



Nunavut Impact Review Board
2018 – 2019 Annual Monitoring Report
for Agnico Eagle Mines Ltd.'s
Meadowbank Gold Project
[03MN107] &
Whale Tail Pit Project [16MN056]



October 2019

Full Report Title: The Nunavut Impact Review Board’s 2018 – 2019 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

Land Tenure: Inuit Owned Lands and Crown Lands

Project Owner: Agnico Eagle Mines Limited
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Monitoring Period: October 2018 – September 2019

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Cover photos:

- 1) Bridge along the Meadowbank all-weather access road
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- 3) Seacan storage at the Explosives Emulsion Plant at the Meadowbank Mine Site
- 4) Haul trucks at Meadowbank Mine Site
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LIST OF ACRONYMS

Agnico Eagle	Agnico Eagle Mines Ltd.
ARD	Acid Rock Drainage
AWAR	All-weather private access road
CAAQS	Canadian Ambient Air Quality Standards
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
FEIS	Final Environmental Impact Statement
GN	Government of Nunavut
GN-DoE	Government of Nunavut, Department of Environment
HHS	Hunter Harvest Study
HOL	Height of Land
HTO	Hunters and Trappers Organization
INAC	Indigenous and Northern Affairs Canada
KivIA	Kivalliq Inuit Association
km	Kilometre
MDMER	Metal and Diamond Mining Effluent Regulations
ML	Million litre (note that metal leaching is abbreviated as ARD-ML)
NIRB	Nunavut Impact Review Board
NRCan	Natural Resources Canada
<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
QA/QC	Quality Assurance/Quality Control
SEMC	Socio-Economic Monitoring Committee
SEMP	Socio-economic Monitoring Program
TAG	Terrestrial Advisory Group
TEMP	Terrestrial Ecosystem Management Plan
TC	Transport Canada
TSF	Tailings Storage Facility
TSP	Total Suspended Particulate
TSS	Total suspended solids
VEC	Valued Ecosystemic Component
WAL	Wally Lake
WRSF	Waste Rock Storage Facility

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 as follows:

- (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 and the Whale Tail Pit Projects from October 2018 to September 2019.

1.1. PROJECT COMPONENTS

1.1.1. Meadowbank Gold Mine Project

The Meadowbank Gold Mine Project (Meadowbank Project) as operated by Agnico Eagle Mines Limited (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 consists 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 mine areas including the Goose and Portage pits. The Vault mine site consists of a maintenance shop, shelter/refuge facility, waste rock storage facility, water management facilities, haul roads, and mine areas including the Vault, Phaser and BB Phaser pits. Mining continues at Portage Pit E but is planned to end by October 2019. For the other pits, mining ended as the ore has been depleted as follows: Goose Pit in April 2015, Portage Pit A in March 2018, Vault Pit in March 2019, Phaser Pit in October 2018, and BB Phaser Pit June 2019.

In addition to the 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 temporary laydown storage area for cyanide; a 60 million litre (ML) fuel tank farm with the fuel tank farm being expanded to 80 ML in 2019; associated interconnecting roads; and a 110 km AWAR from the Hamlet of Baker Lake to the Meadowbank mine site.

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 approximately 150 kilometres (km) north of the Hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Project. The project components include the main camp, associated mining infrastructure, and one (1) open pit, North Basin of the Whale Tail Lake. In August 2019 the main camp was opened but still required additional accommodations wings to be completed. The Whale Tail haul road expansion was completed in November 2018 with a final survey of the road planned for September 2019. Agnico Eagle plans to construct additional pullouts for the road in the future.

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 a fish-out completed in August and the major infrastructure was completed in March 2019. Dewatering of the North Basin was still ongoing in September 2019.

Mining started at the North Basin in Q2 of 2019 but by September 2019 the mine was not yet in full commercial production. Open pit mining has commenced at the Whale Tail pit and commissioning of the long-haul truck fleet was underway. Ore from the pit is being 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 Project for milling.

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

1.2.1. Meadowbank Gold Mine Project

On December 30, 2006 pursuant to Section 12.5.12 of the *Nunavut Agreement*, the NIRB issued Project Certificate No. 004 for the 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 December 2018, the NIRB formally amended the Project Certificate No. 004 (Amendment 003) to include the modification for in-pit tailings disposal (NIRB 2018a).

[Table 1](#) provides a summary of the Meadowbank Project history and current status.

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 all-weather access road 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.
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 Project commenced.
May 2010	Amendment to the water licence issued by Nunavut Water Board (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 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 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	1) 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). 2) Dewatering of the Phaser Lake commenced
October 2016	Dewatering and fish-out program of the Phaser Lake complete.

DATE	ACTIVITY
December 2017	Agnico Eagle submitted application to the Nunavut Planning Commission that included a proposed modification of Agnico Eagle's tailings disposal from the current method (use of current tailings storage facility) to an in-pit tailings disposal in Portage Pit A, Portage Pit E and Goose Pit.
March 2018	Mining activities ceased at Portage Pit A.
October 2018	Mining activities ceased at Phaser Pit.
November 2018	The Responsible Ministers accepted the Board's recommendations for the In-Pit Tailings Disposal Modification to proceed under existing Terms and Conditions of Project Certificate No. 004, with one (1) additional term and condition.
December 2018	Following a technical review, the NIRB formally approved the In-Pit Tailings Disposal Modification at the Meadowbank Project and issued an amended Meadowbank Gold Mine Project Certificate on December 21, 2018 (NIRB 2018a).
March 2019	Mining activities ceased at Vault Pit.
June 2019	Mining activities ceased at BB Phaser Pit.
July 2019	In-Pit tailings disposal at Goose Pit commenced.

1.2.2. Whale Tail Pit Project

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, allowing the Whale Tail Pit Project to proceed in accordance with the Terms and Conditions issued therein (NIRB 2018b).

In November 2018, Agnico Eagle applied for a proposed expansion of the Whale Tail Pit Project to include an expansion of Whale Tail Pit and the addition of a new pit, as well as underground mining. The NIRB determined that the expansion proposal required a formal reconsideration of the terms and conditions of Project Certificate 008. The Board is currently assessing the proposal through its reconsideration process and held a Public Hearing in August 2019.

[Table 2](#) provides a summary of the Whale Tail Pit Project history and current status.

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 2018b).
May 2018	Type "A" Water Licence No. 2AM-WTP1826 issued by the Nunavut Water Board.
June 2018	Expansion of the Whale Tail haul road commenced.
July 2018	1) <i>Paragraph 35(2)(b) Fisheries Act</i> Authorization (16-HCAA-00370) issued by the Fisheries and Oceans Canada. 2) Construction of Whale Tail dike commenced.
August 2018	Fish-out program of the North Basin of Whale Tail Lake commenced.
November 2018	1) Completion of Whale Tail haul road. 2) Agnico Eagle applied for the Whale Tail Pit Expansion Project, a proposed modification to the approved Whale Tail Pit Project. The NIRB initiated formal reconsideration of terms and conditions of Project Certificate 008.
March 2019	Completion of Whale Tail dike.

DATE	ACTIVITY
August 2019	Public Hearing for the Whale Tail Pit Expansion Project and reconsideration of terms and conditions of Project Certificate 008.

2.0 MONITORING ACTIVITIES

The NIRB Monitoring Officer for the Meadowbank and Whale Tail Pit Projects along with another NIRB staff member conducted a site visit of the two (2) Projects from August 22 to August 24, 2019. Prior to the site visits, the NIRB staff held a community information session in Baker Lake on August 21, 2019 to update, discuss with and receive feedback from community members on the NIRB's monitoring program for the Meadowbank Project.

2.1. GENERAL REPORTING REQUIREMENTS

2.1.1. Meadowbank Project Certificate No. 004

As per [Appendix I](#), 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 (Amendment 003) for the Meadowbank Project.

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 the outline of 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 April 10, 2019 the NIRB received Agnico Eagle's *Meadowbank Gold Mine Project and Whale Tail Pit Project 2018 Annual Report* (2018 Annual Report). On April 12, 2019 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 May 28, 2019 the NIRB received comments from the following parties:

- Kivalliq Inuit Association (KivIA)
- Government of Nunavut (GN)
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
- Environment and Climate Change Canada (ECCC)
- Fisheries and Oceans Canada (DFO)
- Transport Canada (TC)

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 II](#), Agnico Eagle demonstrated a general compliance with reporting requirements imposed through commitments resulting from the NIRB’s Review of the Whale Tail Pit Project, including those contained in related reports, plans, and the NIRB’s Project Certificate No. 008.

At present, the NIRB has not yet issued Appendix A for the Whale Tail Pit Project Certificate and expects to do so once sufficient permits are issued for the Project to understand the responsible authorities’ operational requirements. Similar to Appendix D for the Meadowbank Project Certificate, Appendix A would provide the project-specific monitoring framework which would further define the specific reporting requirements of the Proponent and responsible authorities.

2.1.3. Reports as required under as required under the Meadowbank Gold Mine Project Certificate No. 004 and the Whale Tail Pit Project Certificate No. 008

The Proponent has provided the following updated items as required by the terms and conditions contained within Project Certificate No. 004 (Amendment 003) and Project Certificate No. 008 for the current monitoring period of October 2018 through September 2019 as outlined in [Table 3](#).

Table 3: Reports submitted as required under the Meadowbank Gold Mine Project Certificate No. 004 and the Whale Tail Pit Project Certificate No. 008

REPORT	SUBMISSION DATE	VERSION
MEADOWBANK GOLD MINE PROJECT		
2018 Water Management Report and Plan	March 2019	Version 7
Composter Management Plan	October 2018	Version 1
Dewatering Dikes – Operation, Maintenance and Surveillance Manual	April 2019	Version 8
Groundwater Monitoring Plan	March 2019	Version 8
Incinerator Waste Management Plan	October 2018	Version 8
Landfill Design and Management Plan	October 2018	Version 4
Meadowbank Interim Closure and Reclamation Plan (ICRP) – Updated 2018	April 2019	Version 1
Mine Waste Rock and Tailings Management Plan	March 2019	Version 8
Tailings Storage Facility – Operation, Maintenance and Surveillance Manual	April 2019	Version 9
WHALE TAIL PIT PROJECT		
Blasting Activities – Whale Tail Dike Construction	April 2019	Version 1
Conceptual Socio-Economic Closure Plan	March 2019	Version 1

REPORT	SUBMISSION DATE	VERSION
Core-Receiving Environment Monitoring Program Addendum – Appendix A: Mercury Monitoring Plan for Whale Tail South Area	April 2019	Version 2
Erosion Management Plan	June 2018	Version 1
Groundwater Monitoring Plan	February 2019	Version 2.1
Haul Road Management Plan	April 2019	Version 2
Inuit Workforce Barriers Strategy Study	March 2019	
Labour Market Analysis	March 2019	
Operation and Maintenance Manual – Sewage Treatment Plant	February 2019	Version 2
Operation and Maintenance Manual – Arsenic Water Treatment Plant	February 2019	Version 2
Operational ARD-ML Sampling and Testing Plan, Whale Tail Addendum	March 2019	Version 4
Terrestrial Advisory Group Terms of Reference	November 2019	
Thermal Monitoring Plan	April 2019	Version 2
Waste Rock Management Plan	October 2018	Version 4
Water Management Infrastructures – Operation, Maintenance and Surveillance Manual	March 2019	Version 1
Water Management Plan	October 2018	Version 3
Water Quality and Flow Monitoring Plan	April 2019	Version 6
Whale Tail Haul Road Management Plan	March 2019	Version 2
MEADOWBANK GOLD MINE PROJECT & WHALE TAIL PIT PROJECT (COMBINED)		
Air Quality and Dustfall Monitoring Plan	March 2019	Version 4
Blast Monitoring Plan	March 2019	Version 3
Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan	March 2019	Version 4
Core-Receiving Environment Monitoring Program	April 2019	Version 6
Hazardous Material Management Plan	March 2019	Version 4
Occupational Health and Safety Plan	December 2018	Version 2
Quality Assurance/Quality Control Plan	March 2019	Version 4
Socio-Economic Monitoring Committee Terms of Reference	March 2019	
Socio-Economic Monitoring Program	June 2019	
Socio-Economic Monitoring Program Report	June 2019	
Spill Contingency Plan	February 2019	Version 7
Terrestrial Ecosystem Management Plan	December 2018; June 2019	Version 6 Version 7

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 project-specific monitoring program for each Project Certificate. To date, the NIRB has only released the project-specific monitoring program for the Meadowbank Gold Mine Project and is in the process of developing the project-specific monitoring program

for the Whale Tail Pit Project prior to the consultation with responsible authorities, the resource and land owners and the proponent on this program.

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 2018 Annual Report an account of the activities associated with the Amaruq project that occurred in 2018 (Agnico Eagle 2019c).

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

2.2.2.1. Proponent’s Responses to the Board’s 2018 Recommendations

On November 7, 2018 the Board issued several recommendations to Agnico Eagle as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 14, 2018 Agnico Eagle provided responses to each of the Board’s 2018 Recommendations which are summarized in [Table 4](#).

Table 4: NIRB 2018 Recommendations for the Meadowbank Project and Agnico Eagle’s Responses

#	NIRB Recommendation	Agnico Eagle’s Responses
1	The Board requested that Agnico Eagle provide a written submission explaining the conditions which contributed to the increase in spills on site for 2017 (both reportable and non-reportable spills) and provide a discussion on what is being done at site to reverse this trend. The Board recommended that Agnico Eagle increase its spill reporting frequency to occur each quarter, to improve the ability to determine the effectiveness of its spill reduction efforts.	Acknowledged that overall in 2017, there was an 18% decrease in reportable spills, and a 2% increase in non-reportable spills. If required by the NIRB, Agnico Eagle is willing to report spills on a monthly basis to the “Inspector”; however, noted that this information is already reporting monthly under Water License 2AM-MEA1526 and quarterly via Kivalliq Inuit Association Production Lease Report. Further, Agnico Eagle referenced the Spill Reduction Action Plan, including Key Performance Indicators, and an increased focus on reporting and monitoring of spills; and best practices in spill management
2	The Board requested that, within future annual reporting, Agnico Eagle present the number of reportable and non-reportable spills (from 2011 onward) in a table or graph for ease of review.	Agnico Eagle committed to providing the requested information in the 2018 Annual Report
3	The Board requested that Agnico Eagle provide a written explanation of why local marine mammal monitors were not utilized for all vessels transporting fuel or materials for the Project during the 2017 season, with	Noted that a total of four (4) monitors were used during the 2017 season, however gaps in the monitoring record were created due to loss of record sheets, inconsistencies in reporting and difficulty hiring monitor replacements from season

#	NIRB Recommendation	Agnico Eagle's Responses
	a description of any alternative monitoring and mitigation employed by the Proponent and its effectiveness. Confirmation of planned efforts to achieve full compliance with Term and Condition 36 of Project Certificate No. 004 amendment 02 in the future must also be provided.	to season. Agnico Eagle intends to ensure better training for monitors on reporting records and commits to hiring monitors for the entire shipping season to fulfill the term and condition.
4	The Board required that Agnico Eagle provide clarification on when and how it will meet the objectives of both Term and Conditions 51 and 54 of Project Certificate No. 004, Amendment 2 moving forward.	Indicated that the planned community led program was inhibited by third-party projects and dispersion of resources within the proposed Hunter Harvest Survey (HHS) committee.
5	The Board requested that Agnico Eagle provide an action plan regarding development of the Creel Surveys and the Hunter Harvest Surveys, with a clear indication of timelines, measures for success and contingency planning. The submission should highlight any identified limitations on the effectiveness of studies currently employed at the Meadowbank Gold Mine Project with a discussion of the feasibility of alternative studies and mechanisms designed to ensure that a gap in available knowledge is not developing	Discussed alternatives such as a community stakeholder managed program, however limited resource availability made "this path impossible in 2018". Consultants were contracted to assess alternative methods to collect data for the HHS and feasibility of re-starting the study in 2018, however the company decided to hold its HHS strategy to not interfere with third-party projects. Agnico Eagle noted that it has started planning the 2019 HHS, and the pre-existing HHS would be re-started in time for caribou migration should alternative methods prove unsatisfactory. The Creel Survey would follow the same process as the HHS.
6	The Board reminded Agnico Eagle that Term and Condition 74 of Project Certificate No. 004, Amendment 2 applies to the suppression of dust on all surface roads including the all-weather access road (AWAR). As such, Agnico Eagle must provide a plan of action on how it will meet the objectives of Term and Condition 74 along the AWAR moving forward, with a clear indication of timelines and discussion of proposed alternative management measures should Agnico Eagle be unable to meet this condition.	Believed that dust suppression efforts and monitoring studies to date fulfill the term and condition. Agnico Eagle noted that it intends to continue dust control measures as stated in the 2017 Annual Report and as outlined in its Air Quality and Dustfall Monitoring Plan.
7	The Board requests that Agnico Eagle provide clarification regarding its references to other project sites in Nunavut which use the same/similar approach to applying chemical suppressants in a discontinuous fashion along a long-distance roadway.	Noted that the reference was related to the Meliadine Division, which was previously using a discontinuous chemical dust suppressant strategy, however this is no longer the case. The reference was also included to ensure successful product alternatives deployed within our Nunavut sites would be assessed globally.
10	The Board requests that Agnico Eagle provide an explanation for the incinerator having not achieved the recommended temperature of 1000°C and above in 2017,	Indicated that they conduct weekly visits, regular inspections and operator advice for the incinerator. Additional training via toolbox meetings, and Energy and Infrastructure group training sessions

#	NIRB Recommendation	Agnico Eagle's Responses
	and whether additional steps have since been undertaken to ensure that the incinerator stays above 1000°C in the secondary chamber.	on operation of the equipment was also implemented.
11	The Board requests that Agnico Eagle provide regulatory authorities with an updated Incinerator Management Plan for review	Noted that an updated Incinerator Management Plan was submitted to the Nunavut Water Board (NWB) in October 2018 and was approved by the NWB in November 2018.
12	The Board requires that Agnico Eagle provide a comprehensive update 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 identifies any trends for each valued ecosystem component where an effect has been observed. The update must identify where original impact predictions can no longer be supported based on project experience to date and include an analysis of the effectiveness of management and mitigation strategies employed. The update must also provide a summary of lessons learned from the Project which can be used to improve future performance at this and other mining developments in Nunavut.	Believed that a comprehensive update is not required as part of the post-environmental assessment monitoring program. Agnico Eagle indicated that examinations are provided in individual monitoring reports and that they intend to highlight trends observed for valued-ecosystem components exceeding predictions in the 2018 Annual Report.
13	The Board requires Agnico Eagle to provide a trend analysis 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 outcomes align with the predictions made within the Final Environmental Impact Statement (FEIS) must be included. This is required under Appendix D for the post-environmental assessment monitoring program (PEAMP) and may be satisfied through inclusion in the broader PEAMP update required for the Project.	<ol style="list-style-type: none"> 1. Referred the Board to the 2017 Core Receiving Environment Monitoring Program (CREMP) report noting that the results of the spatial and temporal trend analyses were summarized in this report. Agnico Eagle noted that specific parameters, particularly conductivity, hardness, and major cations (calcium, magnesium, potassium, sodium) for water quality data have exceeded their trigger values and are mining-related. However, Agnico Eagle noted that even though these values exceeded the trigger values that it is important to note that they have been fairly stable in more recent years. Furthermore, all available information compiled for the various parameters suggests that the observed concentrations are well below levels of concern for the health of aquatic life. 2. With respect to aligning the water quality results to the predictions made within the FEIS, Agnico Eagle noted that the same list of parameters that exceeded the Meadowbank trigger values typically exceeded the concentrations predicted in the FEIS, namely ionic compounds (calcium

#	NIRB Recommendation	Agnico Eagle's Responses
		<p>and magnesium), hardness, and total alkalinity. Chloride, fluoride, nitrate, and sulphate also exceed the FEIS predictions for Third Portage Lake, Second Portage Lake, and Wally Lake in at least one sample in 2017. Strontium consistently exceeded the model predictions for Third Portage Lake, but did not exceed the trigger (95th percentile of baseline) indicating current strontium concentrations are representative of pre-development conditions.</p> <p>3. With respect to sediment quality data, Agnico Eagle noted that trends were identified for chromium at stations in Third Portage Lake and arsenic at Wally Lake. Chromium has been tracked for a number of years at the stations in Third Portage Lake and concentrations continue to exceed the trigger value with concentrations being at the upper limit in 2017. Agnico Eagle indicated that while chromium concentrations had increased at the stations, other studies have shown evidence that the sediments being non-toxic to benthic species.</p>
14	<p>The Board requests that Agnico Eagle qualify why it considers the exceedances of the thresholds to be “relatively low” and provide evidence to support the statement that it is “unlikely to adversely affect aquatic life” with reference to findings from the biotic surveys (i.e., phytoplankton and benthic invertebrate community) conducted in 2017. In addition, a discussion of management actions with respect to trigger exceedances in water is to be provided, even if the likelihood of adverse effects on aquatic life is considered to be low.</p>	<p>1. Noted that the biomass values for phytoplankton communities are in line with historical values and taking in all evidence in consideration there is no evidence to suggest mining operations are increasing primary productivity and no evidence to suggest the health of the phytoplankton community at the near-field stations is adversely affected by mine-related activities. Agnico Eagle noted that even though the natural variability is considered the most likely explanation for the observed differences in 2017, it was concluded that the trends should be closely watched in 2018 to see if initial conclusions are corroborated or if there is stronger evidence of mine-related causality.</p> <p>2. With respect benthic invertebrate communities, Agnico Eagle indicated threshold exceedances for sediment chemistry parameters for chromium, arsenic and lead in 2017 at stations in Third Portage Lake and arsenic at Wally Lake (WAL)t relative to the baseline period and compared to the most recent 2014 coring results. Further, Agnico Eagle made a decision to pursue targeted sediment coring and toxicity/bioavailability studies in 2018 would be conducted to fully address risks to the benthic invertebrates at WAL with results to be reported in 2018 CREMP.</p>

#	NIRB Recommendation	Agnico Eagle's Responses
15	The Board requests that Agnico Eagle explain why there has been an increasing trend in the number of parameters predicted to require treatment at closure.	<p>Agnico Eagle noted that the increasing trend from year to year in the number of parameters forecasted to exceed the Canadian Council of Ministers of the Environment (CCME) guidelines in the pits at mine closure can be attributed to the following:</p> <ol style="list-style-type: none"> 1) The 2017 Annual Report, total concentrations of the metals were considered instead of the dissolved fraction in order to assess its impact if the suspended particles did not settle out in the pit. This approach results in a more conservative assessment and results in identifying additional parameters of concerns. 2) Furthermore, the 2017 Annual Report now considers the concentration loads from the pit seepages, which result in an increase in the loads of certain parameters into the pit water for the water quality forecast model compared to previous models. The analytical results from the groundwater sampled around the Portage and Goose Pits also confirm this observation. 3) Every year, the water quality forecast model is adjusted based on the mill effluent sampled during that year with the quality of the mill effluent varying from year to year. In 2015, higher concentrations of dissolved copper, dissolved silver and dissolved selenium in the mill effluent were measured in the mill effluent and used in the model when compared to the 2014 model, resulting in the identification of silver and selenium as additional parameters of concern. In the current 2017 model, forecasted nickel concentration was detected to be slightly higher than the CCME guidelines in Goose Pit due in part to the higher concentration measured in the mill effluent that year. 4) The water quality forecast model provides a conservative estimate, especially with regard to the pit seepage loadings that were assumed to be constant throughout the years until the pits are completely flooded. <p>Agnico Eagle further pointed out that using the CCME guideline for treatment objectives should be considered as a conservative approach and that water quality prior to lake reconnection in the re-flooded area should meet CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Nunavut Water Board's approval, if water quality</p>

#	NIRB Recommendation	Agnico Eagle's Responses
		parameters are above CCME Guidelines, a site-specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.
16	The Board requests that Agnico Eagle clarify how the exceedance of predicted sound levels was resolved at noise monitoring station R5, recognizing that the levels have been above the predicted sound levels in previous years.	Indicated that previous exceedances at R5 were resolved by having helicopters based at the Meadowbank site thus reducing peak noise levels during take-off and landing in the vicinity of the station. In previous years, helicopters were maintained with the exploration activities in the area.
17	The Board requests that Agnico Eagle clarify whether an evaluation was undertaken for the noise model and, if so, whether the results were compared to the predictions within the Final Environmental Impact Statement for the Project.	Noted that an evaluation was undertaken in 2016 for the noise model, and it was determined that assumptions of the noise model with respect to site activities remain valid and that in relation to the FEIS, noise monitoring results were assessed to be conservative in comparison.

