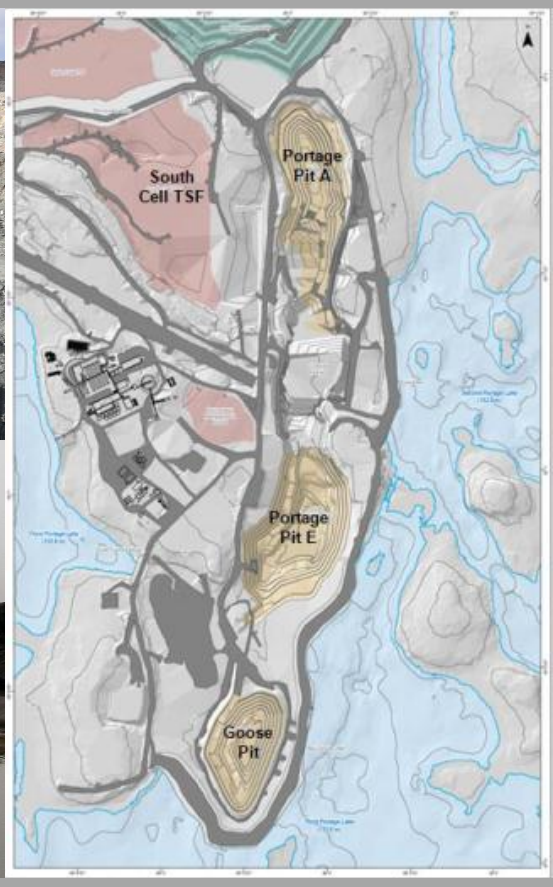
Nunavut Impact Review Board

Reconsideration Report and Recommendations

In-Pit Tailings Disposal Modification

Agnico Eagle Mines Ltd.

NIRB File No.: 03MN107



August 31, 2018

INSIDE COVER PAGE

The Nunavut Impact Review Board's Primary Objectives under the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada,* Article 12, Section 12.2.5:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of residents of Canada outside the Nunavut Settlement Area.

The Nunavut Impact Review Board's Primary Objectives under the *Nunavut Planning and Project Assessment Act,* S.C. 2013, c. 14, s. 23 states:

23(1) The Board must exercise its powers and perform its duties and functions in accordance with the following primary objectives:
(a) to protect and promote the existing and future well-being of the residents and communities of the designated area; and
(b) to protect the ecosystemic integrity of the designated area.

23(2) In exercising its powers or performing its duties and functions in accordance with the objective set out in paragraph (1)(a), the Board must take into account the well-being of residents of Canada outside the designated area.

Contact Information:
Nunavut Impact Review Board
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SIGNATURE PAGE

THIS REPORT IS SUBMITTED TO THE HONOURABLE DOMINIC LEBLANC, MINISTER OF INTERGOVERNMENTAL AFFAIRS, NORTHERN AFFAIRS AND INTERNAL TRADE BY THE NUNAVUT IMPACT REVIEW BOARD ON THIS 31ST DAY OF AUGUST 2018.

Elizabeth Copland
Chairperson

Phillip (Omingmakyok) Kadlun
Board Member

Guy Alikut
Board Member

Henry Ohokannoak
Board Member

Allen Maghagak
Board Member

Madeleine Qumuatuq
Board Member

Catherine Emrick
Board Member

COVER LETTER

NIRB File No.: 03MN107

August 31, 2018

The Honourable Dominic LeBlanc, P.C.
Minister of Intergovernmental Affairs, Northern Affairs and Internal Trade
Crown-Indigenous Relations and Northern Affairs Canada
House of Commons
Government of Canada
Ottawa, ON K1A 0A6

Sent via email and courier: dominic.leblanc@parl.gc.ca

Re: Reconsideration Report and Recommendations of the Nunavut Impact Review Board Regarding a Significant Modification to the Meadowbank Gold Mine Project as Proposed by Agnico Eagle Mines Ltd. as the "In-Pit Tailings Disposal Modification"

Dear Honourable Dominic LeBlanc:

As set out in the Nunavut Impact Review Board's (NIRB or Board) Notice of Reconsideration sent to the relevant Minister on June 18, 2018, in support of the Board's reconsideration of the Terms and Conditions of existing Project Certificate No. 004 under Article 12, Section 12.8.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (*Nunavut Agreement*) and s. 112 *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*), the NIRB has undertaken an assessment of the "In-Pit Tailings Disposal Modification" Proposal. As required by Article 12, Section 12.8.3 of the *Nunavut Agreement* and s. 112(5) of *NuPPAA*, the NIRB is providing this Reconsideration Report and Recommendations to the Minister for your consideration.

The enclosed Reconsideration Report and Recommendations summarizes the NIRB's assessment of the potential ecosystemic and socio-economic effects of the "In-Pit Tailings Disposal Modification" Proposal associated with the approved Meadowbank Gold Mine and concludes that it should be allowed to proceed, with no revisions to the Terms and Conditions of Project Certificate No. 004 having been identified as required. The NIRB's report details the commitments made by the Proponent to ensure protection and promotion of the ecosystemic and socio-economic environment and provides direction to the Nunavut Water Board regarding issues

or concerns that need to be addressed through the subsequent water licensing process for this proposal. Finally, the Report also identifies additional commentary for several Terms and Conditions in Project Certificate No. 004 to clarify their intended application for the works or activities associated with this proposal.

Should you have questions or require clarification regarding this matter, please contact the NIRB's Executive Director, Ryan Barry at (867) 983-4608 or rbarry@nirb.ca.

Sincerely,

Elizabeth Copland
Chairperson
Nunavut Impact Review Board

cc: The Honourable Catherine McKenna, Minister of Environment and Climate Change
The Honourable Jonathan Wilkinson, Minister of Fisheries and Oceans and the Canadian Coast Guard
The Honourable Amarjeet Sohi, Minister of Natural Resources
The Honourable Marc Garneau, Minister of Transport
The Honourable Hunter Tootoo, MP for Nunavut
The Honourable Joe Savikataaq, Premier of Nunavut
Aluki Kotierk, President, Nunavut Tunngavik Incorporated
David Ningeonan, President, Kivalliq Inuit Association
Lootie Toomasie, Chairperson, Nunavut Water Board
Jamie Quesnel, Agnico Eagle Mines Ltd.
Ryan Vanengen, Agnico Eagle Mines Ltd.
Meadowbank Gold Mine Distribution List
Whale Tail Pit Distribution List

EXECUTIVE SUMMARY

This Reconsideration Report and Recommendations has been issued by the Nunavut Impact Review Board (NIRB or Board) to present the findings of the Board's assessment of Agnico Eagle Mines Ltd.'s (Agnico Eagle or the Proponent) "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal), a proposed amendment to the approved Meadowbank Gold Mine Project (NIRB File No. 03MN107). The scope of the In-Pit Tailings Disposal Proposal as assessed by the NIRB involves the proposed disposal of mining tailings in three mined out pits within the footprint of the approved Meadowbank Gold Mine: Portage Pit A, Portage Pit E and Goose Pit. Agnico Eagle proposes to use this method of tailings disposal in addition to the currently approved practice of placing mining tailings within the existing Meadowbank Tailings Storage Facility. Agnico Eagle proposes to transition to the in-pit disposal method following the closure of the Meadowbank Tailings Storage Facility, to accommodate tailings produced through processing ore from the Whale Tail Pit Gold Mine.

On March 22, 2018 the Nunavut Planning Commission concluded that the In-Pit Tailings Disposal Proposal represented a significant modification to the approved Meadowbank Gold Mine Project because it is for a component or activity that was not part of the original or previously-amended project proposal. Accordingly, the Commission referred the In-Pit Tailings Disposal Proposal for assessment by the NIRB under the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (*Nunavut Agreement*) and the *Nunavut Planning and Project Assessment Act* (*NuPPAA*) prior to issuance of any permits, licences or other approvals by associated Regulatory Authorities.

Following a technical meeting hosted via teleconference by the NIRB on June 12, 2018, the NIRB released a notice under s. 112(3) of the *NuPPAA* noting that the NIRB was able to conclude with confidence that the In-Pit Tailings Disposal Proposal constituted a significant modification based on additional information received from the Proponent and regulatory participants. The NIRB also determined that the most appropriate mechanism for conducting the required assessment of the modifications proposed in the In-Pit Tailings Disposal Proposal was through a reconsideration of the Terms and Conditions of Project Certificate No. 004, under Section 12.8.2 of the *Nunavut Agreement* and s. 112 of the *NuPPAA.*

Throughout the reconsideration process the Board provided numerous opportunities to participants from federal, territorial and local governments, the Kivalliq Inuit Association, local Hunters and Trappers Organizations, and the public to share their perspectives about the In-Pit Tailings Disposal Proposal, to ask questions and to highlight their concerns about the potential ecosystemic and socio-economic effects (both positive and negative) of the proposed works and activities.

Appropriate waste deposition and treatment options are a significant part of managing the impacts from all mining projects, as the Board has considered with each phase of Agnico Eagle's development related to the Meadowbank Gold Mine (Meadowbank Mine and Vault Pit Expansion Amendment assessed under NIRB File No. 03MN107, and the Whale Tail Pit Project assessed under NIRB File No. 16MN056). Although parties identified information and modelling of interest to them beyond what was presented by Agnico Eagle within its application for the In-Pit Tailings Disposal Proposal, the NIRB recognizes that if this proposal is allowed to proceed, the

subsequent water licensing process would provide sufficient opportunity for these issues to be addressed and be a more appropriate platform for their resolution.

Agnico Eagle continues to utilize the Meadowbank Tailings Storage Facility for deposition of mine tailings, and had previously proposed expansion of this facility to accommodate development of the Whale Tail Pit project, which was subsequently approved by the Board. However, when investigating what specifically would be required to expand the existing Tailings Storage Facility the Proponent considered additional options for tailings disposal and has concluded that the in-pit tailings disposal option is its preferred method moving forward.

The NIRB recognizes that the Proponent has been clear in its intention to use the facilities at the Meadowbank Gold Mine as a "hub" for future developments in the area to the extent practicable. In effect, the implementation of the In-Pit Tailings Disposal Proposal would significantly increase Agnico Eagle's storage space required for tailings produced from developing the Whale Tail Pit Deposit, and could also accommodate additional tailings potentially generated by mining additional gold deposits in the area in future. However, the Board notes that approval of the increase in tailings storage capacity at the Meadowbank site through in-pit disposal does not authorize Agnico Eagle to proceed with development of any additional deposits (outside of the scope of the existing Meadowbank, Vault Pit and Whale Tail Pit sites) in future until additional impact assessments of such proposals as may be required are completed.

As set out in detail within this Report, having reviewed and considered all of the information provided to the Board throughout the reconsideration process for the In-Pit Tailings Disposal Proposal, the NIRB has concluded that this proposed amendment to the Meadowbank Gold Mine may proceed to the licensing and permitting regulatory phase with no revisions to the existing Terms and Conditions of Project Certificate No. 004 required. As always, the Board is grateful to all who shared their experiences, expertise and perspectives to assist us in completing a thorough and timely assessment. The NIRB recognizes and appreciates the positive, collaborative and respectful contributions of all who continue to work together to ensure that the Meadowbank Gold Mine Project delivers lasting economic benefits to the Kivalliq Region while minimizing the potential for adverse socio-economic and ecosystemic effects.