2.2.2.2. Regulatory Agencies' Responses to the Board's Recommendations

Environment and Climate Change Canada

On November 7, 2018 the Board issued two (2) recommendations to Environment and Climate Change Canada (ECCC) as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 16, 2018 ECCC provided responses to each of the Board's 2018 Recommendations as summarized below in Table 5.

Table 5: NIRB 2018 Recommendations for the Meadowbank Project and Environment and Climate Change's Responses

#	NIRB Recommendation	ECCC Responses
8	The Board requests that Environment and Climate Change Canada (ECCC) review and comment on the information provided by Agnico Eagle in response to the NIRB's 2017 Annual Report related to dust, including whether it agrees with Agnico Eagle's conclusions that alternative dust suppressants at the mine site are not required and that the dust methodology using canisters on the ground along the all-weather access road (AWAR) is more effective compared to other methodologies currently used. Limitations on the effectiveness of the current dust suppression employed for the Meadowbank Project (including the AWAR) should also be discussed.	<p>In response to the Board's Recommendation 8 regarding Agnico Eagle's conclusion that alternative dust suppressants at the mine site are not required, ECCC noted that based on the dustfall and total suspended particulates (TSP) data from the 2017 annual report, it appears that there are times at which the dustfall measurements are above the predictions in the Final Environmental Impact Statement (FEIS) (ECCC 2018). ECCC also stated that dustfall and TSP measurements are above the Alberta guideline for dustfall and the Government of Nunavut (GN) guideline for TSP as referenced by Agnico Eagle in the 2017 report.</p> <p>ECCC stressed that mine site dust predictions in the FEIS did not assume mitigations such as road watering will be used. If no road watering was assumed in the FEIS dust predictions but monitoring results with road watering were still</p>

#	NIRB Recommendation	ECCC Responses
		<p>at times above the predictions and Alberta Dustfall and GN-TSP guidelines it is expected that the FEIS has potentially underestimated the amount of dust produced on the mine site. Therefore, ECCC is not able to comment on whether chemical dust suppressants should be used at the mine site since the 2013 annual report indicates they were, the 2018 NIRB site visit indicates they were not, and the 2017 annual report does not describe the dust suppression methods in the mine area.</p> <p>With respect to reviewing the dust collection methodology, ECCC noted that there are various standards that outline how to monitor dustfall. ECCC provided three (3) documents for reference that outline examples of how to collect dustfall data and how dustfall data should be treated (ECCC 2018). ECCC recommended that these documents be reviewed as they provide good standard to follow for the development and implementation of a dustfall monitoring program. ECCC also indicated that the installation of canisters at ground level and not on 1.5-2 metres poles is not a common practice and this placement would have limitations to data quality, such as the influence of downwash or ground dust, noting that the standard guidance is for the containers to be at a height of two (2) metres above the ground and that there is a wide variability in the concentration of particles subject to settling at heights of less than two (2) metres. However, ECCC is not aware of specific documentation that indicates ground level sampling of dust will produce erroneous results. However, as stated there is a wide variability in the concentration of particles subject to settling at low heights and the effects of wind and snow on the sample at ground level will have an impact on the data. ECCC commented that four (4) other projects in Nunavut places the dustfall canisters above the ground on poles. ECCC stressed that, for dustfall data to be comparable to other sites as well as any dustfall objective, the methods for collecting the dustfall samples should be consistent and follow relevant dustfall monitoring quality assurance guidance. ECCC recommended, to remove the possible biases in data and to be able to compare to dustfall objectives, that sampling methods should be</p>

#	NIRB Recommendation	ECCC Responses
		<p>consistent with the standards listed and consistent across all sites.</p> <p>With respect to comments on the limitations of the effectiveness of the current dust suppression employed for the Meadowbank Project (including the AWAR), ECCC noted that the AWAR dust monitoring report demonstrated a reduction in measured dustfall using the TETRA Flake dust suppressant product. While there were problems with the study's sampling method, specifically the ground level placement of dustfall canisters, the chosen dust suppressant was shown to be effective at reducing dust levels. Sections of haul road that were treated with dust suppressant generated less airborne dust than untreated sections and the effectiveness of dust suppression is limited to areas in which TETRA Flake is applied. As such, areas along the majority (>90%) of the 110 km AWAR were still subjected to relatively higher dust emissions compared to treated areas. In addition, the study demonstrated that the dust suppression was effective over a 1- to 2-month time period. ECCC recommended that further assessment by Agnico Eagle is needed to determine whether additional dust suppressant applications are needed for the summer months.</p>
9	<p>The Board requests that ECCC confirm whether it agrees with Agnico Eagle's conclusion that based on the dust monitoring results to date along the AWAR, it is unlikely that Final Environmental Impact Statement predictions are being exceeded and that impacts to valued ecosystemic components (vegetation community productivity and wildlife) from dust dispersion are not occurring beyond the smallest assumed zone of influence (100 metres).</p>	<p>ECCC noted that Agnico Eagle did not make predictions specifically for the dustfall metric along the AWAR in the FEIS for the Whale Tail Project or for the 2005 Meadowbank Air Quality Impact Assessment. Rather, results of the previous dustfall monitoring of the Meadowbank haul road from 2015 as well as predicted dustfall for the Whale Tail haul road (also referred to as the Amaruq haul road) were included in the Whale Tail FEIS. While the usage of the AWAR differs from that of the haul roads, the results of this recent study are generally consistent with those earlier findings.</p> <p>ECCC emphasized that dustfall monitoring, while being relatively inexpensive and simple to deploy, is generally considered to be a basic monitoring method for assessing air quality impacts to the environment. Dustfall measurements below the Alberta dustfall standards do not, by themselves, indicate the absence of harm to ecosystem components. Dustfall measurements are broadly useful for</p>

#	NIRB Recommendation	ECCC Responses
		limiting the amount of nuisance dust accumulation and are a rough indicator of relative dust emissions on site. ECCC stressed that to fully assess the impacts of airborne dust on the environment, monitoring methods that measure concentrations of particulate matter (PM) 2.5, PM10, and/or TSP are needed. Air quality monitoring methods that measure PM2.5, PM10, and/or TSP, continuously with a powered instrument (similar to those found on the mine site), are needed to determine whether the AWAR FEIS predictions are being exceeded. ECCC highlighted that dustfall monitoring along the AWAR alone is not adequate to assess impacts.

2.2.2.3. Compliance Achievements

In general, the Meadowbank Gold Mine Project appears to be in compliance with the majority of the terms and conditions contained within the Meadowbank Project Certificate No. 004 (see [Appendix I](#)). 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 with the main issues identified in this monitoring period.

2.2.3. Compliance with NIRB Project Certificate No. 008 – Whale Tail Pit Project

2.2.3.1. Proponent's Responses to the Board's 2018 Recommendations

On November 7, 2018 the Board issued several recommendations to Agnico Eagle as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 14, 2018 Agnico Eagle provided responses to each of the Board's 2018 Recommendations which are summarized in [Table 6](#).

Table 6: NIRB 2018 Recommendations for the Whale Tail Pit Project and Agnico Eagle's Responses

#	NIRB Recommendation	Agnico Eagle's Responses
1	The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: an updated Dust Management and Monitoring Plan, evidence of consultation with applicable regulatory agencies to undertake required site-specific permafrost monitoring mapping and thermal analysis, an Invasive Species Mitigation Plan, finalized Terms of Reference (TOR) for the Terrestrial Advisory Group, development of an easily referenced listing of formal certificates	1. Noted that the actual Air Quality and Dustfall Management Plan as submitted in June 2018 did not fully meet the requirements of Condition 2 and proposed to include information within a revision of the Air Quality and Dustfall Management plan that would satisfy the term and condition (Agnico Eagle 2018a). The revised plan was provided to the NIRB as part of the 2018 Annual Report (Agnico Eagle 2019a). Agnico Eagle also agreed to continue to investigate alternatives dust mitigation measures in its Nunavut sites

#	NIRB Recommendation	Agnico Eagle's Responses
	and licences that may be acquired via on-site training or training, and an updated Occupational Health and Safety Plan.	<p>and intends to keep the board informed through the annual reports on efforts deployed in dust management.</p> <p>2. With respect to Condition 10 (site-specific permafrost monitoring, mapping and thermal analysis), Agnico Eagle believes that it has met the requirements and considers that the Whale Tail Dike, Mammoth Dike, Waste Rock Storage Facility (WRSF) Dike, North East Dike, Starter WRSF and Pit were designed in accordance with the Nunavut Water Licence, Condition 10 and the integrity of these infrastructures will be maintained after construction.</p> <p>3. With respect to Condition 25, Agnico Eagle noted that it is working on developing an invasive species mitigation plan for the 2019 barge season. The updated plan was submitted as part of the 2018 Annual Report (Agnico Eagle 2019a).</p> <p>4. With respect to Condition 27, the finalized Terms of Reference for the Terrestrial Advisory Group in November 2018.</p> <p>5. Agnico Eagle submitted the initial listing of formal certificates and licences, and the Occupational Health and Safety Plan as part of the response to the Board's recommendations to meet Conditions 52 and 57, respectively</p>

2.2.3.2. Regulatory Agencies' Responses to the Board's Recommendations

Environment and Climate Change Canada

On November 7, 2018 the Board issued one (1) recommendation to Environment and Climate Change Canada (ECCC) as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 16, 2018 ECCC provided responses to the Board's 2018 Recommendation as summarized below in [Table 7](#).

Table 7: NIRB 2018 Recommendations for the Whale Tail Pit Project and Environment and Climate Change's Responses

#	NIRB Recommendation	ECCC's Responses
2	The Board requests that Environment and Climate Change Canada review the Air Quality and Dustfall Management Plan submitted by Agnico Eagle in June 2018 and provide feedback regarding whether the plan meets the requirements under Terms and Conditions #1 and #2 of Project Certificate No. 008.	ECCC indicated that Air Quality Dustfall Monitoring Plan as submitted by Agnico Eagle did not appear to address the requirements of the Term and Condition as the document is a monitoring plan not a management plan (ECCC 2018). In addition, ECCC noted that Agnico Eagle has referred the NIRB to review several different plans (e.g., Air Quality and Monitoring and Management Plan, Air Quality and Dustfall

#	NIRB Recommendation	ECCC's Responses
		<p>Management Plan) that would cover the intent of Conditions 1 and 2 but ECCC has not been able to find these documents to review and determine if the intent of the conditions are being met.</p> <p>ECCC further noted that the 2018 Air Quality and Dustfall Monitoring plan, which appears to be very similar to the 2016 monitoring plan, is an outline for how and where the monitoring will be conducted but not the management of any air quality or dust issues indicated by the data collected by following the monitoring plan. ECCC recommended that the Proponent compile all of the air quality and dust monitoring, mitigation, management information, and studies into one document. This document could then be updated based on the data that is collected and presented in the annual report.</p>

Crown-Indigenous Relations and Northern Affairs Canada

On November 7, 2018 the Board issued one (1) recommendation to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and Natural Resources Canada as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 14, 2018 CIRNAC provided responses to the Board's 2018 Recommendation as summarized below in [Table 8](#).

Table 8: NIRB 2018 Recommendations for the Whale Tail Pit Project and Crown-Indigenous Relations and Northern Affairs Canada's Responses

#	NIRB Recommendation	CIRNAC's Responses
3	The Board requests that Crown-Indigenous Relations and Northern Affairs Canada and Natural Resources Canada review the information provided by Agnico Eagle for Term and Condition 10 of Project Certificate No. 008 in relation to the additional site-specific permafrost monitoring mapping and thermal analysis studies and confirm whether the information is complete and that this condition has been satisfied	<p>CIRNAC indicated that the information provided by Agnico Eagle did not satisfy the requirements under Condition 10 for the following reasons (CIRNAC 2018):</p> <ul style="list-style-type: none"> ▪ Submissions did not meet the timeline and the reporting requirements of the Condition as the additional site-specific information was not reported to NIRB 30 days prior to the start of construction; ▪ Information submitted did not provide description of how the Proponent interprets the raw data provided and how the collected site-specific data documents the permafrost conditions and seasonal thaw; ▪ Submissions included little information on the amount of ground ice, and it was only focused on the Whale Tail Dike area and not the other relevant infrastructure; and ▪ The design and drawing reports submitted to date did not demonstrate how the detailed

#	NIRB Recommendation	CIRNAC's Responses
		<p>designs of the infrastructure were informed by the site-specific data and how these considerations ensure the integrity of the infrastructure as the thermal conditions discussed in the design reports are general and not aligned with the descriptions of the site conditions in the Thermal Monitoring Plan.</p> <p>CIRNAC recommended that the Proponent should adequately respond to all aspects of the requirements established by Condition 10. Additionally, based on the importance of permafrost conditions to the behaviour of the hydrological regime, the site-specific permafrost mapping, monitoring and the thermal analysis should be incorporated into the Groundwater Monitoring Plan.</p>

In addition to providing a response to the recommendation, CIRNAC also provided the following additional compliance issues identified through its review of the material submitted by Proponent since issuance of the Project Certificate:

a) Talik Distribution and Flow- Term and Condition 14

CIRNAC reviewed the Thermal Monitoring Plan as well as the first and second versions of the Groundwater Monitoring Plan submitted to the Nunavut Water Board (NWB) and concluded that the Thermal Monitoring Plan is not adequate to identify potential changes in talik distribution and flow paths that may result from the development of project infrastructure as per the requirement of Condition 14. Particularly, the monitoring plan presents inconsistencies regarding the number of thermistors currently active in the Whale Tail Pit area, as well as no clear commitments regarding the thermal monitoring of the pit area. CIRNAC noted that details on how the Proponent intends to adapt the monitoring strategy defined for each facility as needed has not been provided and the timing to trigger the decision to install additional thermistors was not described and should be provided. In order to satisfy the condition, CIRNAC recommended that the current Thermal Monitoring Plan and the Groundwater Monitoring Plan require revisions to include more comprehensive details on the monitoring strategy the Proponent will employ to confirm the predicted impacts on talik distribution and groundwater flows in the vicinity of the Whale Tail Pit.

b) Groundwater Monitoring Plan - Hydraulic Conditions - Term and Condition 15

CIRNAC reviewed the second version of the Groundwater Monitoring Plan submitted to the NWB in November 2018 and concluded that the Plan submitted by the Proponent is not adequate as several requirements from Condition 15 were not satisfied by the plan. During the NIRB and NWB regulatory processes, CIRNAC noted that it expressed concerns regarding water quality in the flooded Whale Tail Pit after closure and recommended that new field data be collected from new groundwater wells prior to mine development. The

Proponent committed to carry out hydrogeological evaluation for the June 2018 field season which was delayed until November 2018. No justification was provided by the Proponent on why the planning of the operational activities did not account for the critical pre-development period sampling as per the requirement of Condition 15. CIRNAC noted that it is uncertain if the delayed sampling can accurately reflect pre-development conditions.

CIRNAC further noted that a single Westbay multiport well continues to be the only functioning groundwater sampling station on the Whale Tail property and there appears to be no plans by the Proponent to install any new monitoring wells. CIRNAC maintained that in order to satisfy the Condition 15, at least one additional deep groundwater well is desirable to define and monitor both vertical and horizontal groundwater flows. Further, the Groundwater Monitoring Plan needs to be revised to include details of effective and feasible options available for mitigation if arsenic concerns materialized.

Natural Resources Canada

As noted above, on November 7, 2018 the Board issued one (1) recommendation to Natural Resources Canada (NRCan) and CIRNAC as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 14, 2018 NRCan provided responses to each of the Board’s 2018 Recommendations as summarized below in [Table 9](#).

Table 9: NIRB 2018 Recommendations for the Whale Tail Pit Project and Natural Resources Canada’s Responses

#	NIRB Recommendation	NRCan’s Responses
3	The Board requests that Crown-Indigenous Relations and Northern Affairs Canada and Natural Resources Canada review the information provided by Agnico Eagle for Term and Condition 10 of Project Certificate No. 008 in relation to the additional site-specific permafrost monitoring mapping and thermal analysis studies and confirm whether the information is complete and that this condition has been satisfied	NRCan noted that the experts at the Geological Survey of Canada, who provide permafrost and thermal expertise on behalf of NRCan, did not review all the thermal data provided by Agnico Eagle, therefore NRCan only considered thermal analysis in the context of NRCan’s recommendations and data available on the registry (NRCan 2018). Based on this, NRCan noted that permafrost monitoring of the facilities around the Whale Tail Pit site has not been conducted at the time of submitting the comments as the thermistors had not been installed as the facilities were not yet developed. With respect to permafrost mapping, NRCan had requested from Agnico Eagle documentation resulting from permafrost characterization undertaken for specific infrastructure components of the project. Agnico Eagle provided a post-closure pit-lake thermal assessment, that included general permafrost characterization of the site in the form of a thermistor data summary from ten (10) thermistors on site; however, this information was not available on the NIRB registry and may not have been submitted to the NIRB.

Fisheries and Oceans Canada

As noted above, on November 7, 2018 the Board issued one (1) recommendation to Fisheries and Oceans Canada (DFO) as a result of its 2017-2018 monitoring efforts including the 2018 site visit (NIRB 2018c) for the Meadowbank Project. On December 17, 2018 DFO provided responses to each of the Board’s 2018 Recommendations as summarized below in [Table 8](#).

Table 10: NIRB 2018 Recommendations for the Whale Tail Pit Project and Fisheries and Oceans Canada’s Responses

#	NIRB Recommendation	DFO’s Responses
4	<p>The Board requests that Fisheries and Oceans Canada provide confirmation that the Whale Tail Fisheries Habitat Offsetting Plan as submitted meets the requirements of Term and Condition 24 of Project Certificate No. 008 and whether the increased surface area of Whale Tail Lake is accepted as a viable offset to habitat losses resulting from the development of the Project. The Board further requests that DFO clarify whether previously raised concerns regarding whether Whale Tail end pit would support fish in the post closure scenario have been satisfactorily addressed</p>	<p>DFO is of the opinion that overall Fish Habitat Offsetting Plan is satisfactory and meets the requirements of Term and Condition 24 (DFO 2018). DFO also noted that it issued a <i>Fisheries Act</i> Authorization on July 23, 2018, to Agnico Eagle for the Whale Tail Pit Project and agreed with Agnico Eagle on a fish habitat offsetting plan that DFO believes is a viable offset for the serious harm to fish and fish habitat due to impacts from the Whale Tail Pit Project. If offsetting measures are not completed by the dates specified in the <i>Fisheries Act</i> Authorization, and/or not functioning according to the approved monitoring plan, Agnico Eagle shall be required to implement contingency measures and associated monitoring measures.</p> <p>Regarding whether the Whale Tail end pit would support fish in the post closure scenario, DFO relies on the expertise of the other regulatory authorities including ECCC and CIRNAC to determine if the water quality will be suitable for breaching of the Whale Tail Dike post-closure. DFO also noted that it relies on Agnico Eagle to inform DFO if at any time Agnico Eagle determines that the long-term water quality will not be suitable for the establishment of healthy fish populations and will therefore not be suitable for reconnection to the south basin of Whale Tail Lake. If this were to occur, DFO and Agnico Eagle would discuss the implementation of the contingency measures outlined in the Whale Tail Fisheries Habitat Offsetting Plan.</p>

2.2.3.3. Compliance Achievements

As noted in [Section 2.1.2](#) and [Appendix II](#), Agnico Eagle has demonstrated a general compliance with the reporting requirements imposed through the NIRB's Project Certificate No. 008. Please note that there are some terms and conditions within the NIRB's Project Certificate No. 008 that has been noted as "compliance unclear" as the NIRB does not appear to have the information on record (see terms and conditions # 9 and 12 under Board Guidance – Appendix II-1 and terms and conditions # 11, 12 and 30 under Appendix II-2).

- The NIRB requests information with respect to each term and condition noted as compliance is unclear in the next 30 days.

2.2.4. Compliance Monitoring by Regulatory Authorities for the Meadowbank Gold Mine Project and Whale Tail Pit Project

On April 12, 2019 the NIRB requested that regulatory authorities with jurisdiction and/or area of expertise for the Meadowbank Gold Mine and Whale Tail Pit Projects provide comments and information with respect to compliance monitoring for the 2018 reporting period. The following is a *summary* of the comments received from parties regarding compliance monitoring.

2.2.4.1. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) indicated that although CIRNAC is not responsible for implementing water related terms and conditions, CIRNAC has reviewed the Type 'A' Water Licence associated with the Meadowbank Gold Mine and Whale Tail Pit Projects with respect to Project Certificates [No. 004 and No.008] and has provided concordance tables that outline how the terms and conditions from the project certificates have been incorporated into the appropriate Water Licences [Type A Water Licence 2AM-MEA1525 (Meadowbank), and Type A Water Licence 2AM-WTP1826 (Whale Tail)].

In 2018, CIRNAC conducted one (1) site inspection of the Whale Tail Pit project and one (1) site inspection at the Meadowbank Project. No non-compliance with the Act or licences were noted during the two (2) inspections.

2.2.4.2. Fisheries and Oceans Canada (DFO)

Fisheries and Oceans Canada (DFO) indicated that it did not conduct site inspections during the 2018 monitoring period but stated in its comments that the Proponent currently operates under multiple *Fisheries Act* Authorizations for the Whale Tail Pit and Meadowbank projects. As a general condition of *Fisheries Act* Authorizations, Agnico Eagle is required to report on their compliance with the *Fisheries Act* Authorizations through annual reporting. DFO will determine Agnico Eagle's compliance status once the reviews of the requisite *Fisheries Act* reports have been completed.

With respect to the incorporation of terms and conditions from the NIRB Project Certificate No. 008, DFO has incorporated Term and Condition 21 into to *Fisheries Act* Authorization 16-HCAA-00370 Condition 2.3.5, and NIRB Project Certificate N0. 008 Term and Condition 22 into *Fisheries Act* Authorization 16-HCAA-00370 Condition 2.3.3.

2.2.4.3. Transport Canada (TC)

In its May 2019 submission, Transport Canada (TC) provided a recommendation and requested information as summarized in [Table 11](#) along with Agnico Eagle’s responses.

Table 11: Transport Canada Comments and Recommendations for Compliance Monitoring for the Meadowbank Gold Mine Site and Whale Tail Pit Project

Topic	Recommendation	Agnico Eagle Responses
Baker Lake Fuel Farm Expansion Project	Due to the fact that Agnico Eagle is proposing to add two (2) 10 million litre (ML) diesel fuel storage tanks to the Marshalling Area Bulk Fuel Storage Facility in Baker Lake for a total of 80 ML, Agnico Eagle would be required to update their Oil Pollution Emergency Plan (OPEP) to reflect the changes in the facility’s characteristics.	The OPEP will be updated to reflect changes at the Baker Lake Oil Handling Facility. The updated management plan will be submitted to Transport Canada Inspector once completed and include in the 2019 Annual Report.

2.2.5. *Compliance with Instruments (Licences and Authorizations as Described in the 2018 Annual Report) for the Meadowbank Gold Mine Project and Whale Tail Pit Project*

Agnico Eagle noted within the 2018 Annual Report that all water quality results collected for the Meadowbank and Whale Tail Pit Projects complied with Water License and Metal and Diamond Mining Effluent Regulations (MDMER) authorized limits. However, Agnico Eagle did note further that five (5) non-compliance with the MDMER regulation were observed in 2018 which included not sampling the required toxicity samples during discharge.

Agnico Eagle 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 Kivalliq Inuit Association, Government of Nunavut, Crown-Indigenous Relations and Northern Affairs Canada, Environment and Climate Change Canada and Transport Canada either no follow-up reports were submitted by the agencies or no non-compliance issues were identified.

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 and Whale Tail Pit Projects, impact predictions and mitigation measures were outlined and developed throughout the environmental review of the Projects and were recorded and presented through the Proponent’s Final Environmental Impact Statement for both Projects and other related documents.

2.3.1. *Effects Monitoring by Regulatory Authorities*

As a part of its annual monitoring program, the NIRB requested that Regulatory Authorities with jurisdiction over project components or activities, or those with specific expertise, provide

comment regarding the effects assessment associated with both the Meadowbank and Whale Tail Projects.

2.3.1.1. Kivalliq Inuit Association (KivIA)

Within its May 2019 submission, the Kivalliq Inuit Association (KivIA) noted that overall the information and conclusions presented in the majority of the 2018 Annual Report indicate that the project appears to be operating effectively, without adverse impacts to the receiving environment as per the project certification and water license is well done and informative. However, there were some sections of the report that required additional background information or detail to help clarify or justify statements made which are summarized in [Table 12](#) along with Agnico Eagle’s responses for both the Meadowbank and Whale Tail Pit Projects.

Table 12: Kivalliq Inuit Association Recommendations for Meadowbank Gold Mine Site and Whale Tail Pit Project and Agnico Eagle’s Responses

Topic	Recommendation	Agnico Eagle Responses
Lake Level Monitoring – Meadowbank	Include the baseline water levels for Second Portage Lake, Third Portage Lake and Wally Lake (WAL) for comparison to the range in the current monitoring year	Refer to Section 12.1.2.1 - Water Quantity, of the 2018 Annual Report, which discusses that comparison and provides figures for data collected since monitoring began
Water Balance Water Quality Reporting Summary - Meadowbank Model	Explain why mercury, lead and total ammonia are predicted to exceed Canadian Council of Ministers of the Environment (CCME) guidelines in pits at closure in the 2018 water quality forecast update predictions.	<ol style="list-style-type: none"> 1. Water Quality Forecast for 2018 considered the extension of the Life of Mine at Meadowbank, which adds the processing of ore body coming from the Whale Tail Pit at the Amaruq site. The ore body from Whale Tail pit has a different geochemical behavior when compared to the Portage/Goose/Vault ore bodies. It has a higher potential to leach mercury and lead. For this reason, mercury and lead were identified as new parameters of concern in this year’s model. 2. For total ammonia, it is forecasted to transfer Reclaim Water from the South Cell to the Goose Pit, which contains ammonia and degradation of ammonia is not considered over time resulting in concentrations to be higher in Goose Pit.
Water Quality Vault – Meadowbank	Clarify why no treatment is predicted to be necessary for Vault Pit at closure, despite current and past exceedances of CCME guidelines in several parameters.	During re-flooding of Vault Pit, no treatment is necessary because the pit will be flooded with the water coming from the Wally Lake. With a significant inflow volume of clean water, the parameters that exceed

Topic	Recommendation	Agnico Eagle Responses
		CCME guidelines, such as un-ionized ammonia, ammonia nitrogen, fluoride, dissolved calcium, and nitrate will be attenuated.
Predicted vs Measured Water Quality – Vault Pit Ice Wall	Explain why the ice wall formed in the Vault pit in 2018 and whether it is likely to occur in future winters. Also, it is recommended that the water balance be updated if the ice wall is predicted to be a common occurrence and provide a discussion as to what changes to the water management plan may be required as a result of this ice wall.	The first occurrence of the ice wall at Vault was observed in 2017 and there is a high probability that the source of the ice wall is the water in the nearby attenuation pond. From 2017 to 2019 it has been observed that the ice wall formation was getting bigger year after year as the pit became deeper. As mining activity are over in Vault Pit it is considered that the ice wall water inflow will contribute to the natural reflooding of the pit. This information will be updated in the water balance.
Predicted vs Measured Water Quality – Meadowbank Detection Limits	Recommends that Agnico Eagle find an accredited lab to analyze pit water quality that can reach the required detection limits for all parameter.	Agnico Eagle will continue to update its water quality model using the best information available. The laboratory services selected by Agnico Eagle are conducted by accredited facilities and reach the analysis lower detection limits where the results can be compared to the CCME guidelines. Agnico Eagle will continue to ensure that the accredited laboratory can reach the required detection limits
Geochemical Monitoring – Meadowbank	Summarize 2018 water quality monitoring results for Meadowbank quarries in the Annual Report.	There was no water quality conducted in quarries along the all-weather access road (AWAR) in 2018 and there has been no more water quality monitoring in quarries conducted since 2012 as previous water sampling has not provided evidence of geochemical issues in the quarries.
Spill Summary	Explain as to why hydraulic hose failure occurs so frequently and what steps are being taken to rectify this problem. It is recommended that Agnico Eagle propose steps beyond the current approach which includes routine visual inspections as part of the Proponent's preventative maintenance approach.	Agnico Eagle operate Meadowbank and Whale Tail under extreme cold condition during winter, and thus created extra pressure on equipment that can lead to more frequent equipment failure even if good inspection and maintenance were conducted. Overall, furthermore to daily visual inspection and preventive maintenance that is in

Topic	Recommendation	Agnico Eagle Responses
		perpetual improvement, Agnico Eagle has started to reconstruct equipment and stopped equipment during extreme cold condition in order to prevent breakdowns. These action items are part of the spill reduction action plan.
Metal and Diamond Mining Effluent Regulations (MDMER) and Environmental Effects Monitoring (EEM) Sampling - Whale Tail North Construction	Explain as to why the effluent sample was not collected from the final discharge point at the end of July as part of the MDMER.	The missed sample was mainly due to an internal planning issue. Agnico Eagle has conducted a review of its internal planning and communication protocols to ensure compliance with regard to MDMER and other water quality monitoring. Agnico Eagle will continue to develop methods and tools that will promote the planning and the timely execution of sampling requirements.
MDMER and EEM Sampling - Whale Tail North Construction Quality Assurance/Quality Control (QA/QC)	Ensure proper QA/QC procedures are in place to avoid this non-compliance in future.	Agnico Eagle has conducted a review of its internal planning and communication protocols to ensure compliance with regard to MDMER and other water quality monitoring. Agnico Eagle will continue to develop methods and tools that will promote the planning and the timely execution of sampling requirements.
Mine Site Water Quality and Flow Monitoring – Meadowbank	Highlight exceedances to listed regulatory limits, in particular water license, MDMER and CCME, in tables reporting water quality data within the receiving environment.	Will highlight exceedance in the table presented as part of the Annual Reports.
Mine Site Water Quality and Flow Monitoring – Exploration Whale Tail	Explain what mitigation measures were implemented to reduce the likelihood these effluent exceedances will be repeated at the Whale Tail sewage treatment plant.	Noted that exceedances could be due to fault of equipment and operator inspection and corrective actions have been put in place.
Spill all-weather access road/Whale Tail haul road	Discuss potential reasons for much higher rates of spills along the Whale Tail haul road compared with the AWAR in 2018 and explain what steps will be taken to reduce the risk of spills along this route in future.	It's Agnico Eagle's belief that the number of spills in 2018 along the haul road was not disproportionate compared to Meadowbank, noting that in 2018 the haul road was under construction and required higher usage. All spills were managed appropriately according to Agnico Eagle's spill contingency plan.
Post-Environmental Assessment Monitoring Program –Aquatic	i) Clarification on why parameters with CCME guidelines that exceeded Final	Agnico Eagle provided an updated text that summarized the information noting that no results exceeded

Topic	Recommendation	Agnico Eagle Responses
Environment, Water Quality - Meadowbank	<p>Environmental Impact Statement (FEIS) predictions were not evaluated against the impact scale described in the report.</p> <p>ii) Explain why exceedances of FEIS predictions are not expected to have adverse ecological effects.</p>	<p>available CCME guidelines (chloride, fluoride, nitrate) or effects-based Core Receiving Environment Monitoring Program (CREMP) thresholds (sulphate), so these constituents are also considered to represent a “low” magnitude of impact.</p>
Meadowbank 2018 Water Management Report and Plan – Pit A	<p>Clarify if mining at Pit A has been completed and if water is being pumped to Pit A or South Cell</p>	<p>Mining of Pit A finished in March 2018. Water from East Dike seepage (when not meeting water quality for discharge) is transferred to Pit A since 2013 and water from Pit E is transferred to Pit A since 2018</p>
Meadowbank 2018 Water Management Report and Plan – Freshet Action Plan	<p>Indicate if any changes to the monitoring program were deemed necessary and if so, describe the necessary changes.</p>	<p>After review of the 2018 monitoring program, it was determined that the Freshet Action Plan is correctly adapted and thus does not require any modifications.</p>
Meadowbank 2018 Water Management Report and Plan – Snow Management	<p>Describe the management practices that are being completed to ensure the excess road material in stream crossings is not impeding fish passage or increasing the likelihood of over topping when clear span bridges have not been employed</p>	<p>Noted that all snow near, in stream crossing, and around culverts that naturally accumulated during winter was removed before the freshet. Agnico Eagle have also established restricted zones where snow cannot be stored during winter, mainly near the water crossing. Those practices help to avoid impeding or over topping the stream and if excess road material were to be found in the stream, Agnico Eagle would take necessary action in advance of the freshet as weekly inspection of these areas is conducted.</p>
Whale Tail Hydrodynamic Modelling for Mammoth Lake	<p>Clarify if the highest concentration of the Waste Rock Storage Facility (WRSF) runoff during post-closure is 1.4 mg/L. Further, KivIA also requested that Agnico Eagle indicate the size of the mixing zone in which phosphorus concentrations will be elevated by at least one trophic level above that in the rest of Mammoth Lake.</p>	<p>The values provided were correct but Agnico Eagle indicated that based on recent refinement of the model it showed that the highest predicted total phosphorus concentration of the WRSF runoff during post-closure to be 0.021 mg/L. Given the small volume of runoff carrying these concentrations, it is unlikely to cause changes in trophic level in Mammoth Lake. Further, the modeling of hydrology within the Whale Tail WRSF showed that there will be no</p>

Topic	Recommendation	Agnico Eagle Responses
		seepage from the pile to Mammoth Lake in post-closure.
Meadowbank and Whale Tail 2018 CREMP – Sequential Extraction	Indicate if another sequential extraction study will be completed in 2019 to determine sediment metals bioavailability at Third Portage Lake (TPE), WAL and Whale Tail since the 2018 results did not meet the data quality objectives	Maxxam Laboratory was unable to resolve the QA/QC issues identified with the 2018 testing, resulting in Azimuth’s lack of confidence in the sequential extraction procedure (SEP) which led to Agnico Eagle to explore alternative tools given the unreliability of the SEP.
Meadowbank and Whale Tail 2018 CREMP – Water Chemistry	Indicate the statistical method used to determine the four values (total copper in WAL-79 [May], dissolved Zinc in SP-111 [May], dissolved chromium in TSP-60 [May], and dissolved lead WAL-81 [July]) were outliers or direct the reader to documents describing the methodology used. <i>[Note: SP-111 is a station in Second Portage Lake; TSP-60 is a station in Third Portage Lake South Basin]</i>	Visual methods were used to identify these outliers. Total copper was the only case where most values are reported >MDL; in this case the spatial-temporal assessment clearly shows that the single May value at WAL is not consistent with the other data
Meadowbank and Whale Tail 2018 CREMP – QAQC	Compare relative percent difference (RPD) values to a standard value or provide a reference supporting the use of a 50% RPD for comparison.	CCME’s Guidance Document states that acceptance limits for field-based QC are broader than laboratory QC and are typically 1.5 to 2 times the laboratory QC limits. Consequently, an RPD of 40% for surface water field duplicate samples would be consistent with CCME guidance. The acceptance criteria for field duplicate QC samples recommended by CCME (2016) will be adopted for the 2019 CREMP.
Meadowbank and Whale Tail 2018 CREMP - Trend	Recommended Agnico Eagle complete the following: i) Investigate the source of these parameter increases, their spatial extent and the reversibility of these trends. ii) Discuss the implications of increased conductivity, calcium, magnesium, potassium, sodium, TDS and alkalinity at the near-field sites on lower trophic levels, specifically in terms of the community composition of	While Agnico Eagle has been managing the mine-related changes in water quality according to the MRP, they acknowledge that the supporting information could be better packaged to document the rationale for the recommended management action. To that end, Agnico Eagle will commission a technical memorandum that addresses elements i) and ii) of the stated concerns above and includes an assessment of uncertainty; this memorandum will be included as an

Topic	Recommendation	Agnico Eagle Responses
	<p>phytoplankton, zooplankton and benthic invertebrates.</p> <p>iii) In accordance with Agnico Eagle’s Management Response Plan (MRP) for the Meadowbank Mine Aquatic Environment Monitoring Program, that Agnico Eagle increase monitoring frequency at the mid-field sites to determine the spatial extent of exceedances observed in the near-field during the open water season.</p> <p>iv) Conduct an investigation of cause study for the observed changes in water chemistry and determine possible management strategies.</p>	<p>appendix in the 2019 CREMP. Should that assessment indicate that elements iii) and iv) are needed to support management decisions, then they will be considered at that time.</p>
<p>Meadowbank and Whale Tail 2018 CREMP – Sediment Chromium</p>	<p>Complete the following:</p> <p>i) Add mid-field and far-field sediment sampling to the 2019 field program to determine the spatial extent of the increased chromium concentration in TPE and discuss the reversibility of the trend.</p> <p>ii) Conduct a source tracking study to confirm the source of the chromium. In addition to completing another sequential extraction test in 2019.</p>	<p>Noted that as discussed in the 2018 CREMP, chromium concentrations decreased in 2019 relative to 2018 and appear fairly stable since 2013. The increasing trend at TPE occurred between 2009 and 2013 (see Figure 4-63 of the 2018 CREMP report). Key results support the conclusion that this trend was restricted to TPE.</p>
<p>Meadowbank and Whale Tail 2018 CREMP – Sediment Arsenic</p>	<p>Provide rationale as to why exceedance of an arsenic trigger value for sediment quality reflects an inappropriate trigger value</p>	<p>Results for reference area Innuguguayalik Lake (INUG) clearly show the influence of natural spatial heterogeneity, presumably due to the presence of arsenic-rich mineralization; one or more samples exceeds the arsenic trigger of 121 mg/kg dry weight (dw) in INUG nearly every year. The trigger for WAL (44.5 mg/kg dw) was set using the baseline results for that lake only (i.e., because many sediment parameters in WAL exceeded the regional triggers set for the Meadowbank project lakes). Thus, while there is no apparent temporal trend in arsenic at WAL, naturally</p>

Topic	Recommendation	Agnico Eagle Responses
		variable sampling results end up exceeding the statistically derived trigger. Thus, the trigger is “inappropriate” only that, similar to INUG, it is often exceeded despite the lack of any apparent temporal trends.
Meadowbank and Whale Tail 2018 CREMP - Spill	Include water quality parameters (i.e. oil and grease) to assess possible fuel spills/leaks to the Baker Lake water quality monitoring program or provide rationale supporting their exclusion	Agnico Eagle committed to doing a weekly inspection of the shoreline at Baker Lake near their operations during open water season in addition to conducting the range of inspections related to fuel spills.
Blast Monitoring Stations at Meadowbank	Clarify how the optimal distance between the blasts and fish habitat is determined. In particular, does it represent the minimum, maximum or average distance.	Agnico Eagle uses the minimum distance between the blast and the fish habitat.
Meadowbank 2018 Groundwater Monitoring Program Report - Recommendation	<ul style="list-style-type: none"> i) Be specific with regards to what recommendations provided by SNC Lavalin Agnico Eagle is committed to following to ensure groundwater monitoring success. ii) How these recommendations should be incorporated into the groundwater monitoring plan? 	The Meadowbank 2018 Groundwater Monitoring Plan presented in Appendix 37 of the 2018 Annual Report is considered, since 2017, as the annual report and the monitoring plan and thus, all recommendations detailed in Section 5 are to be followed in further groundwater sampling campaign.
Whale Tail 2018 Groundwater Management Monitoring Report	Recommended that in the 2019 annual report that Agnico Eagle provide a discussion of the implications of adopting SNC Lavalin’s recommendations and whether observed differences between data gathered at Meadowbank and Whale Tail are due to site specific differences in groundwater chemistry, sample depth collection or methodological factors.	Will provide requested information in the 2019 Annual Report.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Mitigation Audit	Explain why only a summary of the audit will be provided in the annual report, and whether the Terrestrial Advisory Group (TAG) will review and advise on drafts of the audit.	Agnico Eagle will appended an audit report to the annual report if available on time. The conclusion of the Mitigation Audit can be discussed with the TAG.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Roads Surveys	<p>Recommended that the report more clearly show:</p> <ul style="list-style-type: none"> i) when and how the decision trees were followed for the 	<p>In response, Agnico Eagle noted:</p> <ul style="list-style-type: none"> i) For the 2019 report, a clearer link between monitoring outcomes and management responses will

Topic	Recommendation	Agnico Eagle Responses
	<p>wildlife monitoring summary report,</p> <p>ii) the sequence of monitoring which led to triggers and mitigation actions,</p> <p>iii) follow-up monitoring to examine the efficacy of the mitigation.</p>	<p>be provided (as per the decision tree approach).</p> <p>ii) Clearer links between monitoring and management will be provided in the 2019 report.</p> <p>iii) Investigating the possibility of conducting a more comprehensive analysis of the effectiveness of mitigation measures in reducing road-related effects on Caribou movements.</p>
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Roads Surveys	More information is needed other than the herd was ‘close’. For example, the tables provided in Appendix 45, Section 3.6.5 Road-related Mitigation are useful giving the frequency and duration of closures but should include the thresholds or sightings that triggered the closures.	The linkages between monitoring results and mitigation action will be more clearly outlined in the 2019 annual report.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Traffic data	<p>Complete the following:</p> <p>i) Annual graphs showing haul trucks, medium vehicles (e.g., watering or fuel trucks), and light vehicles (e.g., pickup trucks) compared against predicted traffic levels.</p> <p>ii) Have the ATV traffic levels as recorded by security on AWAR also presented in graphs?</p>	<p>In response, Agnico Eagle indicated:</p> <p>i) Acknowledge KivIA’s recommendation and will evaluate the feasibility to include the requested information in the 2019 annual report. This will also be reviewed during the TAG meeting.</p> <p>ii) The monthly AWAR ATVs and snowmobile usage are already provided in Table 11.2 of the 2018 Annual Report.</p>
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report	Requires clarification on how are ‘unnatural’ and ‘suitable’ defined, and how will it be determined that caribou are not able to use suitable habitats and demonstrate unnatural use patterns beyond 1 km distance from roads (and beyond 500 m for pits and mine site). In addition, recommended that the criteria should be defined and added to the “methods” section of the report and also to the Terrestrial Ecosystem Management Plan (TEMP).	These threshold levels are an artefact of an earlier version of the TEMP (2006) and will be removed for the 2019 report as they are not in the revised TEMP (Table 14, TEMP v6).
Meadowbank and Whale Tail 2018 Wildlife Monitoring	The tables on the AWAR surveys demonstrate annual trends and the seasonal numbers but the KivIA	The feasibility of implementing this suggestion will be investigated for the 2019 annual report. Agnico Eagle

Topic	Recommendation	Agnico Eagle Responses
Summary Report – Road related mitigation	recommended that it should be cross-referenced to 3.6.5 Road-related Mitigation. Further recommended that the figure should show finer resolution than 5 km sections, perhaps 2 km for better resolution to focus mitigation efforts.	also will look at using a 2 km resolution for the figures.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report	Clarify which, if any, closures were due to blizzards as summarized in Appendix 45, Table 3.7.	The focus of the annual wildlife report is to document closures due to wildlife presence. Where wildlife and weather-related issues are factors in closure, both will be mentioned.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Arctic hare mortalities	Clarify the discrepancy that showed different mortalities in 2018 in the annual report, noting that small mammals were not included.	Four (4) Arctic Hare mortalities should have been included in the table in the annual report. Careful attention will be paid to ensure consistency in the 2019 report.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Management Recommendations	Provided management recommendations.	Recommendations to be included in the 2019 annual report.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Roads Closures	Recommended that the separation of observations by techniques needs some rethinking and re-presentation – perhaps a section on mitigation by topic (road closures) with the different monitoring techniques. This would help evaluate which monitoring methodology is more efficient in coverage and utility, and where there may be gaps and duplications.	Noted that the 2019 report will include an integrated section related to caribou monitoring and mitigation that will ensure that the links between monitoring results and mitigation or management actions are clearly described.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report - Deterrence	Provide clarity on why there is a large requirement for deterrence of wolverine and wolf required at Meadowbank. This unusual attraction may still be related to garbage or the kitchen facility.	Several factors may explain increased Wolf and Wolverine presence in 2018: 1) Since Wolf and Wolverine population size is cyclical, increased numbers may have been present in the region in 2018; 2) potential limited prey availability may have led to an increase in attraction to the mine site; and 3) attractants may have been more readily available at the mine site in 2018. Waste management at site is in constant monitoring and is addressed

Topic	Recommendation	Agnico Eagle Responses
		by increasing the level of staff training.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Caribou	The Summary Report states as if the Government of Nunavut and Agnico Eagle movement/zone of influence studies were never done, but these reports were completed in 2017. Recommended updates to be included in the 2019 annual report.	Agnico Eagle will revise and update the sections in the 2019 Annual Report. As well, an integrated section on Caribou monitoring and management will improve clarity.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Height of Land	Recommended updates to be included in the 2019 annual report regarding the height of land (HOL) data and whether the surveys are an effective early warning system.	Noted that the effectiveness of the HOL survey approach will be discussed at future TAG meetings. A discussion on the effectiveness of the approach will be included in the 2019 report.
Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report – Remote Camera Monitoring	No results were provided from the remote camera monitoring and it is unclear how the remote cameras will contribute to monitoring.	Noted that the primary purpose of remote cameras is to document behavioral interactions rather than monitoring caribou presence or abundance. The 2019 report will provide a more comprehensive discussion on results of the program.