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ᐃᓱᒪᓕᐅᑲᓂᕐᓂᕐᒧᑦ ᐊᒻᒪ ᐊᑐᓕᖁᓪᓂᕐᒧᑦ ᐅᓂᑉᑲᖅ ᓴᕿᑕᐅᓯᒪᕗᖅ ᓄᓇᕗᒻᒥ ᐊᕙᑎᓕᕆᔨᑯᑦ ᑲᑎᒪᔨᓐᓂᑦ ᐅᖃᐅᓯᖃᖅᑐᖅ ᖃᐅᔨᓴᕐᓂᑯᖏᓐᓂᒃ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᕐᓂᖓᓐᓂᑦ ᐊᓪᓂᒍ ᐃᒍᒃᑯᑦ “ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ” ᑐᒃᓯᕋᐅᑦ ᐊᕿᒋᐊᕈᑕᐅᑉᓗᓂ ᐊᖏᖅᑕᐅᓯᒪᔪᒧᑦ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᕐᓂᕐᒧᑦ ᐅᔭᕋᒃᑕᓇᐊᑦ ᐱᓕᕆᐊᖓᓐᓂ (ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓄᑦ ᑎᑎᖃᖏᓐᓂ 03MN107). ᐱᓕᕆᐊᖑᓂᐊᖅᑐᖅ “ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᒻᒥ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᖅ ᓄᓇᕗᒻᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓚᖃᖅᐳᖅ ᐊᓂᑕᐅᓂᖏᓐᓂᒃ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᐃᒪᖓᑕ ᐱᖓᓱᐃᓕᖓᔪᓂ ᐊᑦᑎᒃᓯᓕᖅᓯᒪᔪᓂ ᐊᖏᖅᑕᐅᓯᒪᔪᑉ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᕐᓂᕐᒧᑦ ᐅᔭᔭᕋᒃᑕᕐᕕᐅᑉ: ᐳᐊᑎᔅ ᐅᔭᕋᖕᓂᐊᕐᕕᖓ A, ᐳᐊᑎᔅ ᐅᔭᕋᖕᓂᐊᕐᕕᖓ E ᐊᒻᒪ ᒍᔅ ᐅᔭᕋᖕᓂᐊᕐᕕᖓ. ᐊᓪᓂᒍ ᐃᒍᒃᑯᑦ ᐊᑐᕈᐊᕐᒪᑕ ᑕᑉᓯᒥᖓ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᐃᒪᖓᑦ ᐊᓂᑕᐅᓂᖓᓄᑦ

ᐃᒪᑲᓂᖅᓯᒪᓗᒍ ᒪᓐᓇᐅᔪᖅ ᐊᖏᖅᑕᐅᓯᒪᑉᓗᓂ ᐊᑐᖅᑕᐅᔪᖅ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᐃᒪᖓᑕ ᐊᓂᑕᐅᓂᖏᓐᓄᑦ ᐊᓪᓂᒍᒃᑯᑦ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᐃᒪᖓᑕ ᐃᒪᐅᓯᕕᖓᓄᑦ. ᐊᓪᓂᒍᒃᑯᑦ ᑐᒃᓯᕋᖅᓯᒪᕗᑦ ᓄᐸᓕᐊᓂᕐᒧᑦ ᐊᑕᑯᕐᕕᖓᑕ ᐅᑯᐊᖅᑕᐅᕙᓕᐊᓂᖓᓂᒃ ᐊᐳᖅᑎᓇᖅᑐᒥ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᐃᒪᖓᑕ ᐃᒪᐅᓯᕕᖓᓄᑦ, ᐃᓂᖃᖅᑎᑦᓯᓗᑎᒃ ᐃᒪᖁᑎᖓᑕ ᐊᓂᑕᐅᓂᖏᓐᓂᒃ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᕿᓇᓗᒐᐅᑉ ᐱᐳᕈᖓᑕ ᒍᓗᓯᐅᕐᕕᖓᓐᓂᑦ ᐅᔭᕋᒃᑕᓇᐊᕐᕕᖕᒥᑦ.

ᐅᓇᐅᑎᓪᓗᒍ ᒫᑦᓯ 22, 2018 ᓄᓇᕗᒥ ᐸᕐᓇᐃᔨᑯᑦ ᑲᒥᓴᖓᑦ ᖃᐅᔨᓴᓂᓚᐅᕐᒪᑦ ᓴᒐᖅᓯᒪᔪᒥᒃ ᐅᔭᕋᒃᑕᕐᓂᑯᑦ ᑕᓯᖓᓐᓂᒃ ᑐᒃᓯᕋᐅᒻᒥᒃ ᐊᕿᒋᐊᖅᑕᐅᓯᒪᔪᒥᒃ ᐊᖏᖅᑕᐅᓯᒪᑉᓗᓂ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᕐᓂᕐᒧᑦ ᐃᓚᖓ ᐱᓕᕆᐊᖓᓗ ᐃᓚᒋᔭᐅᓚᐅᖅᒋᒪᓂᒃ ᐊᕿᒋᐊᖅᓯᒪᔪᑉ ᐱᓕᕆᐊᑉ ᑐᒃᓯᕋᐅᑎᖓᑕ. ᑎᐊᓐᓇᐃᑎᓪᓗᒍ, ᐸᕐᓇᐃᔨᒃᑯᑦ ᑐᕋᖅᑎᑦᓯᓚᐅᕐᒪᑕ ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᒥᒃ ᖃᐅᔨᓴᖅᑕᐅᖁᑉᓗᒍ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐊᑕᓐᓂ *ᐊᖏᕈᑦ ᐃᓄᖕᓄᑦ ᓄᓇᑕᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᓄᑦ ᐊᒻᒪ ᑯᐃᓐ ᑭᒐᖅᑐᖅᑎᖓᑕ ᑲᓇᑕᒻᒥ* (*ᓄᓇᕗᒥ ᐊᖏᕈᑎᖓ*) ᐊᒻᒪ *ᓄᓇᕗᒥ ᐸᕐᓇᖕᓂᖕᒧᑦ* ᐊᒻᒪ *ᐱᓕᕆᐊᑦ ᖃᐅᔨᓴᖅᓴᐅᓂᖏᑕ ᐱᖁᔭᖓᓂ* (*NuPPAA*) ᓯᕗᓂᖓᓂ ᑐᓂᔭᐅᓂᖏᑕ ᓚᐃᓴᐃᑦ, ᐱᓕᕆᔪᖕᓇᐅᑎᑦ ᐊᓯᖏᑦᑐ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ ᑐᕋᖓᔪᑦ ᒪᓕᒐᓕᕆᔨᑦ ᑎᒥᖁᑎᖏᓐᓄᑦ.

ᖃᓄᐃᓕᐅᕈᑎᓂᒃ ᑲᑎᒪᔭᑎᖃᓚᐅᕐᓗᑎᒃ ᐅᖃᓗᑎᑯᑦ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᔭᓐ 12, 2018,

ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᒪᕿᑎᑦᓯᓚᐅᖅᐳᑦ ᑎᑎᖃᒻᒥ ᐊᑕᓐᓂ ᐃᓚᒋᔭᐅᔪᖅ 112(3) *ᓄᓇᕗᒥ ᐸᕐᓇᖕᓂᖑᑦ ᐊᒻᒪ ᐱᓕᕆᐊᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᑕ ᒪᓕᒐᖏᓐᓂ* ᑕᑉᑯᐊ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓱᒪᓕᐅᕈᖕᓇᓚᐅᕐᒪᑕ ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᑦ ᐊᕿᒋᐊᕈᑎᖃᕐᒪᑦ ᑐᑭᓯᑲᓂᕈᑎᑦ ᒪᓕᒃᓗᒋᑦ ᐱᓕᕆᔪᒪᔪᒻᒥᑦ ᐊᒻᒪ ᒪᓕᒐᕐᓂᒃ ᑎᒥᐅᔪᓂᑦ. ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓱᒪᓕᐅᖅᓯᒪᕗᑦ ᐱᐅᔪᖅ ᐊᑐᒐᐅᔪᖕᓇᖅᑐᖅ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᕿᒋᐊᕈᑎᓂᒃ ᐃᓗᐊᓂᓯᐅᖅᑐᑦ ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᒻᒥ ᐃᓱᒪᓕᐅᕈᑕᐅᑲᓂᖅᓯᒪᔪᖅ ᑕᐃᒍᓯᖏᓐᓂ ᒪᓕᒐᖏᓐᓂᓗ ᐱᓕᕆᐊᖑᔪᑉ ᓚᐃᓴᖓᓂ004, ᐃᓚᒋᔭᐅᔪᖅ 12.8.2 *ᓄᓇᕗᒥ ᐊᖏᕈᒻᒥ* ᐊᒻᒪ ᐃᓚᒋᔭᐅᔪᖅ 112 *ᓄᓇᕗᒥ ᐸᕐᓇᖕᓂᖑᑦ ᐊᒻᒪ ᐱᓕᕆᐊᑦ ᖃᐅᔨᓴᖅᓴᐅᓂᖏᑕ ᐱᖁᔭᖓᓂ.*

ᐃᓱᒪᓕᐅᖅᑕᐅᓂᖓᓂ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐊᔪᖏᑎᑦᓯᓚᐅᕐᒪᑕ ᐃᓚᐅᒧᓄᑦ ᑲᓇᑕᐅᑉ, ᓄᓇᕗᒥ ᒐᕙᒪᓂᒃ, ᑭᕙᓪᓕᕐᒥ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒋᒋᓐᓂᒃ, ᓄᓇᓕᖕᒥ ᒪᖃᐃᑎᑦ ᑲᑎᒪᔨᖏᓐᓂᒃ, ᐊᒻᒪ ᐃᓄᒥᐊᓂᒃ ᐅᕗᖓ ᐊᑎᒃᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᒧᑦ, ᐊᐱᕆᔪᖕᓇᕐᓗᑎᒃ ᐃᓱᒪᓗᒋᔭᕐᒥᖕᓂᒃ ᐊᕙᑎᐅᑉ ᐃᓄᓯᐅᑉᓗ ᐊᒃᑐᐃᓂᖏᓐᓂᒃ (ᓇᒻᒪᒃᑐᓂᒃ ᓇᒻᒪᖏᑐᓂᓪᓗ) ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒥ.