2.3.1.2. Government of Nunavut (GN)

In its May 2019 submission, the Government of Nunavut (GN) provided comments and recommendations based on their mandate which is provided in [Table 13](#) as a summary along with Agnico Eagle’s responses to the concerns.

Table 13: Government of Nunavut Recommendations for the Meadowbank Gold Mine Site and Whale Tail Pit Project and Agnico Eagle Responses

Topic	Recommendation	Agnico Eagle Responses
Raptor monitoring around Whale Tail Pit	Proponent provide evidence 2015-2017 nest surveys were an accurate predictor of 2018 active nests.	1. No previously identified active nests were within 1 km of the Whale Tail Pit or the Whale Tail haul road; 2. Suitability of habitat in the vicinity had not changed substantially; 3. Activity in 2018 reduced the possibility new nests would be constructed.
	Proponent explain why nest surveys were not conducted in 2018.	New nests would have been identified through other monitoring. Any documented raptor activity would have been followed by a nest survey.
	Proponent clarify whether surveys will be conducted in the vicinity of all new sites prior to construction.	A dedicated nest survey will be conducted in spring 2020 in the vicinity of the Whale Tail Pit and Whale Tail haul road. Nest monitoring carried out in quarries prior to allowing activities.

Topic	Recommendation	Agnico Eagle Responses
	Proponent clarify how the nest monitoring program is able to distinguish between Project related and other effects.	Current program involves weekly monitoring of nests. Monitoring provides information on the success of nests, but causes of nest-failures are difficult to determine.
	Proponent design and implement a new raptor monitoring program or revise threshold and study design with the Terrestrial Advisory Group (TAG).	Requires further discussion within TAG and with raptor experts. The current approach may be preferred.
	Fully implement raptor mitigation as specified in the Terrestrial Ecosystem Management Plan (TEMP).	Agnico Eagle uses experts to provide advice. Where activity is unavoidably close to active nests, site-specific plans will be developed.
	Ensure next revision of the TEMP will reflect Commitment 32.	Next revised version of TEMP will reflect this commitment.
	Provide details of automatic no disturbance buffers in 2019 Annual Report	Next revised version of the TEMP will include this.
Caribou	The Proponent should develop a format for caribou-related components that is aligned with the TEMP with respect to planned monitoring and mitigation for future Annual Reports	Data in 2019 report will be organized by caribou season as per the TEMP. A discussion of the differences between TEMP and Government of Nunavut (GN) definitions will be included.
	All caribou information should be presented together.	An additional section of the 2019 report will integrate the caribou information found throughout the report.
	Monitoring thresholds used in the Annual Report should be the same as those in the TEMP.	Thresholds in the 2018 report are an artefact of earlier version of the TEMP and will be removed in the 2019 report.
	Explain why only a single road survey was conducted along the Whale Tail haul road in April and May.	<ol style="list-style-type: none"> 1. Several factors, including the upgrade from exploration to haul road, accessibility and safety of the road during construction along with the availability of a Baker Lake Wildlife Officer, lead to a delay in mobilizing the road surveys in 2018. 2. In response to Caribou presence within the Whale Tail study area in April 2019, road survey frequency was increased substantially resulting in more than 30 road surveys. 3. A number of factors contributed to the slow mobilization of road surveys along the Whale Tail haul road in 2018 but these issues had been addressed by the second half of 2018. Agnico Eagle is now fully applying the TEMP Version 6.
	Explain the apparent discrepancy in information provided in the 2018 Report indicating that roads surveys during peak migration were increased to every 2 days versus the contents of table 3.5 which indicates that a single survey was conducted along the Whale Tail haul road during the spring migration.	
	Explain why a total of 41 road surveys were conducted along the Whale Tail haul road in 2018 in comparison to the minimum of 52 surveys (1 per week) indicated in the TEMP.	

Topic	Recommendation	Agnico Eagle Responses
Caribou	Proponent should explain in detail what adaptive management measures (over and above existing caribou protection measures in the TEMP (version 6) will be taken in 2019 and in future years in response to the 2018 Report’s finding that disturbance of caribou exceeded threshold levels.	Adaptive mitigation strategies were implemented in spring 2019 in response to Caribou movements across the AWAR and Whale Tail haul road. Road survey frequency was increased and road closures and/or road restrictions were implemented. In addition, when applicable, lower speed limits were set and daily rides were escorted by Environment Department and in collaboration with Hunters and Trappers Organization (HTO) and Kivalliq Inuit Association (KivIA). When necessary, Environment Department stopped convoys to let Caribou pass undisturbed. These adaptive management strategies will be more clearly outlined, and linked to Caribou monitoring results, in the 2019 report.
Road and Wildlife	Future Annual Reports include quantitative analyses of road effects on the movement and distribution of caribou that incorporate concurrent data on recorded traffic levels, caribou monitoring activities and road management measures that are implemented.	Clearer link will be made between monitoring and implemented mitigation in 2019 report. Report on the movements of collared caribou will be finalized in June 2019.
	Proponent should clarify the inconsistencies between tables 3.7 and 4.1 in the Annual Report with respect to road closures for caribou.	Table 3.7 summarizes information contained in ‘Wildlife Mitigation Documentation’ (i.e., Road Status Updates) provided in Appendix C, Table 4.1 summarizes information from the more general ‘Wildlife Observation Records’ (see Appendix E). Inconsistencies between these two data sources will be corrected in the 2019 report.
	Proponent should explain why road closures were not implemented in response to observations of caribou made on the days listed.	Collection of data linking monitoring results with mitigation actions (e.g., road closures) was not adequate in 2018 but has been approved in 2019. For the 2019 report, a clearer link will be described.

Topic	Recommendation	Agnico Eagle Responses
	Proponent should explain what information from caribou monitoring, on or around September 27, prompted the road closure.	Closure of the road on September 27 likely resulted from information provided by road maintenance, operations, or Environment staff rather than from a dedicated survey. In the future, more information behind decisions to close roads or restrict traffic will be provided.
	Explain why the AWAR was not closed earlier during fall migration in response to collar maps provided to road managers.	Field road surveillance is increased when the collars maps received indicated that the caribou are approaching. The collars maps are not the only tool use to trigger the closure or not of the road.
	Proponent should outline what specific efforts and investment it made in 2018 to collect data on the movements of collared animals in proximity to the Whale Tail haul road	As collared animals entered the study area and approached mine facilities, requests are made to the GN/Caslys Consulting to increase the frequency at which collar location maps were provided.
	Proponent should retain the services of a consultant to conduct an independent audit of the implementation of caribou protection measures.	Agnico Eagle acknowledges GN's recommendation and will evaluate it further.
	Proponent should ensure that the caribou decision trees specified in the TEMP will be implemented in a consistent manner on every occasion caribou are observed.	Decision trees specified in the TEMP will be implemented in a consistent manner
	For April 22, please explain what is meant by "restricted". Does this mean the amount of traffic using this portion of the road was decreased? If so, how. If not, what restrictions were implemented. How does escorting of traffic reduce disturbance of caribou?	<ol style="list-style-type: none"> 1. 'Restricted' - only obligatory small vehicles or light trucks are permitted to use the road. Tankers or other heavy equipment for hauling, construction or maintenance are not allowed. This means that the amount of traffic using this portion of the road was significantly decreased. 2. When delivery of goods or to allow crew change are necessary, escorts are led by a member of the Environment Department, in collaboration with the Baker Lake HTO and/or KivIA. Convoys limit disturbance to a single event rather than multiple events over a longer period of time.
	For April 27, 28 and May 14, 15, 27, 2018, please explain what is meant by "restricted" in each of these cases.	See previous.

Topic	Recommendation	Agnico Eagle Responses
	<p>Please explain what caribou monitoring was being conducted on May 4 that supported the decision to continue construction. What information was obtained from this monitoring that led to the decision to continue construction? Where in the Annual Report is this monitoring information reported?</p>	<p>The Environment Department, even if no official wildlife survey sheets were recorded, monitored the caribou migration along the Whale Tail haul road on a daily basis during caribou migration. On the notification sent to HTO, KivIA and GN on May 4, Agnico Eagle mentioned: ‘Vault transit to km 20 is restricted to light vehicle only for the construction crew as no caribou were observed on that section of the road this morning’. It was determined that there is no risk to allow the construction between Vault laydown and km 20. KivIA was also on site on May 4 to provided assistance to the Environment Department with the monitoring of the road and no concerns were raised.</p>
	<p>For May 8 and 11, please explain whether the closures on these days are reported as caribou-related, or were the result of weather closures.</p>	<p>Road closures during the May 8th to 11th period were due to a number of factors, including snow accumulation, caribou close to the road, and muskox close to the road at km 95.</p>
	<p>For May 22 why was the road only closed for northbound traffic? What is different about southbound traffic that made it acceptable to continue while caribou were crossing the road?</p>	<p>The Whale Tail haul road was initially closed to northbound traffic leaving the Vault because caribou were observed at the beginning of the Whale Tail Haul road (note: southbound traffic would require some time to reach the Vault end of the road). Further evaluation determined that Caribou had moved away from the road later in the day allowing the road to be reopened to all traffic.</p>
<p>Problem carnivores</p>	<p>Clarify discrepancy between Table 4.1 and section 4.5.5</p>	<p>Unsuccessful deterrence indicates that deterrence activities did not result in predatory mammals immediately leaving the mine site; however, these individuals eventually left the mine site on their own accord and did not need to be dispatched. For the 2019 report, further details will be provided on the circumstances around and management actions taken for individuals that were not successfully deterred.</p>

Topic	Recommendation	Agnico Eagle Responses
	<p>Explain (i) why interactions in 2018 with wolf and wolverine peaked from Dec to April; (ii) what attractants, if any; were present at the Project during this period; (iii) what adaptive management is planned to address the problem.</p>	<p>Possible factors include cyclic size of wolves and wolverines causing increased numbers in 2018, prey around mine site, attractant may have been more readily available in 2018. Agnico Eagle stresses proper waste management to employees and conduct weekly visits to waste infrastructure.</p>
<p>clarify whether the trend of increasing deterrent actions against wolf and wolverine (2015-2018) reflects increasing problems with these species or increasing deterrent efforts.</p>		
<p>What additional adaptive management will be taken in 2019 to address what appears to be a persistent, if not increasing, problem with predatory mammals.</p>		
	<p>Proponent should retain an independent specialist to conduct a site inspection and audit of the Project to recommend additional adaptive management for predatory mammals, where appropriate. The results of this audit should be submitted to NIRB.</p>	<p>Agnico Eagle will evaluate this recommendation.</p>
<p>Hunter Harvest Study</p>	<p>Explain in detail how the design of the Hunter Harvest Study (HHS) being employed in 2019 will permit estimation of the total level (or an index of) caribou, muskox, and wolverine harvest by residents of Baker Lake.</p>	<p>The spatial distribution of hunting can be compared between years of the Agnico Eagle study and an earlier study by the NWMB. Results to date indicate that a higher proportion of hunting has occurred in the vicinity of the AWAR since the road was built. A total level of harvest cannot be determined with the current study design; however, Agnico Eagle is open to discussing the feasibility of collecting additional data that permits an estimation of the total level of harvest.</p>
	<p>Proponent should clarify whether a revised HHS strategy, including a revised study design for estimating the two key metrics specified in section 10.2 of the Annual Report (Agnico Eagle 2019, appendix 45) will be developed, when this will be completed and the schedule for implementation.</p>	<p>The metrics currently part of the study design will still be used but Agnico Eagle is open to discussing with the TAG how study design can be refined to provide estimates of other key metrics.</p>
	<p>That the Proponent should clarify whether a consultant is currently retained to undertake this HHS revision.</p>	<p>Gebauer & Associates has been retained.</p>

Topic	Recommendation	Agnico Eagle Responses
	Proponent should clarify what further consultations are planned regarding revision of the HHS including consultation with the TAG.	Previous approach to the hunter harvest study is suitable for collecting harvest data and investigating mine-related effects. However, several modifications have been made. To date, engagement is strong. Agnico Eagle open to discussion with TAG as to what changes would be appropriate or acceptable to the GN.
Wildlife Monitoring and Mitigation for Blasting Activities	Proponent should provide information on blasting activities that occurred along the Whale Tail haul road and at Project mine sites in 2018.	More detail will be provided in the 2019 report.
Terrestrial Ecosystem Management Plan	<p>The Proponent should provide a revised version of the TEMP that reflects all commitments made during the NIRB review of the Project.</p> <p>Proponent should provide a conformity table referencing the sections of the TEMP that address each commitment</p> <p>2019 Annual Report should provide information to demonstrate how have been implemented.</p>	TEMP Version 7 was submitted to NIRB and included all of the commitments made during the review. The 2019 Annual Report will report on the commitment implementation.
Height-of-Land Surveys along the Whale Tail haul road	<p>Proponent should explain why the number of HOL Surveys conducted in 2018 was less than 20% of the minimum number specified in the Project's TEMP.</p> <p>Proponent should explain why HOL surveys were not conducted during the spring caribou migration.</p> <p>Proponent should explain why the frequency of HOL surveys was not increased to every 2 days in 2018 in response to observations of caribou and subsequent Whale Tail haul road closures.</p> <p>Provide a revised version of the TEMP that reflects the commitment made during the NIRB's review of the Whale Tail Pit project to increase the frequency of HOL surveys.</p> <p>2019 Annual Report should provide information to demonstrate how the commitment to increase HOL survey frequency has been implemented.</p>	<p>Please refer to Agnico Eagle's response to GN's recommendation regarding the low number of road surveys, especially in April and May 2018.</p> <p>Please refer to Agnico Eagle's response to GN's recommendation regarding the low number of road surveys, especially in April and May 2018.</p> <p>Please refer to Agnico Eagle's response to GN's recommendation regarding the low number of road surveys, especially in April and May 2018.</p> <p>TEMP Version 7 was submitted to NIRB and included all of the commitments made during the review.</p> <p>Information will be included in the 2019 report.</p>

2.3.1.3. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

In its May 2019 submission, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) provided comments and recommendations based on their mandate which is provided in [Table 14](#) as a summary along with Agnico Eagle’s responses to the concerns.

Table 14: Crown-Indigenous Relations and Northern Affairs Canada Recommendations for the Meadowbank Gold Mine Site and Whale Tail Pit Project and Agnico Eagle’s Responses

Topic	Recommendation	Agnico Eagle Responses
Lake Level Monitoring-Turn Lake	Confirm changes in Turn Lake water levels in 2019 Annual Report	Information will be provided.
Tailings Freezeback and Capping Thickness	Agnico Eagle should 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 (WRSF) remain effective to prevent and control deleterious seepage over long term, and management actions if discrepancies appear.	<ol style="list-style-type: none"> 1. A capping study will be undertaken to implement the CIRNAC recommendation at closure once more thermistors will have been installed in the tailings storage facility (TSF) capping. In the 2019 annual report a meaningful discussion on the thermal data during operation will be included and compared to the conceptual thermal modelling results. 2. As per the Waste Rock and Tailings Management Plan (WRTMP) a study is ongoing to calibrate the thermal model of the Whale Tail WRSF.
	CIRNAC reiterates the importance of its prior recommendation that Agnico Eagle provide more 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.	Study is ongoing and publications are expected to be available in 2019. The 2019 annual report will provide reference to literature published on this subject in 2019 (if any). Agnico Eagle will also comment in the 2019 annual report how these results will influence the cover design of the TSF and RSF.
Progressive Reclamation – Mine Site	Recommends that the next ICRP revision, including updates requested by CIRNAC, be presented in the 2019 Annual Report.	Agnico Eagle acknowledges CIRNAC’s comment and may consider adding some of this information in the next ICRP update. However, this updated version including additional information on progressive closure may not be provide via the 2019 Annual Report.

Topic	Recommendation	Agnico Eagle Responses
Inspections, Compliance Reports and Non-Compliance Issues	Recommends that in addition to providing the list of items discussed as per Section 11.5.1.4 of the 2018 Annual Report, Agnico Eagle should provide high level statements as to whether or not there are any issues associated with each of the areas of discussion.	<ol style="list-style-type: none"> 1. It is Agnico Eagle's intent to continue to refer directly to the NIRB Monitoring Report to capture the whole essence of the interpretation of the report. 2. It is also Agnico Eagle's belief that a summary of the inspections completed in the year is already provided. However, Agnico Eagle will continue to improve information reported in this section in future annual reports, if it's possible to extract the information from the report without removing the context of the findings.
Post-Environmental Assessment Monitoring Program (PEAMP)	Recommends that Agnico Eagle include a temporal analysis identifying trends over time in the data interpretation.	<ol style="list-style-type: none"> 1. It is Agnico Eagle's belief that a comprehensive update is not warranted as part as the PEAMP. According to the proponent's responsibilities identified under Appendix D of the Project Certificate, examinations are provided as required in individual monitoring reports. As such, trending analyses would also not be required under the aforementioned responsibilities. Agnico Eagle is confident that these discussions reference any potential impacts observed. 2. In addition, the annual report is based on an extensive review of the Final Environmental Impact Statement throughout its content and individual monitoring report provided.
Results of Thermistor Measurements for Tailings and Waste Rock Storage Facilities	CIRNAC reiterates its prior recommendation that Agnico Eagle analyze the thermistor monitoring results against early thermal modelling predictions and update its Waste Rock and Tailings Management Plans if large discrepancies are observed between the monitoring results and model predictions in the 2018 Annual Report.	<ol style="list-style-type: none"> 1. A capping study will be undertaken to implement the CIRNAC recommendation at closure once more thermistors will have been installed in the TSF capping. In the 2019 annual report a meaningful discussion on the thermal data during operation will be included and compared to the conceptual thermal modelling results. 2. As per the WRTMP a study is ongoing to calibrate the thermal model of the Whale Tail WRSF

Topic	Recommendation	Agnico Eagle Responses
Compliance Monitoring	Recommends that Agnico Eagle review its internal planning, communications protocols, and management plans and assess if improvements can be incorporated to existing procedures to ensure planning and timely execution of all sampling requirements.	Agnico Eagle has already conducted a review of its internal planning and communication protocols to ensure compliance in regards to MDMER and other water quality monitoring.
Tailings Storage Facility Capacity Limitations	Requests that Agnico Eagle provide a discussion of the implications of existing tailings capacity not being adequate to address current or future life of mine throughput.	Agnico Eagle has received approval for the in-pit disposal project. As per the license condition, an updated Waste Rock and Tailings Management Plan including an updated tailings deposition plan will be submitted in July 2019 and will address this comment.
Geotechnical Implementation and Inspections	<ol style="list-style-type: none"> 1. Requests that Agnico Eagle address the continued ongoing issues of culvert obstruction, blockage, or not being properly located. If continued monitoring is proposed, Agnico Eagle should undertake a risk assessment of potential impacts associated with failure of the culverts during freshet or major storm events. 2. Also requests that no unsafe hazard conditions resulting from physical works (e.g., unsafe slopes, loose rocks, etc.) be left “as-is” once such conditions have been identified. Agnico Eagle should list all such conditions and set out a timeline for addressing them. 	It is Agnico Eagle’s opinion that the implementation plan is sufficient to address the recommendation of the annual geotechnical inspection and that no unmanageable unsafe condition are left outstanding from the 2018 annual inspection. For future annual inspection, Agnico Eagle will add the priority level of the recommendation in the implementation plan with a timeline.
Updated Socio-economic Monitoring Program	CIRNAC will review the updated Kivalliq Projects Socio-economic Monitoring Program (SEMP) following its submission to the NIRB. Conditions 45 and 46 of the NIRB project certificate remain unfulfilled until the Whale Tail Socio-economic Monitoring Plan is provided to the NIRB.	A draft of the updated SEMP was sent to the Kivalliq Socio-Economic Monitoring Working Group (SEMWG), which includes CIRNAC, on June 3rd, 2019 for review. Agnico Eagle had submitted the SEMP to NIRB on June 29, 2019.
Staff Schedules	To streamline the submission of staff schedule forecasts, future annual reports should include copies or hyperlinks to staff schedule forecasts to demonstrate compliance with the project certificate.	If a staff schedule update is required, the staff schedule will be hyperlinked or included in the annual report for the respective year.

Topic	Recommendation	Agnico Eagle Responses
Collaboration with the Government of Nunavut on Career Development	Recommends that Agnico Eagle provide written summaries of meetings it has with the Government of Nunavut (GN) on career development initiatives specific Nunavummiut in future annual report submissions.	Will be included in the annual reports.
Updated Socio-economic Monitoring Program	CIRNAC will review the updated Kivalliq Projects Socio-economic Monitoring Program following its submission to the NIRB. Conditions 45 and 46 of the NIRB project certificate remain unfulfilled until the Whale Tail Socio-economic Monitoring Plan is provided to the NIRB.	A draft of the updated SEMP was sent to the Kivalliq SEMWG, which includes CIRNAC, on June 3rd, 2019 for review. Agnico Eagle submitted the SEMP to NIRB on June 29, 2019.
Annual joint "Agnico Eagle Kivalliq Projects" Socio-economic Monitoring Reports	CIRNAC will review the final 2018 socio-economic monitoring report once it is made available for review by the NIRB.	
Monitoring demographic changes	CIRNAC will review the upcoming 2018 Socio-economic Monitoring Report to confirm whether information is provided on the number of Inuit employees who relocated from 2017 to 2018.	
Access to housing	Recommends that Agnico Eagle to continue its efforts to coordinate with relevant Government of Nunavut departments on training efforts as per Condition 61.	Will continue to make efforts to comply with Condition 61.
Community infrastructure monitoring	Recommends that Agnico Eagle ensure an effects monitoring program is developed with the GN to identify project-related pressures to community infrastructure in all point-of hire communities in the Kivalliq region. The results of this monitoring program for the year 2018 should be provided to the NIRB. Subsequent results should be provided to the NIRB in future annual report submissions.	The Kivalliq Socio-Economic Monitoring Program (KvSEMP) includes measures to monitor project-related pressure to community infrastructure in Baker Lake and Rankin Inlet, as these are the communities most affected by Agnico Eagle's mining activities. Results of monitoring are included in Agnico Eagle's 2018 Socio-Economic Monitoring Report, submitted to the NIRB on June 29, 2019.
CIRNAC Inspection 2018 reporting period	Noted that two pieces of information requested by the Water Resource Officer had not been received.	Agnico Eagle provided the information in an email on September 5, 2018, and received an email from the inspector acknowledging receipt.

2.3.1.4. Environment and Climate Change Canada (ECCC)

In its May 2019 submission, Environment and Climate Change Canada (ECCC) provided recommendations and requested information as summarized in [Table 15](#) along with Agnico Eagle’s responses for both the Meadowbank and Whale Tail Pit Projects.

Table 15: Environment and Climate Change Canada Recommendations for the Meadowbank Gold Mine Site and Whale Tail Pit Project and Agnico Eagle’s Response

Topic	Recommendation	Agnico Eagle Responses
Dustfall Sampling Technique	Conduct dustfall sampling for all sampling locations according to the ASTM method (2017), specifically at a sampling height of two meters.	The 2019 study will be provided in subsequent annual report along with sampling method and mitigation measure that will be adopted; and Agnico Eagle will be available to discuss the study results.
Canadian Ambient Air Quality Standards	Re-iterated the recommendation that monitoring results be compared to the most stringent air quality standards applicable to a given area. Further, recommended Agnico Eagle: <ul style="list-style-type: none"> a) provide a comparison of annual average concentrations of nitrogen dioxide to the Canadian Ambient Air Quality Standards (CAAQS) in future Air Quality Monitoring Reports; and b) update relevant Management Plans to include the CAAQS. 	Agnico Eagle is of the view that it is not appropriate to compare annual averages of 30-day average NO ₂ concentration observed at Meadowbank to the CAAQS and provided the rationale as part of their response.
Dust Suppression Activities	Provide more details regarding dust suppressant activities, including detail on the following: <ul style="list-style-type: none"> i) The use of road watering, including timing, frequency, and volumes applied. ii) Dust suppressant activities for the Whale Tail haul road. iii) How dust suppressant activities were triggered, including the use of dustfall measurements, active particulate matter monitoring, visual dust observations, and an account of community input on the issue of dust. 	<ol style="list-style-type: none"> 1. Mine site road watering at both Meadowbank and Whale Tail was applied on a daily basis during frost-free season (May to October), as needed. For Meadowbank, the volume of water used for this activity was not recorded by Agnico Eagle as the water tank was the same as the one use by the mill, and thus no distinction was possible. For Whale Tail, a total volume of 1,943 m³ of water was use for both the mine site and the Whale Tail haul road. 2. Dust suppression along the AWAR and Whale Tail haul road will be triggered by Air Quality and Dustfall Monitoring plan.

Topic	Recommendation	Agnico Eagle Responses
Reconnecting Flooded Pits	The Proponent, in conjunction with the 2019 Annual Report, should revise management and monitoring plans that are relevant to reconnecting flooded pits with surrounding fish bearing waterbodies to clarify that dike breaching is dependent on demonstrating that pit water quality has stabilized and is consistently acceptable for discharge to the receiving environment.	Acknowledges ECCC's comments and will add the request in the 2019 Water Management Report and Plan.
Laboratory Detection Limits	Continues to recommend that the Proponent seek out laboratories with sufficiently low detection limits to be able to properly assess samples, thereby supporting comparison of measured data to predicted values.	Will continue to update its water quality model using the best information available and further noted that the laboratory services selected are conducted by accredited facilities and reach the analysis lower detection limits where the results can be compared to the Canadian Council of Ministers of the Environment (CCME) guidelines.
Managing Missing Data	<ul style="list-style-type: none"> i) Propose another method for managing missing monitoring data (rather than arbitrarily assigning a value of zero), and provide an accompanying rationale. ii) Provide a discussion on why missing chromium and thallium data are assumed negligible in the water quality forecast model when some of the observed measured concentrations exceed CCME water quality guidelines. iii) Provide a discussion on why there is no data for fifteen data points for the 2019 Meadowbank Water Quality Forecasting Update. 	Noted that input water quality used in the water quality forecast model is based on water quality analysis sampled regularly on a yearly basis. For the 2019 Meadowbank Water Quality Forecasting Update, the parameters indicated by a zero value indicate that no analysis was available.
Mercury Monitoring Plan	Provide any associated monitoring data for the consultant reports provided to support the proposed approaches of (1) collecting only surface level grabs, rather than monitoring vertical water quality and (2) collecting sediment grab samples, rather than annual core samples.	Agnico Eagle provided the requested reports as appendices in response to ECCC's request.

Topic	Recommendation	Agnico Eagle Responses
Possible Acid Rock Drainage/Metal Leaching (ARD-ML)	Test the orange coloured water for ARD-ML and demonstrate how the proposed mitigation will reduce/prevent the incidence of the ARD-ML downstream if it is found to be occurring.	Water was tested in 2017 and in 2018 and all parameter were confirming the hypothesis that the orange coloration was a bacterial process and not ARD-ML. No pH reduction was measured in the Central Dike seepage water. Testing of this water will resume at freshet in 2019 with a similar program to continue to confirm the hypothesis of a bacterial process.
Long-tailed Duck Mortalities	Two Long-tailed ducks were found dead on separate occasions near the Assay Lab and suspected to have collided with the building. Recommended that all migratory bird incidents and mortalities to ECCC and provide an assessment of the various factors listed in the comments to determine if any were factors that contributed to the mortalities.	Will provide report related to all migratory bird incidents and mortalities at the email address referenced in the recommendation. Agnico Eagle has conducted an assessment of the various factors detailed above and determine that there are no apparent reasons for these two mortalities
Program for Regional and International Shorebird Monitoring (PRISM) and North American Breeding Bird Survey Route (BBS)	Is of the view that more analysis of the data would be helpful to inform the future of the PRISM monitoring program and/or to support a change to the monitoring objective. Also has concerns with the proposed monitoring frequency in the Terrestrial Ecosystem Management Plan (TEMP) (i.e., every 3 years) and potential for observer variation for the BSS monitoring program. An alternative design may need to be considered to ensure that this work is a valuable contribution to the national monitoring program.	Will discuss further with ECCC regarding the concerns and suggest addressing these concerns through the Terrestrial Advisory Group.
Fish-out Waterbird Observations	Provide the waterbird observations associated with the Whale Tail fish-out and confirm that no by-catch incidents occurred.	No waterbird was observed in the vicinity of the Whale Tail North Basin during the fishout, and thus, no by-catch incidents occurred.

Topic	Recommendation	Agnico Eagle Responses
Marine Mammal and Seabird Observer (MMSO) Report	Provide staff with adequate training to implement established ECCC seabird survey protocols as ECCC has concerns about the quality of the data provided in the MMSO report	Has worked with ECCC and was referred to Edgewise company for formal training. A poster was also created to improve bird identification and the presentation provided by ECCC was forwarded to the shipping company, which was used to increase the effectiveness of the bird survey. Agnico Eagle will also investigate with the shipping company the possibility of formal training in the future. This training can be held by Edgewise or other qualify company.

2.3.1.5. Fisheries and Oceans Canada (DFO)

In its May 2019 submission, Fisheries and Oceans Canada (DFO) provided comments specific to Project Certificate 008 Terms and Conditions 21 through 24, and 40 and a summary of the recommendations provided by DFO are provided in [Table 16](#) along with Agnico Eagle's responses to the concerns.

Table 16: Fisheries and Oceans Recommendations for the Whale Tail Pit Project and Agnico Eagle's Responses

Topic	Recommendation	Agnico Eagle Responses
Whale Tail Site (<i>Fisheries Act</i> Authorization 16-HCAA-00370 Condition 2.3.3 and NIRB Project Certificate Term and Condition 22)	A proper blast monitoring plan needs to be developed for every blasting activity outside of the areas covered in the current blast monitoring plan (for Portage, Vault and Whale Tail Pit). Reminded Agnico Eagle that adherence to blasting thresholds are required for all blasting activities near, or in fish bearing waterbodies and watercourses. Blasting activities that occur outside of areas covered in a blast monitoring plan, are still required to adhere to blasting thresholds and that DFO needs to be notified.	Will notify DFO when exceedances occurred, during the egg incubation from August 15 to June 30, outside areas covered in the Blast Monitoring Plan.
Fishout Program Summary	Concerns were raised with respect to the completion of the fishout program conducted at Whale Tail Lake and the sufficiency of fish out target end-point being met.	Agnico Eagle will wait on DFO engagement regarding the fulfillment of obligations and validity of conclusion of the Whale Tail Fishout Program

Topic	Recommendation	Agnico Eagle Responses
Wildlife Monitoring on Vessel	Suggested that opportunity to discuss the marine mammal protocols, implementation of protocols and adequacy of training could be beneficial to interested parties and the success of the marine mammal monitoring program overall.	Desgagnés Group, the contractor responsible of fuel and goods delivery at Baker Lake, has been collaborating on the voluntary whale watching data collection project of the Marine Mammal Observation Network (MMON) since 2015. Each year, training is given by MMON to ship officers to train them in marine mammal identification and observation. In addition, Agnico Eagle has reached out to DFO regarding training opportunities and to discuss survey protocols.

2.3.2. NIRB’s Review of Agnico Eagle’s 2018 Annual Report for the Meadowbank Gold Mine Project

As part of its Post Environmental Assessment Monitoring Plan (PEAMP) and the requirement of Appendix D of Project Certificate No. 004, Agnico Eagle provided a summary on how the current environmental and socio-economic effects of the Meadowbank mine site compared to the impacts as predicted in the Final Environmental Impact Statement (FEIS) for the following:

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

For each of these categories, Agnico Eagle summarized the valued ecosystem components (VECs) identified in the FEIS, the original impact predictions and the management plans/mitigative measures submitted as part of the FEIS, implementation of mitigation in 2018, and whether impact predictions continue to be supported. The review focused on the potential impacts for which monitoring was recommended for the phase of mine activity currently underway (i.e. operations). Overall, Agnico Eagle concluded, in its 2018 Annual Report, that the impact predictions within the FEIS continue to be supported by the monitoring results.

The NIRB reviewed these items as presented in Agnico Eagle’s 2018 Annual Report with conclusions summarized below:

2.3.2.1. Aquatic Environment

Agnico Eagle reported in the PEAMP section of the 2018 Annual Report that observed impacts to surface water quantity, surface water quality, and fish and fish habitat measured in 2018 appeared to have been within FEIS predictions, or if not were not expected to result in adverse

environmental impacts. Further, Agnico Eagle noted that Meadowbank’s water quality and quantity monitoring programs intended to meet the requirements of the Nunavut Water Board (Type “A” license) and Environment Canada MDMER criteria.

As in previous years, the PEAMP section of the 2018 Annual Report did not provide a discussion on Agnico Eagle’s programs or any discussion on the changes observed/detected at the aquatic stations. The NIRB notes that Agnico Eagle did provide a summary of the Core Receiving Environment Monitoring Program report referring to the full report but no trends were provided in the Annual Report. 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. Agnico Eagle concluded in the annual report that since observed impacts to water quantity, water quality, fish and fish habitat measured in 2018 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.

2.3.2.2. **Wildlife Monitoring**

Agnico Eagle reported in the PEAMP section of the 2018 Annual Report that overall, two (2) Terrestrial Ecosystem Monitoring Program thresholds were exceeded or potentially exceeded in 2018: onsite waterfowl mortalities; and sensory disturbance of caribou. Since onsite waterbird mortality occurred beyond the FEIS thresholds in 2018 (death of two [2] ducks after apparently flying into a building), an assessment of historical trends for this component was conducted by Agnico Eagle, and summarized as follows:

- a. No waterfowl were killed in 2011, 2012, 2013 or 2014.
- b. In 2015, two (2) mortalities occurred; a dead duck was found outside a building, and a dead Canada Goose was found in the tailings pond.
- c. In 2016, a dead juvenile Merganser duck was caught in gill nets during the Phaser Lake fish-out program.
- d. In 2017, no onsite waterbird mortalities were reported.

Based on the data above, Agnico Eagle concluded that there is no clear trend towards increasing mortalities of waterbirds on the Meadowbank site, as determined through mine-site surveys.

With respect to sensory disturbance of caribou, Agnico Eagle noted that potential disruption of caribou movements due to the Meadowbank all-weather access road (AWAR) was first reported in 2015, and analysis of the data are ongoing. Most 2018 caribou activity was observed during the spring migration requiring numerous road closures and restrictions along the Meadowbank AWAR and the Whale Tail haul roads. The roads were also observed to be deflecting many of the collared caribou during the spring, late summer, and fall seasons. Although 2017 collar data showed fewer road-related effects, 2015 and 2016 collar data also observed that the AWAR appeared to be altering natural movement patterns of collared caribou. Agnico Eagle and regulatory agencies are committed to conducting more detailed analyses of caribou monitoring data, satellite collar data, hunter harvest activity, and other potential influences on caribou movement and migration to adaptively manage and minimize project-related effects on Caribou (see Section 12.2.5, zone of influence study description). Agnico Eagle will also explore the link between caribou road crossings and road closures.

Creel Survey (Condition 51)

Since 2016, 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 Government of Nunavut, Kivalliq Inuit Association and Hunters and Trappers Organization [Baker Lake] 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 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 in 2016 and met with stakeholders in 2017 and 2018 in order to develop a new fully integrated HHS which is anticipated start by March 2019.

Thus, moving forward Agnico Eagle intends to continue working with the parties to ensure a representative number of participants and long-term success of the program. The HHS would be implemented in 2019 with this collaborative approach, and to ensure success in re-starting the HHS Agnico Eagle has contracted a third-party consultant.

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 Awar. Since 2016, 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 HHS due to decrease in participation rates. Agnico Eagle planned to initiate the studies in 2018 with the collaborative approach as summarized in the 2017 Annual Report (Agnico Eagle 2018b); however, it was noted in the 2018 Annual Report that due to tight timelines for implementation combined with multiple similar projects within the community on data collection (community base water monitoring programs, watershed studies, NWMB Harvester recruitment) caused resources to be spread. Therefore, Agnico Eagle decided to hold its HHS strategy to not add confusion and impact community-based projects for the 2019 reporting year.

- The NIRB looks forward to reviewing the results from these two (2) studies in the 2019 Annual Report but notes that for the 2018 reporting year that Agnico Eagle were not in compliance with Terms and Conditions 51 and 54.

2.3.2.3. Noise Quality Monitoring

Agnico Eagle reported in the PEAMP section of the 2018 Annual Report that for all sites and monitoring dates with available data at the Meadowbank site, values measured in 2018 were lower than those predicted in the FEIS documents, except one datapoint for Station R5. For this station, Agnico Eagle noted the prediction of one-hour L_{eq} ¹ values of 57 dBA was exceeded for one of the 22 monitored hours, with an L_{eq} of 58 dBA. Agnico Eagle noted that the exceedances were possibly due to animal interference or a helicopter fly-over and since the exceedance only occurred for one of twenty-two time-points, the event was not investigated further.

Agnico Eagle also reviewed noise data measured since 2009 for stations R1 to R5 and there was no clear trend towards increasing sound levels at any site, with the highest sound levels generally occurring in 2012.

2.3.2.4. Air Quality Monitoring

Dustfall Monitoring along the AWAR

Since 2012 Agnico Eagle has conducted dustfall monitoring studies to characterize dust deposition rates at various distances from the Meadowbank all-weather access road (AWAR) in order to determine the potential for impacts to habitat in excess of those predicted in the FEIS. The 2012 study also included dustfall measurements along the proposed Whale Tail 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. In 2018 Agnico Eagle conducted a study in order to confirm results of the 2016-2017 study and observe changes in dustfall rates in areas with and without dust suppression. In 2018, the dustfall sampling program was to assess dustfall rates in five (5) AWAR dust suppression locations (km 11, 25, 50, 69, 80), as well as at two (2) reference sites without dust suppression (km 18 and 78) that have been monitored since 2012. Agnico Eagle indicated that dustfall rates along the Meadowbank AWAR continue to lie well within the range of historical values. For samples collected in 2018 at and beyond the 100 m distance (smallest assumed zone of influence in the FEIS), three (3) of 84 samples exceeded the Alberta Environment recreational area guideline. Since this guideline is based on aesthetic concerns, Agnico Eagle concluded it is unlikely that impacts to habitat caused by road dust are occurring beyond FEIS predictions. Further, Agnico Eagle stated that 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. Agnico Eagle indicated that it will continue to conduct the dust monitoring in 2019 and following concern raised by Environment and Climate Change Canada (ECCC), Agnico Eagle will conduct a supplemental study in 2019 to confirm that dustfall rates measured at ground level continue to align with those measured on stands.

As in previous years and as raised by regulators, the NIRB notes that dust suppressants are not being applied to the whole AWAR as required by Condition 74. The AWAR dust monitoring report demonstrated a reduction in measured dustfall using calcium chloride as the dust

¹ L_{eq} = Continuous equivalent of A-weighted sound pressure level in decibels (dBA) over a specified time period

suppressant indicating that the chosen dust suppressant is effective at reducing dust levels. Sections of the AWAR that were treated with dust suppressant generated less airborne dust than untreated sections; however, dust suppressants are only being applied to a small section of the AWAR with areas along the majority (>90%) of the 110 km AWAR were still subjected to relatively higher dust emissions compared to treated areas. In addition, the 2018 study demonstrated that the dust suppression was effective over a one (1) to two (2) month time period only, similar to previous years. In response to the Board's concern with respect to this issue in 2018, Agnico Eagle noted that it believes that dust suppression efforts and monitoring studies to date fulfill the term and condition.

As noted by ECCC, the mine site dust predictions in the FEIS did not assume mitigations such as road watering would be used. As such, if no road watering was assumed in the FEIS dust predictions but monitoring results with dust suppressants were still at times above the predictions and above the Alberta Dustfall and Government of Nunavut – Total Suspended Particulate (GN-TSP) guidelines (three [3] out of 75 samples exceeding the GN 24-h standard of 120 micrograms/cubic metre [$\mu\text{g}/\text{m}^3$]) it is therefore expected that the FEIS predictions have potentially underestimated the amount of dust produced on the mine site.

Finally, as raised previously, the NIRB still notes concern with respect to Agnico Eagle's dust collection methodology with the installation of canisters at ground level and not on 1.5-2 metre poles as is the common practice. As noted by ECCC, placing canisters on the ground have limitations to data quality, such as the influence of downwash or ground dust, and there is a wide variability in the concentration of particles subject to settling at heights of less than 2 metres. Finally, this methodology makes it difficult to compare the dustfall data to other sites as well as any dustfall objective.

On-site air and dust monitoring

In its 2018 Annual Report, Agnico Eagle stated that the main monitoring program for air quality recommended in the FEIS is static dustfall, which is being continuously monitored at four (4) locations around the mine site. In addition, Agnico Eagle conducts monitoring of total suspended particulate (TSP), particulate matter – 10 (PM_{10}), $\text{PM}_{2.5}$ and NO_2 , in accordance with the Air Quality and Dustfall Monitoring Plan. Agnico Eagle noted that no exceedances occurred for NO_2 , $\text{PM}_{2.5}$, or PM_{10} . In addition, greenhouse gases (GHG) emissions were below the predicted value. Agnico Eagle also observed that no trends towards increasing dust generation or deposition were apparent since monitoring began in 2012; however, baseline concentrations were not evaluated for any the stations currently being measured and overall impact predictions appeared to be supported by the monitoring results.

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 two (2) out of 44 samples exceeded the Alberta recreational area guideline.

Estimated green house gas emissions for the Meadowbank site were 186,122 tonnes CO_2 equivalent, which is similar or slightly lower to the values obtained since 2015.

Incinerator

In its 2018 Annual Report, Agnico Eagle noted that the incinerator was operational throughout 2018 and the Daily Report Logbook entries cover all months in 2018. 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, 3,749 cubic metres of waste was burned in the incinerator.