ᐊᑕᑯᑦ ᐊᓂᑕᐅᓂᖏᑦ ᓴᓗᒪᖅᓴᐅᑎᖏᓪᓗ ᐊᑐᒐᐅᔪᖕᓇᖅᑐᑦ ᒥᐊᓂᕆᔭᐅᔪᑕᐅᓂᐊᖅᑐᑦ ᐊᒃᑐᐃᓂᐅᔪᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᓂ ᐅᑯᐊ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓱᒪᓕᐅᖅᓯᒪᖕᒪᑕ ᐱᓕᕆᐊᖑᔪᓂᒃ ᐊᒡᓂᒍ ᐃᒍᒃᑯᓐᓂᑦ ᐅᕙᖓ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᕐᓂᕐᒧᑦ ᐅᔭᕋᒃᑕᓇᐊᕐᕕᖕᒧᑦ (ᐊᐳᖅᑎᓇᖅᑐᒥ ᐅᔭᕋᖕᓂᐊᕐᕕᖓᓂ ᐊᒻᒪ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᑉ ᐊᒡᓕᒋᐊᕈᑎᖓ ᐊᕿᒋᐊᕈᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᒃ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᑎᑎᖃᖏᓐᓂ 03MN107, ᐊᒻᒪ ᕿᓇᓗᒐᐅᑉ ᐸᐱᕈᖕᒪᑕ ᐅᔭᕋᖕᓂᐊᕐᕕᖓᓂ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᖅ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᑎᑎᖃᖏᓐᓂ 16MN056). ᑎᒥᐅᔪᑦ ᓇᓗᓇᐃᕐᓂᓚᐅᕋᓗᐊᖅᑎᑦᓗᒋᑦ ᐊᒻᒪ ᐃᓚᐅᓯᐊᕐᓂᕋᖅᓗᑎᒃ ᑐᓂᔭᐅᓯᒪᔪᒥ ᐊᒡᓂᒍ ᐃᒍᒃᑯᓐᓂᑦ ᑐᒃᓯᕋᐅᑎᖓᓂ ᐅᕙᖓ ᐊᑦᑎᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᒥ, ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓕᑕᖅᓯᓯᒪᕗᑦ ᑐᒃᓯᕋᐅᑦ ᑲᔪᓯᓇᔭᕐᓂᖅᐸᑦ ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐ ᐊᔪᖏᑎᓯᓇᔭᕐᒪᑦ ᑕᑉᑯᓂᖓ ᐃᓱᒪᓗᒍᑕᐅᔪᓂᒃ ᐅᖃᐅᓯᐅᑎᖅᓯᓗᓂ ᐊᒻᒪ ᑐᖓᕕᖃᑎᐊᖅᑎᖅᓯᓗᓂ ᐊᕿᒋᐊᕈᑎᒃᓴᖏᓐᓂᒃ.

ᐊᒡᓂᒍ ᐃᒍᒃᑯᑦ ᑲᔪᓯᕗᑦ ᐊᑐᕐᓂᕐᒥᖕᓂᒃ ᐊᐳᖅᑎᓇᖅᑐᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᑕ ᓴᓂᕙᐅᓯᒪᕕᖓᓂᒃ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᓂᑦ, ᐊᒻᒪ ᐊᒡᓕᒋᐊᕈᒪᑉᓗᑎᒃ ᐱᔭᑦᑕᐊᔭᕐᒥᖕᓂᒃ ᕿᓇᓗᒐᐅᑉ ᐸᐱᕈᖕᒪᑕ ᐱᓕᕆᐊᖓᓂᒃ ᑕᒻᓇ ᐊᖏᖅᑕᐅᓯᒪᓕᐊᓂᒃᑐᖅ ᐅᑯᓇᖓᑦ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ. ᑭᓯᐊᓂ, ᖃᐅᔨᓴᖅᑎᑦᑐᑭᑦ ᐊᑐᕆᐊᓕᖕᓂᒃ ᐊᒡᓕᒋᐊᕐᓂᖓᓄᑦ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᑕ ᐃᓂᖃᕐᕕᖓᑕ, ᐱᓕᕆᓂᐊᖅᑐᖅ ᐊᕿᒋᐊᕈᑎᒃᓴᓂᒃ ᐃᓱᒪᓕᐅᖅᓯᒪᖕᒪᑦ ᐊᓂᑕᐅᓂᖏᓐᓂᑦ ᐅᖃᖅᓗᓂᓗ ᐊᑦᑎᖕᓂᕐᒥ ᑲᑎᖅᓯᐃᕕᖓ ᐊᑐᕈᖕᓇᕐᒪᑦ ᓯᕗᒻᒧᖕᓂᐊᖅᑐᓐᓇ.

ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓕᑕᖅᓯᓯᒪᖕᒪᑕ ᐱᓕᕆᓂᐊᖅᑐᖅ ᑐᑭᓯᑎᕐᓯᓯᒪᖕᒪᑕ ᐱᓕᕆᐊᕆᓯᐊᑲᒥᓂᒃ ᐊᑐᖅᑕᐅᓂᖓᓄᑦ ᐊᐳᖅᑎᓇᖅᑐᑉ ᒍᓗᓯᐅᕐᕕᖓᓂ “ᑐᑦᑕᕐᕕᐅᓗᓂ” ᓯᕗᓂᕐᒥ ᐱᕙᓪᓕᐊᓂᕐᓄᑦ ᐅᔭᕋᒃᑕᓇᐊᓂ ᐊᑐᕆᐊᖃᓕᕐᓂᖅᐸᑕ. ᐊᒻᒪ ᓱᓕ, ᐊᑐᓕᖅᑎᑕᐅᓂᖓ ᐊᑦᑎᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᑎᑉ ᐊᒡᓕᑎᖅᓯᓇᔭᕐᒪᑦ ᐊᒡᓂᒍ ᐃᒍᒃᑯᑦ ᐃᓗᕐᑯᑎᖓᓐᓂᒃ ᐱᕙᓪᓕᐊᓂᕐᒧᑦ ᕿᓇᓗᒐᐅᑉ ᐸᐱᕈᖕᒪᑕ ᐊᑕᑯᕐᕕᖓᓂᒃ, ᐊᒻᒪ ᐊᑐᑲᓂᕈᖕᓇᖅᑐᓂᒃ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᕐᒧᑦ ᒍᓗᓯᐅᕐᓂᕐᒥᒃ ᓯᕗᓂᕐᒥ. ᑭᓯᐊᓂᑕᐅᖅ, ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᖃᐅᔨᒪᖕᒪᑕ ᐊᖏᖅᑕᐅᓂᖓ ᐃᒪᖃᕕᐅᑉ ᐊᐳᖅᑎᓇᖅᑐᒻᒥ ᐊᑦᑎᓯᓕᖅᓯᒪᔭᑯᑦ ᐊᔪᖏᑎᑦᓯᖏᒻᒪᑦ ᐊᒡᓂᒍ ᐃᒍᒃᑯᓐᓂᒃ ᑲᔪᓯᔪᖕᓇᕐᓂᕐᒥᒃ ᐱᕙᓪᓕᐊᓂᕐᒧᑦ ᐱᑕᖃᑲᓂᖅᑎᑦᓯᓗᑎᒃ ᐅᔭᕋᒃᓯᐅᕐᓂᕐᒥᒃ (ᓯᓚᑕᓐᓂ ᑐᕋᒐᓇᔭᐅᔪᑦ ᐊᑐᖅᑕᐅᔪᑦ ᐊᐳᖅᑎᓇᖅᑐᒥ, ᕗᑦ ᐅᔭᕋᒃᑕᓇᐊᖓᓂ, ᐊᒻᒪ ᕿᓇᓗᒐᐅᑉ ᐸᐱᕈᖕᒪᑕ ᐅᔭᕋᒃᑕᓇᐊᖓᓂ) ᓯᕗᓂᕐᒥ ᐊᒃᑐᐃᔪᑕᐅᔪᖕᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓐᓂᑦ ᑐᒃᓯᕋᐅᑎᑦ ᐊᑐᕆᐊᖃᖅᑐᑦ ᐱᐊᓂᒃᓯᒪᓕᖅᐸᑕ.

ᑎᑎᕋᖅᓯᒪᖕᒪᑦ ᐃᓗᐊᓐᓂ ᐅᓂᑉᑲᒻᒥ, ᖃᐅᔨᓴᖅᑕᐅᓯᒪᖕᒪᑦ ᐃᓱᒪᒋᔭᐅᓯᒪᑉᓗᓂᓗ ᑐᓂᔭᐅᓯᒪᔪᑦ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓂᖓᓂ ᐅᕙᖓ ᐊᑦᑎᓯᓕᖅᓯᒪᔪᒻᒥ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᑯᑦ ᐃᒪᖓᓐᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓂᖓ ᑐᒃᓯᕋᐅᑎᑉ, ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓱᒪᓕᐅᖅᓯᒪᓕᕐᒪᑕ ᐊᕿᒋᐊᕈᒻᒧᑦ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᕐᓂᕐᒧᑦ ᐅᔭᕋᒃᑕᓇᐊᓂ ᑲᔪᓯᔪᖕᓇᕐᒪᑦ ᓚᐃᓴᒥᒃ ᐊᔪᖏᔪᓪᒥᒃᓗ ᐱᓂᓗᑉᓗᓂ ᐊᕿᒋᐊᕈᑎᖃᖅᒥᓗᓂ ᑕᐃᒍᓯᓂᒃ ᒪᓕᒐᓂᒃᓗᓐᓂᑦ ᐱᓕᕆᐊᑉ ᓚᐃᓴᖓᓂ 004 ᐊᑐᕆᐊᖃᖅᑐᓂ. ᑎᐊᓐᓇ ᓱᓕ, ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᖁᕕᐊᓱᒃᐳᑦ ᖃᐅᔨᒪᔭᒥᖕᓂᒃ ᐊᒥᖅᑲᖅᑲᑎᖅᑲᖅᑐᓂᒃ ᐃᑲᔪᕈᒪᓂᕐᒧᑦ ᐱᐊᓂᒃᓴᐅᓂᖓᓐᓂᑦ ᑕᑉᓯᒪ ᑲᔪᓯᑎᐊᕐᓗᑎᒃ. ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏ ᐃᓚᑕᖅᓯᓯᒪᕗᑦ ᖁᕕᐊᓱᒃᐳᖅᓗ, ᐱᓕᕆᖅᑎᒋᔭᐅᖕᒪᑕ ᐅᐱᒍᓱᒃᓗᑎᒡᓗ ᑲᑐᐃᑉᓗᑎᒃ ᐊᐳᖅᑎᓇᖅᑐᒥ ᒍᓗᓯᐅᓯᓂᖅ ᑲᔪᓯᑎᐊᕐᑯᑉᓗᒍ ᐱᕙᓪᓕᐊᕈᑕᐅᓂᐊᖅᑐᓂᒃ ᑭᕙᓪᓕᕐᒥᐅᓄᑦ ᐊᖏᓗᐊᖅᑎᑦᓯᑕᐃᓕᑉᓗᑎᓪᓗ ᐊᒃᑐᐃᓂᕐᓂᒃ ᐃᓄᓯᕐᒍᑦ ᐱᕙᓪᓕᐊᓂᕐᒧᑦᓗ ᑭᕙᓪᓕᕐᒥᐅᓄᑦ.

SOMMAIRE EXÉCUTIF

La Commission du Nunavut chargée de l'examen des répercussions (la CNER ou la Commission) a publié son rapport de réexamen, avec recommandations, de la proposition de «modification pour stockage de résidus dans les fosses» (Proposition de stockage des résidus dans les fosses), amendement de Agnico Eagles Mines Ltd. (Agnico Eagle ou le promoteur) au projet approuvé de la mine d'or Meadowbank (no. de dossier 03MN107). Telle qu'évaluée par la CNER, la portée de cette proposition de stockage des résidus dans les fosses prévoit le stockage des résidus miniers dans trois fosses dépilées, situées dans l'empreinte physique de la mine d'or Meadowbank: Portage Pit A, Portage Pit E and Goose Pit. Agnico Eagle propose d'ajouter cette méthode de stockage à l'entreposage actuel des résidus miniers dans l'installation de stockage Meadowbank et dès la fermeture du bassin de résidus de la Meadowbank, de s'y concentrer pour le stockage des stériles provenant du traitement du minerai de la fosse Whale Tail.

Le 22 mars 2018, la Commission d'aménagement du Nunavut a conclu que la proposition de stockage des résidus dans les fosses constituait une importante modification du projet approuvé de mine d'or Meadowbank car elle visait une composante ou activité étrangère au projet initial ou préalablement autorisé. Par conséquent, en vertu de l'Accord entre les Inuit de la région du Nunavut et sa Majesté la Reine du Chef du Canada (l'Accord du Nunavut) et la Loi sur l'aménagement du territoire et l'évaluation des projets au Nunavut (LATEPN), avant la délivrance de permis, licence ou autorisations des organismes de règlementation compétents.

Dans un avis publié en vertu du paragraphe 112(3) de la LATEPN, suite à une réunion technique organisée par téléconférence le 12 juin 2018, la CNER a déclaré avoir conclu avec certitude que d'après les renseignements supplémentaires fournis par le promoteur et les participants au processus de réglementation, la proposition de stockage des résidus dans des fosses dépilées constituait en effet une importante modification. Elle a ajouté que, conformément aux dispositions de l'alinéa 12.8.2 de l'Accord du Nunavut et de l'article 112 de la LATEPN, l'examen des modalités et conditions prévues dans le certificat de projet no.004, serait le mécanisme le plus approprié pour l'évaluation requise des modifications énoncées dans la proposition de stockage des résidus dans les fosses.

Pendant toute la procédure de réexamen, la Commission a, à maintes reprises, invité les participants des gouvernements fédéral, territorial et local, de la Kivalliq Inuit Association et des organisations locales de chasseurs et de trappeurs, à présenter leurs points de vue sur le projet de stockage de résidus dans les fosses, à poser des questions et à exposer leurs préoccupations vis-à-vis des éventuelles répercussions écosystémiques et socioéconomiques (positives et négatives) des ouvrages et activités proposés.

Le traitement et le dépôt appropriés des résidus forment une partie importante de la gestion des répercussions de tous les projets miniers. La Commission a examiné toutes les phases de l'expansion la mine d'or Meadowbank de Agnico Eagle (amendement pour l'agrandissement de la fosse Vault de la mine d'or Meadowbank, évalué comme dossier no. 03MN107 de la CNER et projet de fosse Whale Tail évalué comme dossier no. 16MN056). Bien que les parties aient apprécié les renseignements et la modélisation présentés en sus des données fournies par Agnico Eagle dans sa proposition, la CNER reconnait que si la proposition est autorisée à aller de l'avant,

le processus ultérieur de délivrance de permis d'eau multipliera les occasions de régler ces questions et sera une plateforme plus appropriée pour leur résolution.

Agnico Eagle continue à stocker ses résidus miniers dans son installation de dépôt de stériles de la Meadowbank; la compagnie avait préalablement proposé d'agrandir son installation pour accommoder l'exploitation du projet de fosse Whale Tail, ultérieurement approuvé par la Commission. Toutefois, en enquêtant sur les éléments dont il devrait absolument tenir compte pour agrandir l'installation de stockage existante, le promoteur a examiné plusieurs autres solutions d'entreposage des déchets et a privilégié le stockage des résidus dans des fosses dépilées comme solution de continuité.

La CNER reconnait que le promoteur a clairement manifesté son intention d'utiliser les installations de la mine d'or Meadowbank comme «pôle central» de futurs développements, dans la mesure du possible. En effet, la mise en vigueur de cette proposition de stockage de résidus dans les fosses maximiserait nettement l'espace requis par la Agnico Eagle pour stocker les résidus issus de l'exploitation du gisement de la fosse Whale Tail et pour entreposer de futurs stériles éventuellement générés par l'exploitation d'autres gisements d'or dans la région. La CNER stipule toutefois que l'approbation d'une augmentation de la capacité d'entreposage des résidus par le stockage dans des fosses dépilées n'autorise pas le promoteur à se lancer dans l'exploitation de gisements supplémentaires (extérieurs à l'empreinte des sites existants de la Meadowbank et des fosses Vault et Whale Tail) tant que les évaluations supplémentaires, éventuelles requises, des répercussions de ces propositions n'auront pas été terminées.

Tel que détaillé dans ce rapport, après avoir examiné et soupesé les renseignements qui lui ont été fournis aux fins de réexamen de la proposition de stockage des déchets dans des fosses dépilées, la CNER a conclu que l'amendement au projet de la mine d'or Meadowbank pouvait progresser jusqu'à l'étape des autorisations règlementaires et de délivrance de permis, sans qu'aucune révision des modalités et conditions stipulées dans le certificat no.004 ne soit exigée. Comme toujours, la Commission remercie sincèrement tous ceux et celles qui, par leurs expériences, leur expertise et leurs points de vue, l'ont aidée à effectuer une évaluation toute aussi rigoureuse qu'opportune. La CNER reconnait et apprécie les contributions positives, respectueuses et collaboratives de tous les intervenants qui œuvrent sans cesse pour que le projet de mine d'or Meadowbank continue à engendrer de durables retombées économiques pour la région de Kivalliq tout en minimisant la probabilité de négatives répercussions écosystémiques et socioéconomiques.

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1. INTRODUCTION

1.1 Purpose of this Report

This Reconsideration Report and Recommendations has been prepared by the Nunavut Impact Review Board (NIRB or Board) to summarize the Board's reconsideration of the terms and conditions of Project Certificate No. 004 in light of the "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal) as proposed by Agnico Eagle Mines Limited (Agnico Eagle, or Proponent) for activities at the Meadowbank Gold Mine (NIRB file no. 03MN107).

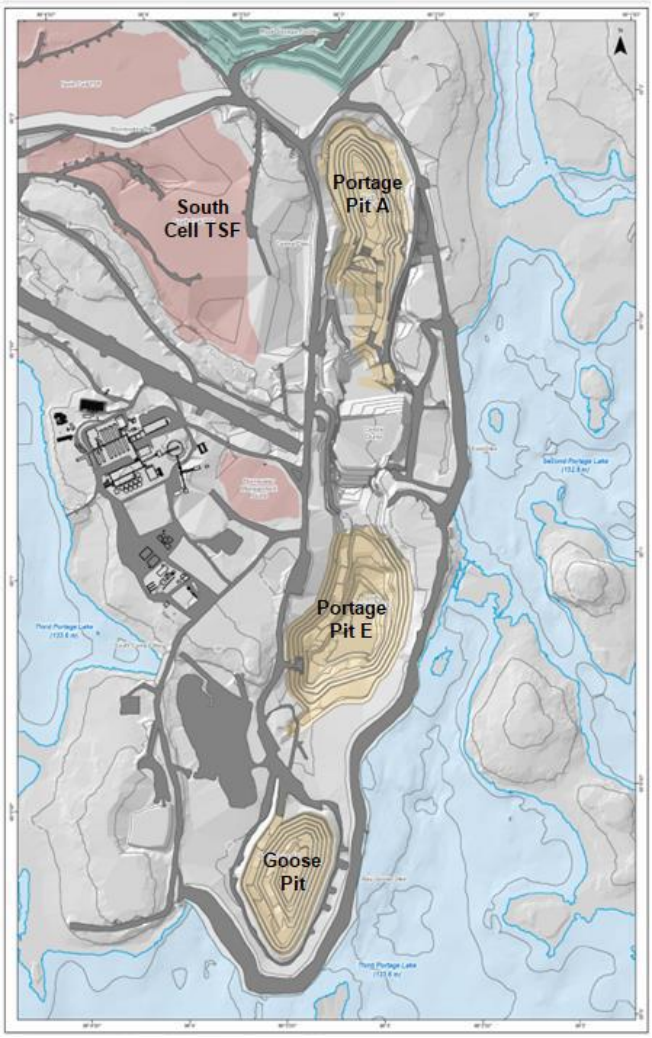
The Reconsideration Report and Recommendations summarizes the NIRB's assessment of the potential ecosystemic and socio-economic effects of the In-Pit Tailings Disposal Proposal and concludes that the proposal should be allowed to proceed, with no revisions to the Terms and Conditions of the existing Project Certificate No. 004 having been identified as required. In coming to this conclusion, the NIRB recognizes that modifications to Water Licence No. 2AM-MEA1526 associated with the In-Pit Tailings Disposal Process are under consideration by the Nunavut Water Board (NWB) and that the NWB's review of the proposed modification will follow the completion of the NIRB's assessment. The Report further describes in detail the factors taken into consideration, providing details about the proposed modification application a summary of all the comments received to date for the Proposal and outlining the environmental and socio-economic consideration that the NIRB has given to the proposal. The Report also provides direction to the NWB and identifies issues or concerns that remain to be addressed through the subsequent NWB modification consideration process. Finally, the Report also identifies specific terms and conditions in Project Certificate 004 that would benefit from additional commentary to clarify their application to the works or activities associated with this modification.

1.2 Overview of the In-Pit Tailings Disposal Modification

The application, as submitted to the NIRB on February 23, 2018, proposed to change Agnico Eagle's method of tailings disposal for its operations at the approved Meadowbank Gold Mine and Whale Tail Pit Gold Mine from the current practice of placing all tailings within the Meadowbank Tailings Storage Facility (TSF) to also allow future disposal of tailings in three (3) mined-out pits: Portage Pit A, Portage Pit E, and Goose Pit. See Figure 1 for the location of the In-Pit Tailings Disposal Proposal.

Tailings would be capped underneath approximately 3 metres (10 feet) of water within the mined-out pits (i.e. sub-aqueous disposal), with a final water cover of approximately 8 metres depth (26 feet) once the mined-out pit has been filled to capacity with tailings. The In-Pit Tailings Disposal Proposal would require the continued use of various existing project components at the Meadowbank Gold Mine, including the following:

- Pits and dikes to segregate operations from Third Portage Lake and Second Portage Lake;
- The reclaim water barge;
- The tailings deposition barge;
- The reclaim water treatment plant; and
- Extension of the existing slurry (tailings) and reclaim water piping to all three (3) pits.