Agnico Eagle stated that there were eight (8) times during 2018 where the temperatures did not reach 1,000°C in the secondary chamber, noting this represents 2.36% of total burn out of the 339 days the incinerator was in operation for the 2018 year.

Stack testing was conducted by Agnico Eagle in October 2018 by an outside company and the results from the tests indicated that the application standards for dioxins and furans (PCDD/F) were met for all tests. In addition, the mercury level average was below the ECCC guidelines during the stack testing.

In addition to stack testing, Agnico Eagle continued to conduct ash sampling from the incinerator bi-annually and the results indicated no exceedance of the Government of Nunavut Environmental Guidelines for Industrial Discharge.

Finally, Agnico Eagle noted that a composter would be put in place in 2019 to reduce the quantity of waste burned by the incinerator.

2.3.2.5. Permafrost

Agnico Eagle noted that in general, degradation of permafrost was predicted in association with the construction of mine buildings, and development of permafrost was predicted in association with dikes, tailings storage facility, and waste rock storage facility construction. Predictions are typically related to closure-phase impacts, so results of monitoring to date are presented within the Annual Report to demonstrate progress, but validity of the prediction (i.e., whether or not the prediction is supported by the monitoring data) cannot be determined at this time.

2.3.2.6. Areas Requiring Further Study or Changes to the Monitoring Program

Appendix D and the Annual Report

The NIRB notes that Agnico Eagle's 2018 Annual Report provided a detailed analysis of results from its 2018 monitoring program and that it compared observed impacts noted in 2018 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. Agnico Eagle's interpretation Appendix D of the Project Certificate is to discuss trends only when impacts are observed, and thus Agnico Eagle believes that the condition is being met and further interpretation is not necessary.

As noted in previous years, the NIRB found that the discussion and analysis within the PEAMP should be expanded to include all Valued Ecosystemic Component (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 as a summary in the annual report 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 2018 was helpful, rationale for why these were different was not always clearly presented. Further, as noted by regulatory parties Agnico Eagle should be including Agnico Eagle a temporal analysis identifying trends over time in the data interpretation portions of the annual report for all VECs and VSECs.

Final Closure and Reclamation Plan

Throughout the 2018/2019 operating year, Agnico Eagle has been completing mining in a number of the deposits in the Meadowbank Area as noted at the beginning of this report. Further, the NIRB notes that Agnico Eagle is at the end of the predicted mining life of the Project. No information has been provided to the NIRB on the Interim Closure and Reclamation Plan on the closure of these deposits.

- The NIRB is requesting Agnico Eagle update the Interim Closure and Reclamation Plan to the *Final Closure and Reclamation Plan* and include more details on progressive reclamation for these areas as well as for the areas identified by Crown-Indigenous Relations and Northern Affairs Canada, Comment 1.4 (see CIRNAC Comments on 2018 Annual Report); tailings storage facility and waste rock storage facility. The NIRB requires the updated plan in the 2019 Annual Report.

2.3.3. NIRB's Review of Agnico Eagle's 2018 Annual Report for the Whale Tail Pit Project

Even though the NIRB has not released the project-specific monitoring program for the Whale Tail Pit Project, the NIRB would expect that some form of post-environmental assessment monitoring would have been provided in Agnico Eagle's 2018 Annual Report as many of the plans state that the comparison would be completed. The NIRB has reviewed the 2018 Annual Report for the same items as described in [Section 2.3.2](#) and summarized the conclusions below:

2.3.3.1. Aquatic Environment

Agnico Eagle stated in the 2018 Annual Report that the Whale Tail Project was merged with the Meadowbank and Baker Lake Core Receiving Environment Monitoring Program reporting framework in 2018. Baseline data collection continued for most of the study area lakes in 2018. With the onset of in-water construction activities in Whale Tail Lake, Whale Tail Lake -South Basin (WTS) and Mammoth Lake (MAM) transitioned from control to impact designations in late July and November, respectively. While no major in-water construction activities occurred in Mammoth Lake in 2018, road construction and quarry development adjacent to the lake in the fall of 2018 had the potential to affect downstream water quality in this lake; subtle changes in water quality were observed in the November sampling event. Given the limited amount of data in the "after" period and the absence of site-specific triggers and thresholds, this year's assessment of spatial and temporal trends focused on visual identification of construction-related changes. Among the parameters measured in the November water samples, hardness, TDS, nutrients (e.g., nitrate and phosphorus), metals (e.g., total and dissolved aluminum, total chromium, and total iron) were measured at higher concentrations compared to earlier in the year

and compared to baseline November events in 2016 and 2017. Similar to Whale Tail Lake-South Basin (WTS), there were no measured exceedances of the Canadian Council of Ministers of the Environment (CCME) water quality guidelines for parameters with effects-based thresholds.

With respect to the phytoplankton community, there was no evidence to suggest site-related activities caused changes in primary productivity in the near-field areas (Mammoth Lake and WTS) due to construction activities in 2018. The benthic invertebrate (benthos) community structure (taxa richness) and function (abundance) is typical of northern headwaters lakes in the region as noted by Agnico Eagle. Agnico Eagle observed that the normal range of species identified among the various study areas is 10 to 15; in 2018 there were between 13 and 20 taxa identified at WTS. The comparatively high taxa richness, combined with no apparent change in abundance, demonstrated that dike construction did not alter the structure or function of the benthos community in 2018.

Lakes in the Whale Tail study area have naturally-high concentrations of some metals. Agnico Eagle noted that arsenic, cadmium, chromium, copper, and zinc exceeded the CCME interim sediment quality guideline in at least one sample collected in 2018. Of the five (5) metals, arsenic is particularly enriched in sediments throughout the study area lakes, with most samples exceeding the CCME probable effect level sediment quality guideline. Agnico Eagle stated there was no indication of a temporal increase in sediment metals concentrations at WTS (or any other area) in 2018 relative to the baseline period.

Hydraulic Conditions and Groundwater Monitoring – Condition 15

Groundwater samples were collected from ports 2, 3, 4 and 6 of the Westbay multi-level well in November 2018. As noted by Agnico Eagle, although the calculated total dissolved solid (TDS) concentrations were higher than when the well was sampled in 2016, the concentrations were not considered to represent an increase in formation groundwater TDS because the TDS profile in the hydrogeological models were based on the more reliable and applicable 2016 data.

Similar to Crown-Indigenous Relations and Northern Affairs Canada's concern in [Section 2.2.3.2](#), the NIRB notes that only a single Westbay multi-level well is used by Agnico Eagle to collection groundwater samples from the Whale Tail property with no specific plans to install any new monitoring wells. This does not appear to satisfy the requirements of Condition 15 as an additional deep groundwater well would be desirable to define and monitor both vertical and horizontal groundwater flows.

- The NIRB requests that within 30 days Agnico Eagle provide reasoning on why additional deep groundwater wells have not been installed to be able to define and monitor both vertical and horizontal groundwater flows especially when Agnico Eagle has had problems with the groundwater monitoring program at the Meadowbank site since its inception until 2018.
- The NIRB further requires that Agnico Eagle revise the Groundwater Monitoring Plan to include details of effective and feasible options available for mitigation if arsenic concerns materialized. The revised Groundwater Monitoring Plan should be provided as part of the 2019 Annual Report.

Mammoth Lake Trophic Studies – Condition 23

As required by Condition 23, Agnico Eagle is required to conduct several different studies to support the conclusions that a change in trophic status in Mammoth Lake would not impact fish productivity. This analysis was not completed for the 2018 year but Agnico Eagle noted that this will be investigated through a site-specific study conducted by University of Waterloo (UW) researchers in partnership with Agnico Eagle. A research agreement for these projects were signed in late 2018.

Methylmercury studies at the Whale Tail Site – Condition 63

The Mercury Monitoring Plan (MMP) was developed to define the sampling methods and data evaluation that will be used to assess impacts of the Project on concentrations of mercury in the Whale Tail South flooded area. The data collected for the 2018 year occurred during the construction of the Whale Tail Dike and is considered to be baseline data for all sampling locations as no flooding occurred prior to mercury monitoring occurring in August of 2018. Results from many of the baseline data collected were not available when the report was released; however, the sediment chemistry for one location in Whale Tail Lake indicated that total mercury in WTS is below the CCME guidelines.

2.3.3.2. Wildlife Monitoring

Migratory Birds and Raptors

As noted in the 2018 Annual Report active bird nest surveys were conducted in the summer of 2018 to assess the degree of risk posed to migratory birds by mining-induced flooding during the nesting period, and to determine the most effective bird deterrents and how they should be applied. A total of 50 nests were identified and this included 15 waterbird nests and 35 upland bird nests. Agnico Eagle noted that these results indicated that although the proportion of waterbird nests was higher than predicted in the Final Environmental Impact Statement (FEIS; 10 nests), total impacts of flooding to nesting birds may be lower than predicted (a total of 98 total nests were assumed to be impacted in the FEIS as 10 waterbird nests and 88 upland bird nests).

No active raptor nests were monitored within the Whale Tail Pit and Whale Tail haul road local study area in 2018. Raptors recorded along the Whale Tail haul road included Rough-legged hawks, a Bald Eagle and a snowy owl.

Wildlife Mortality – Condition 33

No wildlife mortalities related to the Whale Tail haul road were reported in 2018. At the Whale Tail Pit site, one (1) arctic fox was found dead in the grease trap building which resulting in subsequent maintenance around the building to prevent wildlife entering the building.

Caribou and Muskox

Agnico Eagle noted that caribou were observed on a regular and year-round basis in and around the Meadowbank and Whale Tail sites and along the AWAR, Vault haul road, and Whale Tail haul road in 2018. The highest number of Caribou reports were from June, July, August, October, and November which led numerous road closures and restrictions were required along the

AWAR, Vault haul road, and Whale Tail haul road. The highest Caribou densities in 2018 were observed between Km 5 and 19, and Km 50 and 55 along the Whale Tail haul road.

Muskox individuals and herds, ranging in size from two (2) to 30 individuals, were reported on numerous occasions in 2018 at the Meadowbank and Whale Tail Pit site but particularly between June and August. No deterrence was needed for any of these observed animals but only one road closure was required due to the presence of muskox herds along the AWAR.

Road Closures

As described in [Section 2.3.2.2](#), most 2018 caribou activity was observed during the spring migration triggering numerous road closures and restrictions along the Meadowbank AWAR and the haul roads. The roads were also observed to be deflecting many of the collared caribou during the spring, late summer, and fall seasons. During this time period, the Whale Tail haul road (or Amaruq haul road) had multiple road closures from approximately mid-April to late-May and the third week of October due to significant movements of caribou in or near the area. However, the Whale Tail haul road was open to authorized convoys of essential traffic^[1] during most of these closures with the convoys escorted by the Environment Department. Further, in review of Tables 3.7, 3.8 and 3.9 of the 2018 Wildlife Monitoring Report (Agnico Eagle, 2019e) it is noted that there were periods where the road was re-opened to ‘restricted’ traffic, however there is no explanation between what is meant by “restricted” versus “closed”. In response to the Government of Nunavut’s question on what is meant by the term “restricted”, Agnico Eagle noted that “restricted” meant that “*only obligatory small vehicles or light trucks are permitted to use the road. Tankers or other heavy equipment for hauling, construction or maintenance are not allowed. This means that the amount of traffic using this portion of the road was significantly decreased.*”. Agnico Eagle continues with stating that when delivering goods or when allowing crew change, convoys are led by the Environment Department in collaboration with the Baker Lake Hunters and Trappers Organization and/or Kivalliq Inuit Association. This response is confusing as there is no clear distinction between what is considered “restricted” traffic versus “closed – except for authorized convoy” traffic. Further, no information was provided in Table 3.9 of the 2018 Wildlife Monitoring Report on what vehicles consisted as part of the convoy traffic during the “restricted” and “closed” periods for the haul road. It is also noted that the implementation of ‘restricted’ traffic during road closure periods does not appear to align with the mitigation measures specified in the Terrestrial Ecosystem Management Plan (TEMP). This makes it difficult to determine if the mitigation measures for caribou are being implemented consistently and according to thresholds agreed upon in the TEMP, and if they are effective in reducing impacts to caribou.

- The NIRB requests that Agnico Eagle clearly identify the difference between “restricted” traffic, “closed – except for authorized convoy” traffic, and “closed” traffic for all roads including the Meadowbank AWAR, Vault haul road and the Whale Tail haul road in its

^[1] The Terrestrial Ecosystem Management Plan defines essential traffic as “*vehicles operated for the purpose of maintaining the safety of personnel, Emergency Response Team (ERT), security and wildlife monitoring.*” (TEMP, version 6, p. 38)

TEMP. The updated Terrestrial Ecosystem Management Plan is expected in the 2019 Annual Report.

- The NIRB also requests a summary of what type of vehicles were allowed on the roads during the restricted periods and/or road closures, including detailed reporting of the frequency and composition of convoys during each road closure in the annual report and include. This information should be provided as part of the table that summarizes the road restrictions (e.g., Table 3.7 of the 2018 Wildlife Monitoring Report). In addition, the Proponent should ensure that road closures as a mitigation measure are being applied according to thresholds established in the TEMP and the definitions of essential and non-essential traffic. This information should be included in the 2019 Annual Report.

2.3.3.3. Noise Quality Monitoring

As required by Condition 5 of Project Certificate No. 008, the 2018 noise monitoring program at Whale Tail was conducted according to the Noise Monitoring and Abatement Plan. Agnico Eagle noted that there was no exceedance in 2018 for daytime and nighttime sound levels; however, not all stations (station R6) were monitored due to scheduling difficulties. Agnico Eagle will be monitoring all stations for the Whale Tail Pit Project (stations R6 to R11) in 2019.

2.3.3.4. Air Quality Monitoring

Dustfall Monitoring along the Whale Tail haul road

Dustfall transects were established between kilometers 18 & 19, 36 & 37, and 54 & 55 along the Whale Tail haul road in 2018. At each transect, stations were installed with jar samplers located on the ground at 25 m, 100 m, 300 m and 1000 m upwind, (east/north) and downwind (west/south) of the haul road. The results from the all samples collected along the Whale Tail haul road were within FEIS predictions with the exception of one 25-m sample at km 37. Agnico Eagle noted that given the high variability observed in dustfall samples, particularly in locations close to the road, this isolated event is not expected to result in impacts greater than predicted overall. Agnico Eagle further noted based on the modelling of the dust emissions on the road, and the experience and monitoring data of the Meadowbank AWAR from Baker Lake to the mine site, use of chemical dust suppressants is not expected for the Whale Tail haul road. Chemical dust suppressants may be only used as a last resort and only in accordance with the Environmental Guidance for Dust Suppression published by the Government of Nunavut Department of Environment.

The NIRB notes that Term and Condition 2 of Project Certificate No. 008 requires the Proponent to apply dust suppressants along the AWAR (also covered by the Term and Condition 74 of Project Certificate No. 004), the Whale Tail haul road and the Whale Tail Pit site roads to reduce dust levels along the mine roads and to meet the commitments to the utilization of dust suppressant made by Agnico Eagle during the Final Hearing for the Whale Tail Pit Project.

As noted in [Section 2.3.2.4](#), the NIRB has concerns with respect to Agnico Eagle's dust collection methodology utilized along the AWAR and also has the same concerns with the methodology of the installation of canisters at ground level along the haul road.

On-site air and dust monitoring

In its 2018 Annual Report, Agnico Eagle noted that no monitoring of air quality and dustfall occurred in 2018 at the Whale Tail Pit site and monitoring will commence in 2019 according to the Air Quality and Dustfall Monitoring Plan. This station is located at the communications tower on the eastern boundary of the Whale Tail Pit.

Incinerator

There is currently no incinerator at the Whale Tail Pit Project. However, Agnico Eagle is authorized to use an incinerator to dispose of solid waste from the accommodation camp, kitchen, shops, and offices that cannot be recycled for the exploration activities.

Air Quality and Dustfall Monitoring Plan

Similar to Environment and Climate Change Canada's concern (see [Table 7](#)), the NIRB notes that the 2018 Air Quality and Dustfall Monitoring Plan did not provide for the management of any air quality or dust issues indicated by the data collected by following the monitoring plan.

- The NIRB is requesting that Agnico Eagle compile all of the air quality and dust monitoring, mitigation, management information, and studies into one document to be submitted within 30 days of receipt of the request. This document should then be updated based on the data that is collected and presented in the annual report.

2.3.3.5. Permafrost and Talik Distribution

Agnico Eagle noted that in 2018, studies were initiated with a consultant to develop the detailed engineering design for the capping of the Whale Tail waste rock storage facility as per the requirements of Condition 10. This included thermal modelling to re-assess the capping thickness. This information would be used in the future to inform the instrumentation program to ensure that the Waste Rock Storage Facility cover perform according to its design intent.

As noted by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), Agnico Eagle did not satisfy the requirements under Condition 10 for the reason as summarized in [Table 8](#) of this document.

- The NIRB requires that within 30 days Agnico Eagle adequately respond to all aspects of the requirements established by Condition 10 including providing the following:
 - Provide description of how the Proponent interprets the raw data provided and how the collected site-specific data documents the permafrost conditions and seasonal thaw;
 - Provide information on the amount of ground ice for not only the Whale Tail Dike area but also the other relevant infrastructure;
 - The design and drawing reports should demonstrate how the detailed designs of the infrastructure were informed by the site-specific data and how these considerations ensure the integrity of the infrastructure as the thermal conditions discussed in the design reports are general and not aligned with the descriptions of the site conditions in the Thermal Monitoring Plan;

- Provide documentation resulting from permafrost characterization undertaken for specific infrastructure components of the project as part of the permafrost mapping; and
- Provide a copy of the post-closure pit-lake thermal assessment, that included general permafrost characterization of the site in the form of a thermistor data summary from ten (10) thermistors on site, that was submitted to Natural Resources Canada.

Further as noted by CIRNAC, the Thermal Monitoring Plan as submitted did not adequately identify potential changes in talik distribution and flow paths that may result from the development of project infrastructure as per the requirement of Condition 14. Particularly, the monitoring plan presents inconsistencies regarding the number of thermistors currently active in the Whale Tail Pit area, as well as no clear commitments regarding the thermal monitoring of the pit area. CIRNAC noted that details on how the Proponent intends to adapt the monitoring strategy defined for each facility as needed has not been provided and the timing to trigger the decision to install additional thermistors was not described and should be provided.

- The NIRB requests that within 30 days Agnico Eagle revise the current Thermal Monitoring Plan and the Groundwater Monitoring Plan to include more comprehensive details on the monitoring strategy the Proponent will employ to confirm the predicted impacts on talik distribution and groundwater flows in the vicinity of the Whale Tail Pit. Additionally, based on the importance of permafrost conditions to the behaviour of the hydrological regime, the site-specific permafrost mapping, monitoring and the thermal analysis should be incorporated into the Groundwater Monitoring Plan and consideration of this information should be included in the next revision of the Closure and Reclamation Plan.

2.4. SITE VISIT

The site visit for Meadowbank and Whale Tail Projects was completed between August 22 to August 24, 2019 and a copy of the report can be found on the NIRB's online public registry at www.nirb.ca/124588 (ID No. 327053). The following is a summary of the recommendations provided in the site visit report for both projects.

2.4.1. *Recommendations and Direction 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. Based on the topics community members discussed at the community consultation, Agnico Eagle must ensure that the potential adverse effects to the terrestrial, marine, and socio-economic environment should be adequately mitigated.

The Monitoring Officer noted the following successes at the Meadowbank facilities:

- The landfarm and hydrocarbon remediation program undertaken in 2013 appeared to have been successful in treating hydrocarbon contaminated soil.

- Groundwater wells appeared to be working and operational since the revisions of the groundwater well program.

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.

Term and Condition 25 requires that the Proponent employ legal deterrents to deter carnivores and/or raptors at all landfill and waste storage areas. During the site visit, Agnico Eagle stated that wildlife (including muskox, caribou, wolves, and birds) had been observed around the site and along the AWAR. Since 2017, raptors (Peregrine Falcon) have nested at various quarry sites along the AWAR including quarry 22 which had been used previously used as temporary storage for contaminated hydrocarbon soil until the landfarm was developed. Plans are in place to remediate this quarry site but have been delayed due to the active Peregrine Falcon nests at this quarry site. Lack of wildlife deterrence at this site and other areas at the Meadowbank site does not fully meet the requirements of Term and Condition 25 of the amended Project Certificate No. 004.

Term and Condition 74 requires that the Proponent employ environmentally protective techniques to suppress any surface dust. To date, this condition has not been met by the Proponent as dust suppressants have not been employed along the whole AWAR. The only dust suppressants that have been applied to date have been at the mine site, along the access road between the Baker Lake facility and the gatehouse, and along three (3) critical areas at km 10-12, 24-26, and 48-50, as agreed upon with the Baker Lake Hunters and Trappers Organization as well as two (2) additional sites at km 68-70 and 80-84. Further, the Proponent initiated a dust sampling program along the road in 2012 to monitor dust deposition on vegetation along the road with additional studies conducted in 2016. Results from the ongoing studies viewed during the site visit have been provided in Agnico Eagle's 2018 annual report.

2.4.2. Recommendations and Direction of Whale Tail Site Visit

Based on the observations made during this site visit, all Whale Tail Site 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. Based on the topic's community members discussed at the public information session, Agnico Eagle must ensure that the potential adverse effects to the terrestrial, marine, and socio-economic environment should be adequately mitigated.

The Monitoring Officer noted the following successes at the Whale Tail pit facilities:

- Segregation and storage of all domestic, hazardous, and combustible wastes appear to be conducted appropriately.

Agnico Eagle appears to be in compliance with a majority of the terms and conditions contained within the Whale Tail Pit Project Certificate No. 008; 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 will be looking at the following during the next site visit:

- Ensure sufficient spill response equipment/material are put in place along the Whale Tail haul road at each major waterbody crossing.

Additionally, in order to fully meet the requirements of the Project Certificate terms and conditions, and to ensure that potential adverse impacts to the environment are adequately mitigated, the NIRB Monitoring Officer has identified the following issues that require follow-up and corrective action from the Proponent:

Term and Condition 2 requires that the Proponent verify commitments to the utilization of dust suppressants along the AWAR, the Whale Tail haul road and any other roads and trails associated with the Project. To date, this condition has not been met by the Proponent as dust suppressants have not been employed along the whole AWAR, the Whale Tail haul road and the Whale Tail Pit site roads.