While approximately 8.3 million tonnes of tailings are anticipated to be produced through processing ore from the Whale Tail Pit deposit, the use of in-pit tailings disposal as proposed would provide an additional 22 million tonnes of tailings storage over and above that required for the Whale Tail Pit Project. Following closure and decommissioning of the facilities at the Meadowbank mine, the Portage area would be re-flooded and the dikes would be breached to discharge water directly to Third Portage Lake once the water quality meets site-specific closure criteria as established under the Water Licence. Further, with the addition of the tailings to the three (3) pits, Agnico Eagle considers this modification to be a change to the fish habitat type areas and fish habitat units for the Project. As a result, Agnico Eagle determined that there would be an overall increase in fish habitat (habitat gains of 2.59 habitat units compared to the 2012 No Net Loss Plan[1]).

Figure 1: Meadowbank Site Layout with In Pit Tailings Disposal (*2016 Mine Waste Rock and Tailings Management Plan*)

1.3 Board Guidance to Proponent in Preparation of Impact Assessment of In-Pit Tailings Disposal Modification

Agnico Eagle's initial application to the Nunavut Planning Commission (the Commission) provided details on the proposed amendment and the rationale for Agnico Eagle's conclusion that the activities did not constitute a significant modification to the Project, as tailings deposition is already a part of the approved mining operation, and the deposition is within a previously disturbed area. On January 12, 2018 the Commission requested the NIRB's opinion on whether the proposed

[1] Agnico Eagle. 2012. Meadowbank Gold Project No Net Loss Plan (NNLP), Agnico-Eagle Mines Ltd, October 15, 2012.

changes constituted a significant modification to the existing project, and to inform the decision, the NIRB sent direction to Agnico Eagle regarding information required by the Board to properly assess the potential effects and significance of the modification request. Further to outlining the information required to allow the NIRB to determine the significance of a modification, the NIRB also provided general guidance for parties seeking approval for modifications to approved projects, including self-assessment, application submission, and consideration of the modification request.

1.4 Evidentiary Issues

1.4.1 The Burden and Standard of Proof

The Proponent bears the onus of proof and must demonstrate, on a balance of probabilities, that the In-Pit Tailings Disposal Proposal is consistent with the Board's mandate and requirements of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and the *Nunavut Planning and Project Assessment Act* (*NuPPAA*).[2]

In the context of this assessment specifically, it is the responsibility of the Proponent to provide the Board with sufficient information for the modification to assess the potential ecosystemic and socio-economic impacts of the In-Pit Tailings Disposal Proposal and to meet any additional guidance issued by the Board.

In addition to the overall onus on the Proponent during the Board's assessment, individual participants throughout the assessment process must also meet the burden of proof for specific information or assertions offered to the Board. As stated in the NIRB Rules of Procedure, any party offering evidence has the burden of ensuring that they have provided the Board with sufficient information to support that participant's position.[3] Further, where there is conflicting information, the Board has the authority to decide which information will be accepted by the NIRB in whole or in part. The standard of proof in this reconsideration process required a careful balancing of all of the information filed in writing to the Board. The sections of this Report discussing the Board's Views address how the Board balanced information provided on key topics. However, the onus remained on the Proponent throughout to demonstrate that the In-Pit Tailings Proposal is consistent with the Board's mandate and requirements of the *Nunavut Agreement* and the *NuPPAA*.

1.4.2 Inuit Qaujimaningit

As indicated in previous Environmental Impact Statement (EIS) Guidelines, the Board's previous decisions, and reflective of the minimum EIS requirements set out under Section 12.5.2 of the *Nunavut Agreement* and s. 101(3) of the *NuPPAA*, in the Board's view, Inuit Qaujimaningit, which encompasses Inuit Traditional Knowledge (and variations thereof) as well as contemporary Inuit knowledge that reflects Inuit societal values and experience, contributes vital information to the

[2] *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2, came into force on July 9, 2015.
[3] NIRB Rules of Procedure, September 3, 2009, Rule 32.1 at p. 18.

NIRB's assessment process. The term Inuit Qaujimaningit is meant to encompass local and community-based knowledge, ecological knowledge (both traditional and contemporary), which is rooted in the daily life of Inuit people and represents experience acquired over thousands of years of direct human contact with the environment.[4,5] With its emphasis on personal observation, collective experience and oral transmission over many generations, Inuit Qaujimaningit provides factual information on such matters as ecosystem function, social and economic well-being, and explanations of these facts and causal relations among them.

The Proponent was required to incorporate Inuit Qaujimaningit into its modification proposal, to the extent that the Proponent had access to such information and in keeping with the expectation that the Proponent would undertake appropriate due diligence to gain access to the information, but the Board understands that the availability of such information may be limited by obligations of confidentiality and other ethical obligations that may attach to such information.

1.5 Procedural History

1.5.1 Jurisdiction of the Board to Conduct the Reconsideration

In conducting a reconsideration, the NIRB remains mindful that the NIRB's primary objectives apply to reconsiderations and generally dictate that the NIRB conduct an assessment of the modification proposal with as much rigor at least as a NIRB screening and sometimes even a full environmental review. However, the NIRB also notes that process for the assessment of modification proposals must also reflect the scale and scope of the changes requested.

Recognizing the limited scale and scope of the proposed modifications, the integral link between the In-Pit Tailings Disposal Proposal and the existing Meadowbank Gold Mine Project and noting that the modifications would be conducted largely within the footprint of the existing Meadowbank Gold Mine Project, the Board determined that the most appropriate mechanism for conducting the required assessment of the modifications proposed in the In-Pit Tailings Disposal Proposal was a reconsideration of the terms and conditions of Project Certificate No. 004, under Section 12.8.2 of the *Nunavut Agreement* and s. 112 of the *NuPPAA*. On this basis, the Board decided that Article 12, Section 12.8.2(b) and (c) of the *Nunavut Agreement* and s. 112(b) and (c) of the *NuPPAA* (changed circumstances and technological innovations) triggered the reconsideration of the terms and conditions of Project Certificate No. 004 in light of the In-Pit Tailings Disposal Proposal.

1.5.2 Key Procedural Steps in the Reconsideration Process of the Project Proposal

The key procedural steps that have been taken by the NIRB during consideration of the In-Pit Tailings Disposal Proposal are set out in Table 1 that follows. In particular, the NIRB wishes to highlight and provide more detail regarding important procedural developments leading up to the release of the Reconsideration Report and Recommendations.

[4] Berkes, F. 1993. Traditional ecological knowledge in perspective. In: Inglis, J. (ed.), Traditional Ecological Knowledge: Concepts and Cases. Ottawa: Canadian Museum of Nature, pp. 1-9.
[5] Stevenson, M. G. 1996. Indigenous knowledge in environmental assessment. Arctic, 49(3), 278-291.

The NIRB first became engaged in the process on January 12, 2018 when the NIRB received correspondence from the Nunavut Planning Commission (Commission) regarding Agnico Eagle In-Pit Tailings Disposal Project. Specifically, the Commission requested the NIRB's opinion as to whether the project proposal represents a significant modification to the Meadowbank Gold Mine Project approved under NIRB Project Certificate No. 004 (NIRB File No.: 03MN107). The documentation provided included a self-assessment from Agnico Eagle which concluded that, in its view, the changes proposed do not constitute significant modifications to the Meadowbank Gold Mine Project (Project Certificate No.: 004) as originally approved by the NIRB.

On January 31, 2018 the NIRB requested submission of additional information from Agnico Eagle to allow for an evaluation of the significance of the proposed modifications, as well as to determine whether or not the proposed works/activities would trigger a formal reconsideration of the terms and conditions of Project Certificate No. 004 pursuant to Article 12, Section 12.8.2 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) and s. 112(1) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

On February 26, 2018 Agnico Eagle provided supplemental information to address the items identified by the Board as requested. Further, Agnico Eagle provided context for its conclusion that the In-Pit Tailings Disposal Proposal is not a significant modification to the Meadowbank Mine and that the In-Pit Tailings Disposal Proposal should not trigger a formal reconsideration of Project Certificate No. 004. Upon receipt of the additional information, the NIRB completed an internal review of the information provided and considered the significance of the proposed change in relation to the scope of the approved Project as previously-assessed, as well as the extent to which the proposed change is likely to significantly affect the ecosystemic and socio-economic impacts previously assessed by the NIRB in respect of the approved Project. On this basis, on March 22, 2018 the Board released correspondence and noted that further assessment of the proposed modification and consideration for possible implications to the NIRB's monitoring program for the approved Meadowbank Project was warranted. The NIRB further noted that it would await confirmation from the Commission that the proposed modification conforms to the Keewatin Regional Land Use Plan, prior to determining whether a formal reconsideration of the terms and conditions of Project Certificate No. 004 will be necessary.

On March 22, 2018 the NIRB received a referral from the Commission to screen Agnico Eagle's In-Pit Tailings Disposal Proposal, with an accompanying positive conformity determination under the Keewatin Regional Land Use Plan. In the conformity determination, the Commission noted that Agnico Eagle's project proposal represents a significant modification to the approved Meadowbank Gold Mine (NIRB File No. 03MN107) project because of the change of tailings disposal method to an in-pit tailings disposal in three (3) abandoned open pit sites.

On April 13, 2018 the NIRB solicited comments from interested parties and Regulatory Authorities on Agnico Eagle's proposed modification to the Meadowbank Gold Mine Project prior to determining whether the proposed changes warrant reconsideration of the existing Project Certificate No. 004 in accordance with the *Nunavut Agreement* Section 12.8.2.

On May 18, 2018 Agnico Eagle provided a response to comments received from parties. Further, Agnico Eagle noted within its correspondence that in its view that the most appropriate course of action was for the NIRB to determine that the In-Pit Tailings Disposal Proposal is not a significant modification, and that the In-pit Tailings Disposal Proposal can proceed in accordance with the NIRB's rigorous monitoring program and required reporting already established at Appendix D of Project Certificate No. 004, in accordance with Part 7 of Article 12 of the *Nunavut Agreement*. This is the " Non-significant Amendment: Screening Not Required; Implications for NIRB Monitoring Program" option described within the NIRB guidance.

On May 20, 2018 the NIRB released correspondence providing notice that the Board was proposing to facilitate a Technical Meeting (via teleconference) for June 12, 2018 to enable discussion with respect to Agnico Eagle's proposed In-Pit Tailings Disposal Proposal.

On June 18, 2018 following the Technical Meeting, the Board issued follow-up guidance and notice under s. 112(3) of the *NuPPAA* regarding the next steps in the processing of Agnico Eagle's In-Pit Tailings Disposal Proposal along with direction regarding the NIRB's required process for consideration of the proposal. With the release of this correspondence, the NIRB commenced the final information request period.

On or before August 3, 2018 parties submitted their final written submissions in respect of the Agnico Eagle's In-Pit Tailings Disposal Proposal and on August 17, 2018 Agnico Eagle provided a reply to parties' final written submissions. It should be noted that, recognizing the limited scope of the In-Pit Tailings Disposal Proposal, the NIRB determined it was not necessary to hold a Public Hearing associated with this reconsideration.

As this summary is not exhaustive, parties wishing to develop a more complete understanding of the activities associated with the NIRB's' assessment for this project proposal are encouraged to consult the complete listing of all associated documentation available from the NIRB's online public registry at www.nirb.ca/project/125253.

Table 1: Procedural History

Party	Timeline	Process Steps	Notes[a]
Nunavut Planning Commission (Commission)	**January 12, 2018**	Correspondence from Commission requesting NIRB's opinion on proposal as significant modification	Documentation contained Agnico Eagle's self-assessment which concluded it considered the changes would not constitute significant modifications to the Meadowbank Gold Mine Project (Project Certificate No.: 004) as originally approved by the NIRB
NIRB	**January 31, 2018**	Requested additional information from Agnico Eagle on proposal	
Agnico Eagle Mines Ltd. (Agnico Eagle)	**February 15, 2018**	Requested extension to provide supplemental information to NIRB	
Agnico Eagle	**February 26, 2018**	Supplemental information provided as required by the Board	
NIRB	**March 22, 2018**	Released correspondence noting further assessment of the proposed modification was warranted	NIRB conducted an internal review of the additional information provided and noted that that further assessment of the proposed modification and consideration for possible implications to the NIRB's monitoring program for the approved Meadowbank Project was warranted. The NIRB further noted that it will await confirmation from the Commission that the proposed modification conforms to the Keewatin Regional Land Use Plan, prior to determining whether a formal reconsideration of the terms and conditions of Project Certificate No. 004 will be necessary
Commission	**March 22, 2018**	Referred project proposal to the NIRB for screening	Conformity determination noted that Agnico Eagle's project proposal represents a significant modification to the approved Meadowbank Gold Mine (NIRB File No. 03MN107) project because of the change of tailings disposal method to an in-pit tailings disposal in three (3) abandoned open pit sites.
NIRB	**April 13, 2018**	Request for comments on proposed modification	Request noted that comments would be considered prior to determine whether the proposed changes warrant reconsideration of the existing Project Certificate in accordance with Section 12.8.2 of the *Nunavut Agreement*.
Parties	**May 4, 2018**	Submission of comments	Received from Kivalliq Inuit Association (KivIA) and Government of Canada (GoC)
Agnico Eagle	**May 18, 2018**	Provided a response to comments	Correspondence also noted that in Agnico Eagle's view the most appropriate course of action was for the NIRB to determine that the In-pit Tailings Disposal Modification is not a significant modification, and that the In-pit Tailings Disposal Modification can proceed in accordance with the NIRB's rigorous monitoring program.

Table 1: Procedural History

Party	Timeline	Process Steps	Notes[a]
NIRB	**May 20, 2018**	Notice of Technical Meeting	Technical meeting to be via teleconference to discuss Agnico Eagles' proposal.
Government of Canada	**June 11, 2018**	Correspondence to clarify Government of Canada's position	Correspondence summarized the Government of Canada's positions on the proposal and requested clarification on the assessment process the Board intended to take. Further, the Government of Canada noted it had not concluded that there would be significant adverse effects from this proposal but rather that they agreed with the Commission's conclusion that the modification is sufficiently significant that the change must be considered in a Part 3 assessment before proceeding.
NIRB	**June 12, 2018**	Technical Meeting via teleconference	Participation: KivIA, Government of Nunavut (GN), Nunavut Water Board (NWB), Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Crown-Indigenous and Northern Affairs Canada (CIRNAC), Natural Resources Canada (NRCan), Transport Canada (TC), Justice Canada, Northern Projects Management Office and Agnico Eagle.
Agnico Eagle	**June 13, 2018**	Provided correspondence with a list of commitments made during the Technical Meeting	Correspondence reiterated Agnico Eagle's view that the most appropriate course of actions is for the NIRB to determine that the modification proposal is not a significant modification and that the modification can proceed in accordance with the NIRB's rigorous monitoring program as established in Appendix D of Project Certificate No. 004.
NIRB	**June 18, 2018**	Correspondence sent providing formal notice of the Board's reconsideration and commenced the Information Request (IR) period.	Notice from the Board pursuant to s. 112(3) of the *Nunavut Planning and Project Assessment Act (NuPPAA)* that it determined under Article 12, Section 12.8.2(b) and (c) of the *Nunavut Agreement* and s. 112(b) and (c) of the *NuPPAA* to trigger the reconsideration of Project Certificate No. 004 in light of the In-Pit Tailings Disposal Proposal submitted by Agnico Eagle related to the Meadowbank Gold Mine Project (NIRB File No. 03MN107). Board invited direction from the Minister pursuant to s. 114 of the *NuPPAA* on prioritizing assessments as may be deemed appropriate.
Agnico Eagle	**June 22, 2018**	Provided response to the NIRB's correspondence dated June 18, 2018	Correspondence noted concerns with respect to the uncertainty and delays that have occurred on this project proposal and questioned the position that the federal agencies have taken that this proposed improvement for tailings management at the Meadowbank mine site constituted a significant modification to the original Project.
Government of Canada	**June 26, 2018**	Extension to IR Date sent to NIRB	Correspondence requested an extension to provide the IRs from June 26th to July 3, 2018 for federal agencies, except for NRCan expecting to provide IRs by July 9, 2018.
NIRB	**June 26, 2018**	NIRB granted extension	NIRB granted extension request to IR submission

Table 1: Procedural History

Party	Timeline	Process Steps	Notes[a]
Parties	**July 3, 2018**	Submission of IR's by parties	IRs received from: Crown Indigenous Relations and Northern Affairs Canada (CIRNAC), ECCC and DFO.
NIRB	**July 4, 2018**	IRs distributed Proponent	IRs requested additional information from the Proponent.
NRCan	**July 9, 2018**	Submission of IR's by NRCan	
NIRB	**July 11, 2018**	NRCan's IRs distributed Proponent	IRs requested additional information from the Proponent.
Agnico Eagle	**July 11, 2018**	Response to IRs submitted	Responses were only to CIRNAC, ECCC and DFO's IR submissions
Agnico Eagle	**July 16, 2018**	Response to NRCan's IRs submitted	
Parties	**August 1, 2018**	Final Written Submissions due	Final written submissions received from: KivIA, GN, CIRNAC, ECCC, and DFO.
NIRB	**August 2, 2018**	Final written submissions distributed to Proponent	
Government of Canada	**August 3, 2018**	NIRB receives correspondence clarifying NRCan's intent to provide a Final Written Submission	GoC noted its cover letter of August 1, 2018 contained an error, should have stated that "*Transport Canada had no comments with respect the Proposal*" instead of NRCan, and NRCan expected to submit final written submissions on August 3, 2018.
Northern Projects Management Office	**August 3, 2018**	NRCan sends Final Written Submission	
Agnico Eagle	**August 3, 2018**	Request the NIRB not accept NRCan's submission of August 3, 2018 for decision-making	Agnico Eagle noted that due to the late submission of the final written submissions, it would not have ample time to respond to the issues raised, and that the Board not consider the submission as part of its decision
NIRB	**August 7, 2018**	Provided follow-up guidance on the late filed submissions from NRCan	Correspondence noted that the NIRB has found NRCan's expertise in respect of permafrost and hydrology to result in highly relevant and important information being provided to the Board and although the submission was provided late the Board was not going to sacrifice the thoroughness of the NIRB's reconsideration by refusing to file and consider NRCan's late submission. The correspondence also provided additional time for Agnico Eagle to file a response to the submissions from parties.
Agnico Eagle	**August 17, 2018**	Responses to final written submissions submitted to the NIRB	

2. SUMMARY OF PROPONENT'S ASSESSMENT OF IN-PIT TAILINGS DISPOSAL MODIFICATION

2.1 Project Description

The Meadowbank Gold Mine Project (the approved Project) as operated by Agnico Eagle Mines Ltd. (Agnico Eagle or 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. In-pit tailings disposal was identified as an alternative in the Final Environmental Impact Statement submitted for the approved Project and included "option A" sub-aqueous slurry deposition in Second Portage Arm and North Portage Pit[6,7]; however, the Proponent identified placing all the tailings within the Meadowbank Tailings Storage Facility (within the former Second Portage Lake northwest dewatered arm) as the preferred option for management of tailings. As a result, Project Certificate No. 004 issued for the approved Project does not contemplate in-pit disposal of tailings. Agnico Eagle's proposed modification as received on January 12, 2018 from the Nunavut Planning Commission and supplemental information provided by Agnico Eagle to the NIRB on February 26, 2018 to address the items identified by the NIRB as required for further assessment proposes to dispose of tailings in three mined out pits: Portage Pit A, Portage Pit E, and Goose Pit; all within the footprint of the assessed and approved Meadowbank Mine in order to ensure that best practices are followed and to ensure appropriate long term planning to optimize the site footprint.

According to the project proposal filed by Agnico Eagle, the scope of the amendment would include the following specific undertakings, works or activities:

- Continued use of existing project components at the Meadowbank Mine Site including:
  - Pits and dikes to segregate operations from Third Portage Lake and Second Portage Lake;
  - Reclaim water barge;
  - Tailings deposition barge;
  - Reclaim water treatment plant;
  - Tailings thickener (this is under evaluation);
- Extension of the slurry (tailings) and reclaim water piping to all three (3) pits; and
- Disposal of tailings in three (3) pits, Portage Pit A, Portage Pit E, and Goose Pit, all within the footprint of the assessed and approved Meadowbank Mine with subaqueous deposition proposed to commence at Goose Pit in 2019.

Tailings would be disposed of underneath approximately 3 metres (10 feet) of water within the mined out pits (i.e. sub-aqueous disposal), with a final water cover of approximately 8 metres depth (26 feet) once the mined-out pit has been filled to capacity with tailings. Following closure and decommissioning of the facilities at the Meadowbank mine, the Portage area would be re-

[6] Golder Associates Ltd., Report on *Evaluation of Tailings Alternatives, Meadowbank Project, Nunavut*, October 2005. Prepared for Cumberland Resources Ltd.
[7] Cumberland Resources Ltd. Integrated Report on Evaluation of Tailings Management Alternatives, Meadowbank Gold Project, Nunavut. February 2007.

flooded, and the dikes would be breached to discharge water directly to Third Portage Lake once the water quality meets site-specific closure criteria as per the Water Licence.

2.1.1 Need for the Project

In evaluating the updates that would be required to expand the Meadowbank Tailings Storage Facility to store the additional tailings which would be generated by processing ore from the Whale Tail Pit site, several other conceptual options were identified by Agnico Eagle through a Multiple Accounts Analysis study:[8]

1. In-pit tailings deposition in Portage Pits A and E;
2. Internal structures tailings deposition within the North and South Cells of the existing Tailings Storage Facility; and
3. Filtered tailings deposition stack in the North Cell of the existing Tailings Storage Facility.

In-pit tailings deposition was selected as the preferred option by Agnico Eagle and included use of Goose Pit in addition to the Portage Pits A and E to store tailings waste produced from Whale Tail Pit Project, rather than expanding the current Meadowbank Tailings Storage Facility (TSF). The change to in-pit disposal of mining tailings was supported by the Meadowbank Dike Review Board (MDRB), a Review Panel of independent geotechnical experts established under the Type "A" Water Licence for the Meadowbank Gold Mine (Water Licence No.: 2AM-MEA1525).