Term and Condition 32 requires the Proponent to work with 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. During the site visit it was noted that there are currently no specific caribou/wildlife crossings in place along the Whale Tail haul road and that the road has not been sloped in such a way to allow wildlife to easily cross the road.

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.*

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. Managing attraction of carnivores and/or raptors to reduce or eliminate attraction at all landfills and waste storage areas – Condition 25

Condition 25 requires the Proponent to manage and control waste in a manner that reduces or eliminates the attraction of carnivores and/or raptors to the site. In addition, the Proponent is

required to employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. During the 2019 site visit, NIRB staff did not observe wildlife deterrents for the Meadowbank project (landfill, waste storage areas, or fuel tank farm at Baker Lake). Since 2017, raptors (Peregrine Falcon) have nested at various Meadowbank sites including quarry sites along the all-weather access road including quarry 22 which was used as temporary storage for contaminated hydrocarbon soil from 2009 to 2012 until the first contaminated soil storage/pilot remediation site (later converted to a landfarm) landfarm was developed in 2013. Plans are in place to remediate this quarry site and the NIRB has discussed annually regarding reclamation of quarry 22 but delays have occurred due to an active Peregrine Falcon nest at this quarry site since 2017. Further, deterrents were not observed at the Baker Lake Marshalling Area which has attracted other types of nesting birds in the past (ravens and songbirds). Lack of wildlife deterrence at this site and other areas at the Meadowbank site does not fully meet the requirements of Term and Condition 25 of the amended Project Certificate No. 004.

b. Placement of local area marine monitors – Condition 36

Term and Condition 36 for Project Certificate No. 004, Amendment 003 requires that Agnico Eagle place/hire local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet. Even though approximately 56 ships with fuel and goods ingress/egress at Baker Lake from Chesterfield Inlet in 2018, only one (1) marine mammal monitor was hired for a period between August 6 to August 23, 2018. 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. This concern was brought up last year by the Board and in response Agnico Eagle indicated that it is committing to hiring monitors for the entire shipping season to fulfill the term and condition. The Board stresses the importance of meeting this condition.

c. Suppression of surface dust – Condition 74

Term and Condition 74 of Project Certificate No. 004, Amendment 003 directs the Proponent to employ environmentally protective techniques to suppress surface road dust. As noted in previous NIRB annual reports and during site visits, Agnico Eagle has limited dust suppression to specific areas at Meadowbank: the haul roads at the mine site; a road between the Meadowbank gatehouse and Exploration Camp site; between the Baker Lake marshalling facility and the Baker Lake gatehouse; and the airstrip. Agnico Eagle uses calcium chloride on all the aforementioned roads except water is used on mine site haul roads and the airstrip. Along the all-weather access road (AWAR) between Baker Lake and Meadowbank dust suppression is only applied at five (5) areas identified by the community of Baker Lake, and monitoring results in 2018 indicated that rates of dustfall were effectively reduced in those specific locations and dust levels continued to be well within the range of historical values for those locations. In its response to the Board's 2018 recommendations, Agnico Eagle maintained that it is meeting Term and Condition 74 of Project Certificate No. 004, Amendment 002 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.

The NIRB acknowledges the efforts made by Agnico Eagle to suppress dust around the Meadowbank and Exploration Camp sites, and further recognizes the dustfall monitoring program Agnico Eagle has conducted along the AWAR since 2012 and the additional studies that are ongoing since 2016. As noted in the previous Annual Reports by Agnico Eagle and in the 2018 Annual Report, monitoring results at areas along the AWAR with dust suppressants were still at times above the predictions and above the Alberta Dustfall and Government of Nunavut – Total Suspended Particulate (GN-TSP) guidelines (three [3] out of 75 samples exceeding the GN 24-hour standard of 120 microgram/cubic metre [$\mu\text{g}/\text{m}^3$]). The mine site dust predictions in the original Final Environmental Impact Statement (FEIS) for the Meadowbank project did not assume mitigations such as road watering or dust suppressants would be used. As such, it appears that the FEIS predictions have potentially underestimated the amount of dust that would be produced on the mine site.

Agnico Eagle's dust methodology with the installation of canisters at ground level and not on 1.5-2 metre poles, as is the common practice, has raised concerns from both the NIRB and regulatory authorities as the placement of canisters on the ground can have negative implications on data quality (e.g., downwash, ground dust or interference by wildlife). These limitations make it difficult to compare the dustfall data to other sites as well as any dustfall objective due to possible biases in the data collected. Further, the other four (4) other projects in Nunavut follow the ASTM standard test method² for measurement of dustfall by deploying canisters on stands at heights of two (2) metres.

With the exception of continuing the dustfall monitoring along the AWAR and applying dust suppressants along the high priority areas, Agnico Eagle has not made any further commitment to applying dust suppressant to the whole AWAR in the near future. Term and Condition 74 requires the application of dust suppression measures along all project roads including the AWAR [emphasis added]. The Proponent has not fully met the requirements of Condition 74, as dust suppression was not conducted along the AWAR from Baker Lake to the mine site again in 2018. The NIRB stresses that Term and Condition 74 applies to all mine roads including the AWAR. The NIRB notes that Agnico Eagle has been in non-compliance with this condition since the Project entered operations, as no dust suppression measures have been employed along the AWAR from Baker Lake to the mine site with the exception of the five (5) areas since 2017 as identified by the community to be of importance.

d. Appendix D, the Annual Report and the PEAMP

The NIRB notes that Agnico Eagle's 2018 Annual Report provided a detailed analysis of results from its 2018 monitoring program and that it compared observed impacts observed in 2018 to predictions made within the FEIS. Agnico Eagle's evaluation focused on the valued ecosystemic components (VECs) that had been identified in the FEIS, including the aquatic environment, the terrestrial and wildlife environment, noise quality, air quality, permafrost and socio-economics. The NIRB acknowledges that Agnico Eagle has worked to improve upon its reporting of findings within its post-environmental assessment monitoring program (PEAMP) and notes the general clarity of the presentation of information in its tables of

² ASTM International. Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter) D1739-98. Reapproved 2017

potential impacts, potential cause(s), proposed monitoring, monitoring conducted for the year, predicted values and measured values/observed impacts. However, this does not meet the requirements of Appendix D of the Meadowbank Project Certificate as the NIRB found that the discussion and analysis within the PEAMP should be expanded upon especially to include trends that may be observed over multiple years at the site. As such the NIRB requires Agnico Eagle provide this trend analysis as part of the summary report in its annual report.

Finally, 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. Suppression of surface dust – Condition 2

Term and Condition 2 of Project Certificate No. 008 for Whale Tail Pit requires Agnico Eagle to verify commitments to the utilization of dust suppressants along not only the all-weather access road (AWAR), but the Whale Tail haul road (also referred to as the Amaruq Haul Road) and any other roads and trails associated with the Whale Tail Pit Project as well. This is similar to Term and condition 74 for Meadowbank and why the NIRB is considering them together. Agnico Eagle noted in the 2018 Annual Report that daily road watering and, if necessary, the application of chemical dust suppressants would be employed at the Whale Tail Pit Project to mitigate emissions of fugitive road dust during the frost-free summer season as per the Air Quality and Dustfall Monitoring Plan. The Plan also states that the use of chemical dust suppressants may only be used as a last resort for the Whale Tail haul road in accordance with the Environmental Guidance for Dust Suppression (published by the Government of Nunavut, Department of Environment, 2014). No information on the thresholds is provided within the Plan on when the dust mitigation measures would be triggered except to note that dust mitigation measures for the road would be employed when road visibility is impaired, or in areas where dust deposition is potentially impacting traditional land use, fish habitat and/or water quality. However, as observed during the 2019 site visit and as stated in the 2018 Annual Report, Agnico Eagle did not employ dust suppressants along the whole AWAR, nor along the Whale Tail haul road, and the Whale Tail Pit site roads. Therefore, carrying forward the discussion for Meadowbank, the Proponent does not appear to have fully met the requirements of Condition 2 or Condition 74 of the Whale Tail Pit or Meadowbank Project certificates, as dust suppression techniques were not applied along the Project roads. The NIRB stresses that both of these conditions apply to all surface/project roads including the AWAR, the Haul Road, and roads at the mine sites.

As noted previously for the Meadowbank Project, Agnico Eagle's dust methodology with the installation of canisters at ground level along the Whale Tail haul road and not on 1.5-2 metre poles as is the common practice raises concern for the NIRB and other parties. In its response to 2018 Board Recommendations Environment and Climate Change Canada also noted that the installation of canisters at the ground level and not on poles is not a common practice and recommended that sampling methods be consistent with the standards and consistent across all sites. Placing canisters on the ground have limitations to data quality, making it difficult to compare the dustfall data to other sites as well as any dustfall objective such as the ASTM standard test method².

b. Safety barriers, berms and crossing with project infrastructure – Condition 32

Condition 32 requires Agnico Eagle to work with the Baker Lake Hunters and Trapper Organization (HTO) and other parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the Whale Tail haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife. The Proponent has reported in the 2018 Annual Report that expansion of the haul road to 9.5 metres wide was completed in November 2018, and its mine work plan for the haul road indicates future work includes only road maintenance and operation. During the 2019 site visit it was noted that there were no specific caribou/wildlife crossings incorporated into the current Whale Tail haul road design or for other project infrastructure such as access roads and NIRB staff observed caribou hesitating to cross the road and the caribou searched for less steeply sloped areas to eventually cross. While the 2018 Annual Report notes engagement with the Baker Lake HTO regarding selection of traditional land use crossings to be used by members of the public for crossing the road, this does not meet the intent of the term and condition as it relates to wildlife specifically nor does it include any discussion of consultation with other parties regarding wildlife crossings. In addition, details of the selected crossings (if any) were not provided in the 2018 Annual Report. Therefore, the Board concludes the Proponent has not met the requirements of term and condition 32.

4.0 CONCLUSIONS

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.

During the 2018-2019 monitoring period, Agnico Eagle demonstrated compliance with the majority of the applicable requirements of Project Certificate No. 004, Amendment 003 of the Meadowbank Gold Mine Project. Further, Agnico Eagle is generally meeting the objectives of monitoring and mitigation plans and procedures put in place for the Project. However, certain outstanding issues will require the Proponent's attention as discussed throughout this report with the main issues identified in this monitoring period as follows:

1. Lack of achievement or progress towards achieving of the following term and conditions: 25, 36, 51, 54e, 74;
2. Redevelopment and implementation of a Creel Survey and Hunter Harvest Survey;
3. Managing attraction of carnivores and/or raptors to reduce or eliminate attraction to the mine site(s);
4. Placement of local marine monitors;
5. Ineffective dust control along the AWAR;
6. Redevelopment of the dust methodology along the AWAR and Whale Tail haul road;
7. Requirement for the development of the Post-Environmental Monitoring Program; and
8. Updates to the Interim Closure and Reclamation Plan.

In addition, Agnico Eagle demonstrated compliance with the majority of the applicable requirements of Project Certificate No. 008 of the Whale Tail Pit Project and is generally meeting the objectives of monitoring and mitigation plans and procedures put in place for this Project. However, certain outstanding issues will require the Proponent's attention as discussed throughout this report with the main issues identified in this monitoring period as follows:

1. Lack of achievement or progress towards achieving of the following term and conditions: 9, 12 (under Board Guidance on General Regulatory and Administrative Responsibilities), and 2, 10, 11, 12, 14, 25, 30, 32 (under Whale Tail Pit Project Specific Terms and Conditions).
2. Ineffective dust control along the AWAR;
3. Safety barriers to improve wildlife crossings across project infrastructure;
4. Additional information on the Whale Tail haul road closure as well as defining the composition of convoys allowed on the haul road;
5. Additional information on site-specific monitoring mapping and thermal analysis studies;
6. Updates to the Groundwater Monitoring Plan;
7. Updates to the Thermal Monitoring Plan and
8. Updates to the Air Quality and Dustfall Monitoring Plan.

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Date: October 25, 2019

Signature: _____

Reviewed by: Kelli Gillard, PAg
Title: Manager, Project Monitoring
Date: October 25, 2019

Signature: _____

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Appendix I Compliance with the Meadowbank Gold Mine Project Certificate No. 004, Amendment 003

<u>Term & Condition</u> (NIRB Project Certificate No. 004)	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
Regulatory Requirements (General)		
1. Adherence to the commitments from the original Final Hearing	n/a	Complete
2. The NIRB's assignment of a Monitoring Officer	n/a	Completed by NIRB
3. 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. Prompt and appropriate action to remedy any noncompliance and annual reporting of noncompliance with environmental laws and regulations and/or regulatory instruments.	Annually	Summary of non-compliance provided in the 2018 Annual Report.
5. Posting of adequate performance bonding.	n/a	Complete and in compliance
Monitoring Records		
6. Information requirements for monitoring reporting.	Annually	Ongoing and in compliance
7. Maintain the records and results of any monitoring, data, or analysis, for a minimum of the life of the Project, including closure and post-closure monitoring.	Annually	Ongoing and in compliance
Water Quality and Waste Management		
8. Re-sample existing groundwater monitoring wells; re-evaluate the salinity, major ion concentrations, and dissolved metal load of groundwater flowing to the mine pits; re-assess existing groundwater monitoring wells and replace any defective wells; and continue groundwater monitoring.	Annually	Agnico Eagle provided a summary of the 2018 groundwater monitoring program in Appendix 37 of the 2018 Annual Report
9. Provide 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. <i>Commentary updated to include In-Pit Tailings Disposal Modification Proposal.</i>	n/a	Complete and part of NWB Type "A" water licence
10. Sewage treatment expectations.	n/a	Complete and part of NWB Type "A" water licence
11. Provide details regarding the effluent outfall configuration for Wally Lake in the water license application to the NWB.	n/a	Complete and part of NWB Type "A" water licence
12. 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.	n/a	Complete and part of NWB Type "A" water licence
13. Water discharge requirements for Wally Lake and Third Portage Lake.	n/a	Ongoing and in compliance
14. Reclamation and Closure - removal of dewatering dikes expectations	n/a	<i>At end of mine life</i>
15. Characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non-metal constituents within two years of commencing operations.	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

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
17. Undertake 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.	n/a	Complete and part of NWB Type “A” water licence
18. Commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation.	n/a	Ongoing and in compliance
19. 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. <i>New commentary: Reference to “two (2) metres cover of tailings” refers to the rock cover that would be placed over the existing Tailings Storage Facility located at the Meadowbank Gold Mine site. The cover associated with the In-Pit Tailings Disposal Modification Proposal is a minimum of eight (8) metres of water placed over an appropriate thickness of waste rock cover as conditions warrant.</i>	Annually	In its 2018 annual report, Agnico Eagle provided a summary of the instrumentation installed including a description of the results from the 2018 reporting period.
20. Groundwater monitoring around the tailings facility demonstrates that contamination from tailings has occurred through the fault. <i>New commentary: Provide an update to the NIRB on any fault identified related to either Portage Pit A, Portage Pit E, and Goose Pit, any plans to address groundwater movement considering any fault, and how potential monitoring of tailings and groundwater movement would be undertaken to inform management plans.</i>	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. Fund 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.	n/a	A small laboratory is on site
23. Water quality monitoring performed at locations within receiving waters that allow for an assimilative 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 to be submitted annually	Agnico Eagle provided a summary of the quality assurance and quality control conducted for all water quality monitoring in the 2018 annual report.
24. Identify an area and design for a landfill for disposal of operational and closure non-salvageable materials with design incorporated into Waste Management Plan.	n/a	1) Hazardous Materials Management Plan, version 4, April 2019 2) Landfill Design and Management Plan, version 4, October 2018
25. Managing attraction of carnivores and/or raptors to reduce or eliminate attraction at all landfills and waste storage areas.	n/a	1) Incinerator Waste Management Plan version 8, October 2018 2) Landfill Design and Management Plan, version 4, October 2018 3) NOT IN COMPLIANCE: effective wildlife deterrence not observed at the Meadowbank site and the Baker Lake Marshalling Facility during the 2019 site visit.

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
26. Ensure spills are cleaned up and site maintained clean of debris	n/a	Spill Contingency Plan, version 7, April 2019 provided
27. Fuel and hazardous materials storage	n/a	Spill Contingency Plan, version 7, April 2019 provided
28. Signatory to the International Cyanide Management Code, communicate this to shippers	n/a	Agnico Eagle received full ICMC certification in March 2016
Project Alternatives and Planned Changes		
29. Tailings Management alternatives, particularly the use of Second Portage Lake as 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. Application to Schedule 2 of the Metal Mining Effluent Regulations, including the No Net Loss Plan expectations	n/a	Updated No Net Loss Plan, October 2012 provided and Habitat Compensation Monitoring, 2011 provided
All-Weather Private Access Road		
31. Stream crossing design criteria along with maintenance plan and mitigation and monitoring expectations.,	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>) All-weather access road to be operated as private access road with limited access of all-terrain vehicles for the purpose of carrying out traditional Inuit activities in an authorized, safe and controlled manner.	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 2018 Annual Report. <u>32f; 32f and 32h</u> : Agnico Eagle provided a summary of the consultation conducted with respect to the AWAR for the 2018 monitoring period and noted that no incident involving non-mine authorized use occurred in 2018.
33. Access and Air Traffic Management Plan	n/a	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.
34. Full-time road safety, search and rescue position	n/a	Complete and in compliance
35. Reclamation for all-weather private access road at the end of the mine life unless approval obtained.	n/a	<i>At end of mine life</i>
36. Local area marine mammal monitors onboard all vessels	n/a	NOT IN COMPLIANCE Only one (1) marine mammal monitor was hired for the period of August 6 to August 23, 2018. The 2018 Annual Report notes that approximately 56 barges arrived in Baker Lake in 2018.
37. Contract only 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.	n/a	Ongoing and in compliance
38. Shipping requirements through Chesterfield Inlet – limited number of ships where possible	n/a	Ongoing and in compliance

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
39. Annual community information meeting in Chesterfield Inlet to fully discuss the shipping program for the Project.	Annually with consultation report submitted within one month of meeting	Meetings were held in Chesterfield Inlet in 2018 with summaries provided in the 2018 Annual Report
40. Traditional Knowledge from the local HTOs and Chesterfield Inlet - marine mammals, cabins, hunting, and other local activities in the Inlet.	Copy DFO on result; Report annually	Meetings were held in Chesterfield Inlet in 2018 with summaries provided in the 2018 Annual Report
41. Marine mammal monitoring and mitigation.	n/a	Ongoing and in compliance
42. Fuel transfer operational requirements	n/a	Ongoing and in compliance
43. Lightering activities at Helicopter Island are not approved, except in case of emergency only, with explanation required if used.	n/a	Ongoing and in compliance
44. Spill Contingency and Emergency Response Plan	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 7, April 2019 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. Insurance requirements for contracted shippers	n/a	No claim was reported for the 2018 year.
Fish and fish-habitat		
46. Freshwater intake pipe requirements and design	n/a	Complete and part of DFO permits and NWB water licence
47. Water flow from Third Portage Lake, including consideration of alternatives.	n/a	Complete and part of DFO permits and NWB water licence
48. Term and condition deleted following review of Vault Pit Amendment (see Project Certificate amendment 002)	n/a	n/a
49. (Revised) Fish-out programs for the dewatering of Second Portage Lake, Third Portage Lake, Vault Lake and Phaser Lake.	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. Barge landing facility design to prevent infilling of fish habitat.	n/a	Complete and part of DFO permits and NWB water licence
51. Creel surveys within waterbodies affected by the Project and in consultation with the HTO.	n/a	NOT IN COMPLIANCE for 2018. Agnico Eagle suspended the creel surveys in 2016 but is planning to conduct the 2019 Creel Surveys for March 2019 for March 2019 with results to be presented in 2019 Annual Report.
52. No-fishing policy	n/a	Ongoing and in compliance
53. (Revised) Fish Habitat Monitoring Plan to be developed to also 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
Wildlife and Terrestrial		
54. Provide updated Terrestrial Ecosystem Management Plan including requirements for a Hunter Harvest Study.	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.	54: Terrestrial Ecosystem Management Plan, version 5 submitted June 2018. Terrestrial Ecosystem Management Plan, version 6 submitted as part of the 2018 Annual Report.

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
		<p>54e: NOT IN COMPLIANCE for 2018. Agnico Eagle suspended the Hunter Harvest Survey in 2016 but is planning to conduct the 2019 Hunter Harvest Study for March 2019 with results to be presented in 2019 Annual Report.</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 with the next survey planned for 2019.</p> <p>54h: 2018 Wildlife Monitoring Summary Report submitted as part of the 2018 Annual Report.</p>
55. Provide Wildlife Summary Monitoring Report including reporting expectations.	Annual Wildlife Monitoring results submitted must include baseline monitoring; effects monitoring; and compliance monitoring.	2018 Wildlife Monitoring Summary Report submitted as part of the 2018 Annual Report.
56. Maps of caribou migration corridors to be posted in site offices at the Project.	Annually	Caribou telemetry data provided within the 2018 Wildlife Monitoring Summary Report
57. Participate in the caribou collaring program	n/a	Agnico Eagle is participating in the GN DoE satellite-collaring program.
58. 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. Deterrence of caribou at the tailings facility	n/a	Complete and in compliance
60. Stop work policy when wildlife in the area that may be endangered by work.	n/a	Ongoing and in compliance
61. Aircraft commitments incorporated into the Terrestrial Ecosystem Management Plan and the Air Traffic Management Plan	n/a	Part of Terrestrial Ecosystem Management Plan.
62. Develop and implement a noise abatement plan to protect people and wildlife from significant mine activity noise	Annually	<p>Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018</p> <p>The noise monitoring program results were provided in the 2018 Annual Report.</p>
Socio-economic		
63. GN and INAC 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. 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, INAC and Cumberland	Within six (6) months of issuance of a Project Certificate	<p>Draft terms of reference provided April 29, 2008.</p> <p>Finalized terms of reference provided March 2019</p>

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
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	Annually	Draft terms of reference provided April 29, 2008. Finalized terms of reference provided March 2019 Agnico Eagle has retained Stratos Inc. to develop a socio-economic monitoring report with the draft presented to the committee in June 2017. Socio-economic Monitoring Program Report provided June 2019 Socio -economic Monitoring Program provided June 2019
65. Information on community of origin of hired Nunavummiut	Annually	Summary of workforce at Meadowbank provided within the Socio-economic Monitoring Program Report.
Human Health		
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. Monitoring of contaminant levels in country foods through a plan developed in consultation with HC	n/a	Studies were completed in 2014 and then 2017. Results of the Wildlife Screening Level Risk Assessment and Human Health Risk Assessment for the Consumption of Country Foods were provided in appendices attached to the 2017 Annual Report. Completed every three years, with the next update scheduled for 2020.
68. Consultation with Elders, local HTOs and the Meadowbank Gold Mine SEMC and incorporation of Inuit societal values into mine operation policies.	n/a	Ongoing
69. Conduct proper archaeological surveys with reporting provided to the GN.	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. Report any archeological site discovered during the course of construction, including a burial site, immediately and concurrently to the GN and KivIA	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.