Further, Agnico Eagle noted that based on observations at the Meadowbank Mine, an increase in seepage has been observed at the mine site at the downstream toe of the Central Dike at the TSF. Agnico Eagle noted that it is technically feasible to continue with no changes to the existing method of tailings disposal; however, the "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal) would mitigate the risks with continuing the use of the Tailings Storage Facility. Agnico Eagle noted the In-Pit Tailings Disposal Proposal "…has advantages with respect to health and safety, quality of life, water, air, capital cost, technology, natural hazards and adaptability."[9] Agnico Eagle also noted that the MDRB also accepted sub-aqueous in-pit disposal of tailings as the best available technology.

Agnico Eagle evaluated that the In-Pit Tailings Disposal Proposal would continue to use existing infrastructure at site, not increase the mine footprint, occur entirely within existing pits (Portage and Goose) that have already been assessed, reviewed, authorized and impacted by approved mine activities and use the same technology as what is currently being used for disposal of tailings at the Tailings Storage Facility (i.e., sub-aqueous disposal). Therefore, the In-Pit Disposal Modification would be a prudent mitigation measure to ensure operation of the Meadowbank mine continues under the safest conditions.

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[8] SNC Lavalin Inc., October 24, 2016. *Multiple Accounts Analysis for the Tailings Facility Extension Project.* Prepared for Agnico Eagle Mines. Ltd.

[9] Agnico Eagle Mines Ltd. Letter NIRB Re: *Agnico Eagle's Request for Comment for Agnico Eagle Mines Ltd.'s "In-Pit Tailings Disposal Modification" and Modification to the Meadowbank Gold Mine Project (NIRB File No. 03MN107.* May 18, 2018.

Finally, Agnico Eagle noted that it considered a milling and tailings management plan which provides operational flexibility for Whale Tail Pit and "reasonably foreseeable future development". The current tailings management plan presents a deposition plan that accounts for the storage 8.3 million tonnes of Whale Tail Pit tailings while the in-pit modification would provide 22 million tonnes of additional capacity beyond what is currently required.[10] In effect, the implementation of the In-Pit Tailings Disposal Proposal would significantly increase Agnico Eagle's storage capacity for tailings beyond that required for the Whale Tail Pit Deposit, and accommodate additional tailings potentially generated by mining other gold deposits in the area in future.

2.1.2 Project Components and Project Phases

Agnico Eagle indicated that for the In-Pit Tailings Disposal Proposal to commence operations in 2019, the Proponent needs to complete procurement and transportation of materials and supplies during the open water season of 2018. If approval is received, construction needed to commence in late 2018 with subaqueous deposition occurring at Goose Pit as early as January 2019.[11] Agnico Eagle described the following deposition phases for the operation and closure for the In-Pit Tailings Disposal Proposal (8.3 million tonnes of tailings for the Whale Tail Pit Project)[12,13]:

- **2018 to early 2019**: Portage and/or Vault tailings deposition in South Cell Tailings Storage Facility;
- **January to July 2019**: Whale Tail Pit tailings deposition in Goose Pit;
- **August 2019 to December 2020**: Whale Tail tailings deposition into Portage Pit E;
- **January 2021 to December 2021**: Whale Tail tailings deposition into Portage Pit A;
- **Years 2022 to 2026**: Pit closures with flooding at the end of operations;
- **Years 2027 to 2031**: Surface water and groundwater quality monitoring;
- **Year 2031**: commencement of post-closure.

The project proposal included the assumption of a full capacity deposition schedule for deposition of a total of 32 million tonnes of tailings as follows:[14,15]

- **2018 to early 2019**: Portage/Vault tailings deposition in South Cell Tailings Storage Facility;

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[10] Agnico Eagle Mines Ltd. Letter to Nunavut Impact Review Board, Re: *Request for Opinion as to whether Agnico Eagle Mines Ltd.'s "In-pit Tailings Disposal Modification" Project Proposal is a Significant Modification to an Existing Project*, February 26, 2018.

[11] Agnico Eagle Mines Ltd. Email to Nunavut Impact Review Board, Re: *03MN107: Final Written Submission Responses for the Review of Agnico Eagle mines Ltd.'s "In-Pit Tailings Disposal Modification" Project Proposal*, August 23, 2018.

[12] Agnico Eagle Mines Ltd., November 2016. *2016 Mine Waste Rock and Tailings Management Report and Plan Update*.

[13] Agnico Eagle Mines Ltd. Email to Nunavut Impact Review Board, Re: *03MN107: Final Written Submission Responses for the Review of Agnico Eagle mines Ltd.'s "In-Pit Tailings Disposal Modification" Project Proposal*, August 23, 2018.

[14] SNC Lavalin Inc., September 12, 2017. *In-Pit Tailings Deposition Water Balance and Water Quality Forecast*. Prepared for Agnico Eagle Mines Ltd.

[15] Agnico Eagle Mines Ltd. Email to Nunavut Impact Review Board, Re: *03MN107: Final Written Submission Responses for the Review of Agnico Eagle Mines Ltd.'s "In-Pit Tailings Disposal Modification" Project Proposal*, August 23, 2018.

- **January 2019 to April 2020**: Tailings deposition in Goose Pit;
- **May 2020 to October 2028**: Tailings deposition in Portage Pit, alternating between Portage Pit A and Portage Pit E
- **Years 2029 to 2030**: Pit closures with flooding at the end of operations;
- **Years 2031 to 2034**: Surface water and groundwater natural flows

2.2 Map of Project Activities

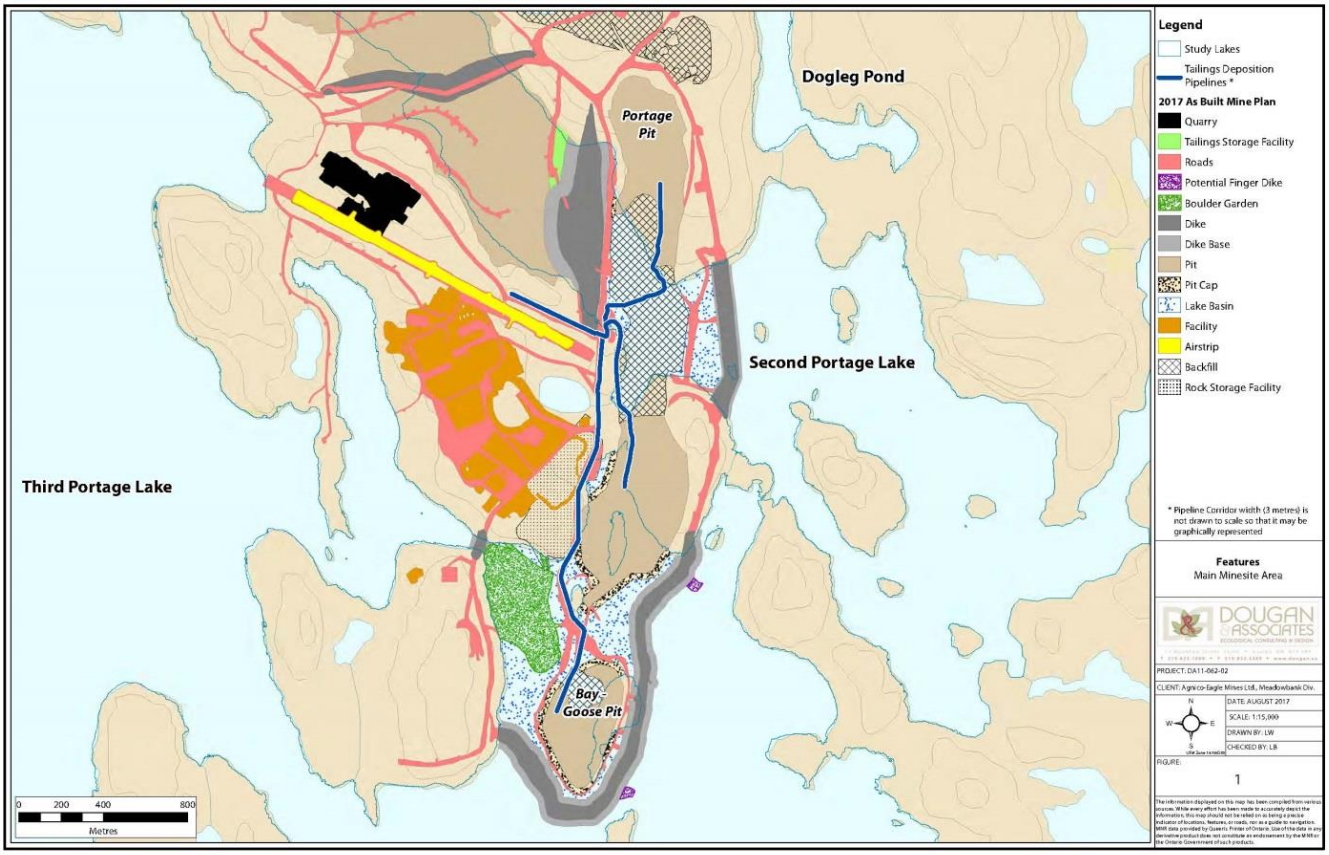

Figure 2: Location of Project Activities (from *Technical Memorandum to Fisheries and Oceans Canada, dated November 17, 2017*)

2.3 Summary of Potential Changes to Ecosystemic Effects as Assessed by the Proponent

Agnico Eagle noted that the In-Pit Tailings Disposal Proposal is not associated with any expansion of the mine footprint, and is located within the area of impact previously assessed, with no additional historical, cultural and archaeological significance. Agnico Eagle considered the nature, magnitude, complexity, probability, frequency, reversibility and cumulative impacts are unaffected as outlined in the original Meadowbank Final Environmental Impact Statement

(FEIS).[16] Agnico Eagle further indicated that this analysis was supported by SNC Lavalin's Environmental Impact Study Review[17] and any potential impacts are mitigable through the implementation of management plans provided to the NIRB during the assessment process.

Table 2: Potential Changes to Ecosystemic Effects

SUBJECT	CHANGES[18]	DISCUSSION	REFERENCE
ECOSYSTEMIC EFFECTS			
Terrestrial Environment	N	The location of the Portage and Goose pits is within the Meadowbank mine site. The In-pit tailings disposal in the Portage and Goose pits will not increase the mine footprint, and will occur entirely within existing pits that have already been assessed, reviewed, authorized and impacted by approved mine activities. As the In-Pit Disposal Modification is a prudent mitigation measure to ensure that the operation of the Meadowbank mine continues under the safest conditions.	NIRB Application for Screening #125253, February 26, 2018
Geology Features, Soil and Permafrost	N	As the pits will be filled with water and tailings, the pre-existing permafrost created during mining operations will degrade and will lead to a negligible impact. Agnico Eagle noted that this impact would affect the permafrost within the pits in operations, but also in closure and post-closure. Further, it was noted that the shoreline of the former arm of Second Portage Lake (i.e., between the South Cell, Central Dump and East Dike) will experience approximately a 1 metre higher water level than the original water lever, as it becomes part of Third Portage Lake but the impact to the shoreline remains the same as originally proposed within the FEIS. Agnico Eagle concluded that the in-pit tailings disposal modification is predicted to have the same or less impact to the permafrost in operation, closure/post closure in comparison to what was originally predicted in the FEIS	1) NIRB Application for Screening #125253, February 26, 2018. 2) Environmental Impact Study Review, February 26, 2018.