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
Air Quality		
71. Install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site	Annually	The results of the 2018 air quality and dust monitoring program conducted by Agnico Eagle was provided in the 2018 annual report. Air Quality and Dustfall Monitoring Plan, version 4, submitted March 2019
72. On-site incinerators to comply with standards.	Stack testing changed to every other year following discussions with ECCC (2012).	Results of the 2018 stack testing were provided in the 2018 annual report.
73. Greenhouse Gas Reduction plan	n/a	Ongoing and in compliance
74. Employ environmentally protective techniques to suppress any surface road dust	n/a	NOT IN COMPLIANCE Dust suppressants applied only to five (5) locations along the AWAR in 2017 and 2018; locations determined in consultation with the Baker Lake HTO.
Accidents and malfunctions		
75. Complete list of possible accidents and malfunctions and accident risk assessment for the Project including the all-weather road, shipping spills, cyanide and other hazardous material spills, and pitwall/dikes/dam failure, 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, v4, March 2019;</i> ii) <i>Spill Contingency Plan, v7, February 2019;</i> iii) <i>Emergency Response Plan, v12, January 2018;</i> iv) <i>Oil Pollution Emergency Plan v8, May 2018;</i> v) <i>OMS Manual for TSF v9, April 2019;</i> vi) <i>OMS Manual for the dewatering dikes v8; April 2019..</i>
76. 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 with involvement from Baker Lake and Chesterfield Inlet.	Results to be provided annually	Related to the AEMP and CREMP programs
77. Review emergency Response Plan in coordination with Hamlets of Baker Lake and Chesterfield Inlet	n/a	Ongoing and in compliance
Abandonment and Reclamation		
78. File Closure and Reclamation Plan to ensure Inuit and taxpayers are not liable for any cost associated with the cleanup, modification, decommission, or abandonment.	n/a	Updated 2018 Interim Closure and Reclamation Plan provided April 2019.
79. Closure and Reclamation Plan; additional expectations in addition to NWB requirements.	n/a	Updated 2018 Interim Closure and Reclamation Plan provided April 2019.
80. Annual updates on progressive reclamation and security posted for KivIA, INAC and/or NWB.	Annually	A summary of the progressive reclamation completed in 2017 and previous years were provided in the 2018 Annual Report.

Term & Condition (NIRB Project Certificate No. 004)	Reporting Requirements	Compliance Achievement
Other		
81. 24-hour security at the Baker Lake Facility including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area.	n/a	Ongoing and in compliance [occurs during barge season]
82. Monitor the ingress/egress of ship cargo at Baker Lake and report any accidents or spills immediately	Annually	A summary of the 2017 ingress/egress was provided in the 2018 annual report. No spills occurred during the 2018 monitoring period.
83. Adherence to Natural Resources Canada's regulations for explosives and issued licence	n/a	Ongoing and in compliance
84. 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. Develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs	n/a	The results of the 2018 blast monitoring program were provided in the 2018 annual report.
Duty to Comply		
86. Duty to Comply to Project Certificate Terms and Conditions with any non-compliance reported	n/a	No non-compliance issues reported in 2018 Annual Report.
Monitoring/Water Quality and Waste Management		
87. <i>(New for in-pit tailings disposal modification)</i> Prior to the deposition of tailings into the Portage or Goose Pits, file with the NWB a report containing updated hydrogeological modelling addressing information gaps.	The Proponent shall file a report with the Nunavut Water Board, containing updated hydrogeological modelling addressing information gaps, prior to the deposition of tailings into the Portage or Goose pits. Confirmation of the report's filing, conclusions of this report, and any further updates to reporting requirements as determined under the water licence, shall be provided to the NIRB in Agnico Eagle's Annual Report for the project.	2018 annual report includes the In Pit Tailings Deposition Thermal Modelling Report (Appendix 19) and the Meadowbank In-Pit Tailings Disposal – Thermal and Hydrogeological Modelling Update to Address NRCAN's Comments (Appendix 20).

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

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

<u>Term & Condition</u> (NIRB Project Certificate No. 008)	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
General Regulatory Requirements		
1. Appointment of Monitoring Officer(s)	n/a	Completed by NIRB
2. NIRB to report annually on the monitoring program (in English, Inuinnaqtun, and Inuktitut)	Annually	Completed by NIRB
3. NIRB to conduct periodic community meetings updates regarding its Monitoring Program	n/a	Completed by NIRB
4. NIRB to schedule periodic sit inspections.	n/a	Completed by NIRB
5. 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. Duty to Comply with environmental laws and regulations and/or regulatory instruments, and shall report any non-compliance as required by law immediately.	Annually	No non-compliance issues reported in 2018 Annual Report.
7. Posting of adequate performance bonding.	n/a	Complete and in compliance
Monitoring Records		
8. Information requirements for monitoring reporting.	Annually	Ongoing and in compliance
9. Make significant monitoring results and/or summaries of significant results available in English, Inuinnaqtun, and Inuktitut, to the extent feasible.	Annually	COMPLIANCE UNCLEAR: NIRB only received the monitoring results and/or summaries of significant results in English. To be reported in the next monitoring period
10. 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	Ongoing and in compliance.
11. Maintenance of an up to date the Environmental Impact Statement and the updated environmental monitoring programs developed for the Project as new information is collected.	As information is updated	Ongoing and in compliance
12. 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	n/a	COMPLIANCE UNCLEAR: portal not established yet by Proponent. Information on the compliance with this condition to be reported in the next monitoring period.
On-going Engagement in Project Monitoring, Modelling, Management and Reporting		
13. 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.	Annually	Ongoing and in compliance.
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	Ongoing and in compliance.

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

<u>Term & Condition</u> (NIRB Project Certificate No. 008)	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
Air Quality		
1. 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. Active and passive monitoring shall be used.	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.	Monitoring results to be provided in the next monitoring period. Air Quality and Dustfall Monitoring Plan, version 4 submitted March 2019.
2. Dust suppression on all site roads including all-weather access road, Amaruq (Whale Tail Pit) haul road and any other roads associated with the Whale Tail Pit site	The Proponent shall report annually to the NIRB with a summary of its dust management activities	NOT IN COMPLIANCE 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. Air Quality and Dustfall Monitoring Plan, version 4 submitted March 2019.
Climate and Meteorology		
3. Greenhouse Gas Emissions (GHG) Reduction Plan	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 summary of the 2018 monitoring program provided in the 2018 annual report.
Noise and Vibration		
4. 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 the NIRB 30 days prior to the commencement of construction activities.	Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018.
5. Noise monitoring stations 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.	Results of all noise monitoring undertaken by the Proponent for the Project shall be provided to the NIRB on an annual basis.	Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018. Monitoring results provided in the 2018 Annual Report (Appendix 44 – Noise Monitoring Program)
Terrestrial Environment (Geology and Geochemistry)		
6. Conduct detailed hydrodynamic modelling to evaluate the mixing of the Waste Rock Storage Facility seepage into Mammoth Lake post-closure; and to minimize the need for active intervention, including long-term treatment of mine contact water.	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.	Water Management Plan, version 3 submitted September 7, 2018. Presentation to CIRNAC on Hydrogeological model July 20, 2018 Hydrodynamic modelling results provided in the 2018 Annual Report (Appendix 16 – Whale Tail Hydrodynamic Modelling for Mammoth Lake)

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
7. Develop a Mine Waste Rock and Tailings Management Plan that reflects site-specific geological and geochemical conditions.	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 3 submitted September 7, 2018. Waste Rock Management Plan, version 4 submitted October 2018; updated version 4 submitted in 2018 Annual Report, April 2019.
8. Submit a detailed Acid Rock Drainage and Metal Leaching Management Plan	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 4 submitted in 2018 Annual Report, April 2019. Thermal Monitoring Plan, version 2 submitted in 2018 Annual Report.
Geological Features, Soils and Permafrost		
9. Undertake additional site-specific geotechnical investigations.	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.
10. Undertake additional site-specific permafrost monitoring, mapping and thermal analysis in consultation with INAC and NRCan.	Results of these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter.	Permafrost conditions on the Project site were estimated based on thermistor data up to October 2017 and previous works. No results from studies following the release of the Project Certificate has been provided. Thermal Monitoring program memo provided to CIRNAC and NRCan, November, 2018. Thermal Monitoring Plan, version 2 submitted in 2018 Annual Report. COMPLIANCE UNCLEAR: CIRNAC noted that Proponent has not met the requirements and an updated Groundwater Monitoring Plan was requested
11. Develop and implement an Erosion Management Plan.	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.	COMPLIANCE UNCLEAR: updates not provided in the annual report Erosion Management Plan, version 1 submitted June 4, 2018.
12. The Closure and Reclamation Plan to include a program to progressively reclaim disturbed areas in a manner that demonstrates the Proponent has considered aesthetic values of local communities.	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.	2018 annual report states no progressive reclamation completed in 2018. COMPLIANCE UNCLEAR: Meadowbank Interim Closure and Reclamation Plan, submitted August 2018; does not include Whale Tail Pit and no separate plan submitted. Whale Tail Pit Interim Closure and Reclamation Plan submitted June 2016 as part of FEIS.

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
13. Explore the feasibility of topsoil/organic matter salvage as part of project development and provide updates to the Closure and Reclamation Plan.	The Proponent shall provide a summary of its management of topsoil in annual reports to the NIRB.	2018 annual report: As per the 2016 Whale Tail ICRP, active revegetation has not been planned at this time as part of the reclamation plan given the cold climate setting of the Project. Additional research on active revegetation may be considered in future iterations of the closure activities.
Hydrogeology and Groundwater Quantity and Quality		
14. Develop and implement a Thermal Monitoring Plan to identify potential changes in talik distribution and flow paths.	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. Thermal Monitoring Plan, version 2 submitted in 2018 Annual Report. COMPLIANCE UNCLEAR: CIRNAC requested Thermal Monitoring Plan include more details
15. Groundwater Monitoring Plan to collect additional site-specific hydraulic data in key areas from new monitoring wells.	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. Groundwater Monitoring Plan, Version 2.1 submitted February 20, 2019 COMPLIANCE UNCLEAR: additional monitoring wells not installed
16. Within two years of commencing operations, conduct additional analysis to determine approximate fill time for Whale Tail Pit at closure; undertake hydrogeological characterization to assess the potential for arsenic and phosphorus diffusion from pit walls; and perform detailed hydrodynamic modelling prior to closure to evaluate meromictic conditions of flooded pit.	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. Groundwater Monitoring Plan, Version 2.1 submitted February 20, 2019 Groundwater Management Monitoring Report submitted in 2018 Annual Report. Hydrodynamic Modelling of Whale Tail Pit Lake submitted June 2018.
Surface Water Hydrology, Surface Water Quality and Sediment Quality		
17. Monitor the effects of project activities and infrastructure on surface water quality conditions and compare monitoring results with the impact assessment predictions on the EIS.	The plan should be submitted to the NIRB at least 30 days prior to the start of construction, with results submitted annually thereafter.	Water Quality and Flow Plan, version 3 submitted May 18, 2018 Water Quality and Flow Monitoring Plan, version 6 submitted in 2018 Annual Report. 2018 Core Receiving Environment Monitoring Program (CREMP) submitted in 2018 Annual Report (Appendix 31).

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
18. Maintain a Site Water Monitoring and Management Plan	The plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.	Agnico Eagle noted that the Water Quality and Flow Plan, version 3 submitted May 18, 2018 applies to this T&C. Water Quality and Flow Monitoring Plan, version 6 submitted in 2018 Annual Report.
19. Maintain a Core Receiving Environment Monitoring Program (CREMP) to determine the short and long-term effects in the aquatic environment resulting from the Project.	The updated plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.	Whale Tail Pit Addendum to CREMP submitted May 18, 2018. 2018 Core Receiving Environment Monitoring Program (CREMP) submitted in 2018 Annual Report (Appendix 31).
Freshwater Aquatic Environment		
20. Setback distance between project quarries and borrow pits from fish-bearing or permanent waterbodies.	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 the Proponent's annual report to the NIRB.	Agnico Eagle noted that a setback distance of 31 metres was adhered to between all quarries and waterbodies (2018 Annual Report).
21. Design of project infrastructures in watercourses that do not prevent or limit the movement of water or fish species in fish bearing streams and rivers.	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.	Summary of design reports submitted in 2018 annual report.
22. Develop project specific thresholds, mitigation and monitoring for blasting activities that would exceed DFO requirements.	If project-specific thresholds, mitigation and monitoring requirements are developed, the Proponent shall identify these requirements in the annual report provided to the NIRB.	Update to Blast Monitoring Program, version 3 to include Whale Tail site provided March 2019
23. Conduct additional analysis and additional site-specific studies to assess the predicted trophic change on lake ecosystem productivity of the Mammoth Lake and downstream environments	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. Whale Tail Pit Addendum to CREMP – Appendix A: Mercury Monitoring Plan for Whale Tail South Area submitted April 2019.
24. 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	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. DFO confirmed in December 2018 that the Whale Tail Fisheries Habitat Offsetting Plan is in compliance.
Vegetation		
25. Ensure equipment and supplies brought to site are clean and free of invasive species	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.	NOT IN COMPLIANCE. Information not provided as outlined in the term and condition. Meadowbank and Whale Tail procedure NU-PRO-ENV-Invasive species inspection prior loading onto

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
		shipping vessel (Appendix 49, 2018 annual report) submitted.
26. Include revegetation strategies within the Mine Closure and Reclamation Plan support progressive reclamation and promote natural revegetation and recovery of disturbed areas.	Within three (3) years from the commencement of construction, 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.	To be determined
Terrestrial Wildlife and Wildlife Habitat		
27. Participate in a Terrestrial Advisory Group (TAG) with the GN, Baker Lake HTO, KivIA and other parties to refine mitigation and monitoring details within the Terrestrial Ecosystem Management Plan (TEMP)	Finalized Terms of Reference for the TAG 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.	Finalized Terms of Reference submitted November 1, 2018
28. Maintain a TEMP throughout all phases of the Project that 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 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.	Results of the TEMP to be provided in the next monitoring period. TEMP, version 6 submitted December 2018. TEMP, version 7 submitted June 2019.
29. In collaboration with the GN, collect additional caribou collar data and confirm zone of influence and associated effects of project components on caribou movement for specific study area	A summary of the analyses and associated effects shall be provided annually in the Proponent's annual report to the NIRB.	2018 results provided in 2018 Wildlife Monitoring Summary Report (Appendix 45)
30. Collect additional data on caribou group sizes in proximity to the Project, and work with the TAG to refine appropriate caribou group size thresholds that trigger additional mitigation.	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.	COMPLIANCE UNCLEAR: TEMP version 7 provided in June 2019, however it is unclear how GST modifications have been incorporated. Information to be provided in the next monitoring period.
31. Develop and implement Road Traffic Management Plan and monitoring logs along the haul road between Whale Tail Pit project and Meadowbank mine.	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.	Whale Tail Haul Road Management Plan, version 2, April 2019 intended to meet term and condition requirement.
32. Engage with the Baker Lake HTO 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.	NOT IN COMPLIANCE Summaries of engagement with Baker Lake HTO not provided in 2018 annual report for wildlife crossings, nor details on selected crossings.
33. Provide wildlife incident reports	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.	2018 incidents summarized and reported in 2018 Wildlife Summary Report (Appendix 45 of 2018 annual report)

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
Birds and Bird Habitat		
34. Migratory Birds Protection Plan for the Project that includes baseline characterization of migratory birds and vegetation within predicted flood areas.	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 of 2018 Migratory Bird Protection Plan (Appendix 48, 2018 annual report) summarized in 2018 annual report.
35. Mitigation and monitoring strategies are developed for Species at Risk	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.	Summary of Species at Risk mitigation provided in 2018 annual report; Further updates to the monitoring to be provided in updates to the TEMP.
36. Prior to removal or deterrence of raptors, consult with the GN-DoE to discuss proposed mitigation options.	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.	2018 annual report update states no removal or deterrence of raptors in 2018.
Marine Environment including Marine Wildlife and Habitat		
37. Shipping Management Plan in consultation with the KivIA and HTOs of the Kivalliq region.	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. 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.	2018 annual report confirms the routing south of Coats Island is being used as the primary shipping route.
39. Setback distance 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.	2018 annual report confirms mitigation requirements are being followed.
40. Ship-based Marine Mammal Monitoring Program in consultation with DFO, communities and interested parties.	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. 2018 Marine mammal and Seabird Observer Report submitted in 2018 annual report. No marine mammal sightings or vessel strikes recorded in 2018. Monitors were not present on every barge in 2018.
41. 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.	2018 annual report provides a summary of consultation.
42. 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 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. Contract only certified vessels to carry cargo and 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.	2018 annual report provided a summary of ingress/egress of ship cargo.
Economic Development and Business Opportunities		
44. Proponent encouraged to continue to participate in the work of the Kivalliq Socio-Economic Monitoring Committee.	Information regarding the Proponent's efforts in fulfillment of this term and condition shall be included in the Proponent's annual report to the NIRB.	Summary of activities provided in 2018 annual report. Additional reporting provided in 2018 Socio-economic Monitoring Program Report.

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
45. Work in collaboration with the GN, INAC, the KivIA 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.	<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>	<p>TOR and Kivalliq Projects Socio-Economic Monitoring Program due March 2019</p> <p>TOR for Kivalliq Socio-Economic Working Group submitted March 11, 2019.</p> <p>Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019</p>
46. Develop a Project-specific Whale Tail Pit Socio-Economic Monitoring Program designed to monitor for project-induced effects and reflect socio-economic concerns identified by the Kivalliq Socio-Economic Monitoring Committee (KivSEMC).	<p>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.</p>	<p>Kivalliq Projects Socio-Economic Monitoring Program due March 2019.</p> <p>Extension of deadline to June 30, 2019 granted.</p> <p>Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019</p>
47. 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.	<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.</p>	<p>Analysis of the Risk of Temporary Mine Closure submitted September 11, 2018.</p>
Employment, Education and Training		
48. Staff schedule forecasts that include title, quantity and transferable skills.	<p>The Staff Schedule should be submitted to the NIRB six (6) months prior to each phase of the Project (construction, operations, closure).</p>	<p>Staff Schedule submitted May 2018.</p>
49. Career development including hiring procedures and policies and long-term labour market plans in collaboration with career development agencies.	<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>
50. Report the results of its Labour Market Analysis and Inuit Work Barrier Study to the KivSEMC with participation with agencies to identify areas of mutual interest, and develop the Kivalliq Projects Agnico Eagle Socio-Economic Monitoring Program.	<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> <p>Extension of deadline for KvSEMP to June 30, 2019 granted.</p> <p>LMA and WBS submitted March 6, 2019 (results to be included in Annual Report and incorporated into KvSEMP).</p> <p>TOR for Kivalliq Socio-Economic Working Group submitted March 11, 2019</p>

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
		Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019
51. Develop a conceptual Socio-economic Closure Plan	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 Conceptual Socio-Economic Closure Plan submitted March 18, 2019
52. 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; with transferability to similar jobs across 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.	Initial Listing provided August 28, 2018.
Population Demographics		
53. Based on voluntary information, collect and provide project-specific data concerning employee community of residence and number of employees that relocated from the year prior.	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 provided in the 2018 Socio-economic Monitoring Program Report, submitted June 2019.
Traditional Activity and Knowledge		
54. Integration and incorporation of Inuit Qaujimaningit into Monitoring Plans.	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. Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019
Heritage Resources		
55. Conduct archaeological surveys prior to land disturbance related to the Project	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Summary of archaeological survey provided in 2018 annual report; Proponent indicated a full Archaeological Site Status Report was submitted to the GN-Dept of Culture and Heritage.
56. Report any archaeological site discovered during the construction, operation, and closure phases to the GN – Department of Culture and Heritage and the KivIA.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Summary of archaeological survey provided in 2018 annual report; Proponent indicated a full Archaeological Site Status Report was submitted to the GN-Dept of Culture and Heritage.
Individual and Community Wellness		
57. Update its Occupational Health and Safety Plan to include sexual health and well-being information in its employee orientation programming	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.	Updated plan submitted to the NIRB on December 14, 2018.
58. Encouraged to form a subcommittee which includes GN representatives to reach consensus decisions on health related issues that the Proponent or the GN bring forward.	Information regarding the Proponent's fulfillment of this term and condition shall be included in the Proponent's annual report to the NIRB.	2018 annual report summary notes no subcommittee currently in place, however noting continued challenges of information exchange with health centres, a forum should be established..

Term & Condition (NIRB Project Certificate No. 008)	Reporting Requirements	Compliance Achievement
59. Establish cross-cultural training initiatives, which promote respect and consideration for the importance of Inuit Qaujimatjuqangit to the Inuit identity and to make this training available to Project employees and on-site sub-contractors	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.	Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019
Community Infrastructure and Public Services		
60. 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, in consultation with the GN.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	2018 annual report summary notes no subcommittee currently in place, however noting continued challenges of information exchange with health centres, a forum should be established.
61. Collaborate with agencies to investigate measures and programs to assist employees with pursuing home ownership and accessing affordable housing.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	2018 annual report indicates no success in meeting this requirement. Proponent intends to continue to communications with the NHC to collaborate.
62. In consultation with the GN, develop an effects monitoring program that identifies Project-related pressures to community infrastructure.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Kivalliq Projects Socio-Economic Monitoring Program and Socio -Economic Monitoring Program Report submitted June, 2019
Human Health and Ecological Risk Assessment		
63. Methylmercury concentrations in the aquatic environment and potential risk of consumption of fish containing methylmercury.	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.	2018 CREMP Addendum – Appendix A: Mercury Monitoring Plan for Whale Tail south Area, version 2, and summary provided in 2018 annual report.
Cumulative Effects		
64. 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.	Status update for 2018 provided in 2018 annual report.