[16] Agnico Eagle Mines Ltd., January 29, 2018. *Agnico Eagle Mines Meadowbank Modification – In-Pit Tailings Disposal*, NIRB Application for Screening #125253.
[17] SNC Lavalin Inc., February 15, 2018. *Environmental Impact Study Review – Meadowbank In-Pit Tailings Deposition*. Prepared for Agnico Eagle Mines Limited.
[18] Changes to ecosystemic effects as previously assessed by the NIRB.

SUBJECT	CHANGES[18]	DISCUSSION	REFERENCE
ECOSYSTEMIC EFFECTS			
Hydrogeology and Groundwater Quantity and Quality	N	Contaminants within the tailings pore water could also diffuse to the environment following closure due to concentration gradients between the tailings pore water and the water column above the tailings. Agnico Eagle noted that this could lead to a higher contaminant concentration at the surface of the tailings compared to the concentration in the water column. At closure, the gradient between the Third Portage Lake and the pits will be negligible. As presented in the prefeasibility study (PFS) design of the in-pit tailings deposition, the diffusion of the contaminant is expected to be extremely slow, therefore potential impact are considered negligible.	1) NIRB Application for Screening #125253, February 26, 2018. 2) Environmental Impact Study Review, February 26, 2018.
Surface Water Hydrology, Surface Water Quality and Sediment Quality	N	Water quality within the pits will be impacted by tailings deposition, and water quality will be monitored during operations, to update water quality forecast model. During operations, Agnico Eagle noted that the water level inside the pits would be kept below the Third and Second Portage lakes elevation and no pit water would be discharged to the receiving environment. Agnico Eagle noted that water quality forecast of the pit lake after in-pit tailings deposition and after pit re-flooding was evaluated during the PFS, assuming no active in-situ water treatment system was in place at closure in order to assess the parameters of concern at closure. At the end of in-pit tailings disposal and pit re-flooding, many total heavy metal concentrations were forecasted to be higher than the Canadian Council of Ministers of the Environment (CCME) guidelines for aquatic life. As a mitigation measure, Agnico Eagle noted that active in-situ water treatment would be required at the end of in-pit tailings disposal for a period of three (3) to five (5) years to treat the pit lake to remove these contaminants. Agnico Eagle concluded that the proposed in-pit tailings disposal modification is predicted to have the same or less impact	1) NIRB Application for Screening #125253, February 26, 2018. 2) Environmental Impact Study Review, February 26, 2018.

SUBJECT	CHANGES[18]	DISCUSSION	REFERENCE
ECOSYSTEMIC EFFECTS			
		to the water quality in operation, closure/post closure in the comparison to what was originally predicted within the FEIS.	
Freshwater Aquatic Environment	N	Considering that breaching the dikes surrounding the re-flooded Portage and Goose pits and its surrounding area will be implemented after water quality meets water quality objectives, no significant changes to impacts on fish and other aquatic organisms is expected. Based on the updated 2017 mine plan, Agnico Eagle predicted that there would be an increase of 2.52 habitat units (HUs) in habitat gains achieved through reflooding the Portage area compared to habitat gains calculated in 2012 (96.70 HUs compared to 94.18 HUs). Agnico Eagle noted residual impacts are non-significant for fish and other aquatic organisms and concluded that the proposed modification is predicted to have the same or less impact to the aquatic organisms and habitat in operation, closure/post closure in comparison to what was originally predicted in the FEIS.	1) NIRB Application for Screening #125253, February 26, 2018. 2) Technical Memorandum Re: Updated NNL Calculations for Habitat Gains in Second and Third Portage Lake, November 17, 2017. 3) Environmental Impact Study Review, February 26, 2018.

2.4 Summary of Potential Changes to Socio-Economic Effects

Similar to the discussion of ecosystemic impacts, Agnico Eagle also justified possible socio-economic impacts from the In-Pit Tailings Disposal Proposal as being not significant due to activities occurring within the original mine footprint and contained to areas previously assessed for impacts, and as a result determined that no significant additional impacts to historical, cultural and archaeological resources would result. Agnico Eagle considered the nature, magnitude, complexity, probability, frequency, reversibility and cumulative impacts would be unaffected as outlined in the original Meadowbank FEIS.[19] Agnico Eagle indicated that its analysis was supported by SNC Lavalin's Environmental Impact Study Review[20] and any potential impacts are mitigable through the implementation of management plans provided to the NIRB during the assessment process. Further, Agnico Eagle noted that that the terrestrial wildlife, migratory birds and non-migratory birds impacts have been assessed and are unchanged from the original

[19] Agnico Eagle Mines Ltd., January 29, 2018. *Agnico Eagle Mines Meadowbank Modification – In-Pit Tailings Disposal,* NIRB Application for Screening #125253.
[20] SNC Lavalin Inc., February 15, 2018. *Environmental Impact Study Review – Meadowbank In-Pit Tailings Deposition*. Prepared for Agnico Eagle Mines Limited.

assessment conducted as presented in the FEIS and therefore the impacts to the socio-economic environment are not significant.[21]

3. SUMMARY OF INTERVENOR SUBMISSIONS

3.1 Summary of Submissions in Respect of Ecosystemic Effects

As part of the NIRB's reconsideration process, parties were provided an opportunity to review the application and submit final written submissions on Agnico Eagle Mines Ltd.'s (Agnico Eagle or the Proponent) "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal). Parties provided comments and recommendations on several topics with the focus being on hydrogeology, groundwater, surface water quality and the freshwater aquatic environment. No party recommended modifications or updates to any of the existing Terms and Conditions within Project Certificate No. 004.

Table 3: Comments in Respect of Ecosystemic Effects

TOPIC	PARTY	COMMENTS
ECOSYSTEMIC EFFECTS		
General	KivIA	The proposal relies heavily on forecasts related to mitigation and treatment options that will be evaluated over the life of the milling operation with no examples provided from other northern Canada or northern jurisdictions for comparison.
	CIRNAC	*Necessity for Model Updates:* The Prefeasibility Study reports contain several recommendations and commitments to update and refine modelling assumptions as more data becomes available from laboratory and field investigations. CIRNAC noted that reducing modelling uncertainty through timely model updates is crucial to preventing unanticipated project impacts and noted that strict adherence to recommendations and commitments cannot be overemphasized.
	CIRNAC	*Effective Tracking of Recommendations and Commitments:* Throughout the Prefeasibility Study reports, the Proponent and its consultants acknowledged and identified data gaps and limitations. CIRNAC noted that it would expect these data gaps and limitations be addressed going forward if the in-pit tailings deposition project is approved. Further, diligent tracking and implementation of these recommendations and commitments that were made would be required to provide assurance that actual project impacts would be monitored and appropriately mitigated.
	ECCC	The external treatment processes be optimized and used to the maximum extent, such that treatment sludges can be disposed of outside the pits. If it is necessary to use in-pit treatment, the selected treatment process should be evaluated in the context of conditions in the pit, for long-term stability of the treatment residuals.

[21] Agnico Eagle Mines Ltd., January 29, 2018. *Agnico Eagle Mines Meadowbank Modification – In-Pit Tailings Disposal*, NIRB Application for Screening #125253.

	ECCC	Commitments made by Agnico Eagle to conduct annual updates of predictive modeling, conduct pore water quality monitoring, and identify treatment plans prior to re-flooding be incorporated by the Nunavut Water Board as conditions for the water licence modification.
Terrestrial Environment	NRCan	Noted concern that the extent of the permafrost used in the transport models was incorrect as the assessment of permafrost conditions for the post-closure conditions by Agnico Eagle remains incomplete. NRCan recommended that the permafrost extent be delineated for post-closure conditions and that the extent be mapped for several model layers.
Geology Features, Soil and Permafrost	CIRNAC	*Insufficient Site Specific Geochemical Data:* The Proponent did not present geochemical test data from tailings that are representative of the actual project tailings (e.g., Whale Tail and Meadowbank) but relied on metallurgical test data for water quality prediction. Without this information, CIRNAC noted it was difficult to assess the potential effect of acid rock drainage and/or metal leaching on the predicted water quality.
Hydrogeology and Groundwater Quantity and Quality	NRCan	Recommended that several elements of the groundwater monitoring plan be updated prior to in-pit tailings deposition as the Proponent is only proposing to update the groundwater monitoring plan later "after the dikes are breached and the pits are flooded."
	NRCan	Recommended that the Proponent extend the hydrogeological model to adjacent large lakes to ensure appropriate model boundaries and to have appropriate predictions of contaminant movement with groundwater flow and transport models on which predictions of contaminate movement are based.
	NRCan	Concerns were noted regarding the unexpectedly high seepage rates beneath the Central Dike and NRCan noted that this should be regarded as a warning that hydrogeological predictions at the Meadowbank site are subject to the uncertainty in upper bedrock hydraulic conductivity. NRCan recommended that the hydrogeological model should include a sensitivity analyses to a tenfold variation.
	NRCan	Requested the NIRB seek commitments from the Proponent to ensure, sufficient, relevant groundwater monitoring into the post-closure period to observe potential groundwater contaminant migration caused by flooding of the pits and the surrounding areas.
Surface Water Hydrology, Surface Water Quality and Sediment Quality	NRCan	Considers the current hydrogeological modelling to be insufficient for the assessment of potential effects related to groundwater contaminant migration; shortcomings of the hydrogeological modelling were noted which caused substantial implications for the contaminant transport results and subsequent use for the assessment of potential impacts.
	NRCan	Recommended the Proponent clearly state when the area surrounding the pits would be flooded and whether this would result from natural drainage or pumping, or breaching of the dikes.
	NRCan	Noted that the groundwater simulations should include tailings as a potential source of contamination as the tailings would not be treated and it would be important to evaluate the potential for tailings to contaminate surface water. In addition, this information would be needed to update the groundwater model to ensure that potential contaminant transport from the tailings to the overlying Third Portage

		Lake does not occur following breaching of the dikes and flooding of the pits.
Freshwater Aquatic Environment	CIRNAC	*Insufficient Information on Water Treatment Options:* The Proponent proposes to treat pit water quality to meet discharge criteria at closure but does not present details or specific information in the Prefeasibility Study reports with respect to basic engineering concepts, flowsheets or planned operation of the pit Water Treatment system. To ensure that the closure objectives are met, a more comprehensive discussion on the proposed water treatment approach for contaminants exceeding criteria needs to be presented.
	ECCC	Noted concern with respect to the treatment options selected by the proponent for major ions such as total dissolved solids and sulphate found in the mixed pits and recommended that plans for management and treatment of high-sulphate and total dissolved solids water be developed. The plans should be developed sufficiently in advance of the end of deposition to be implemented prior to re-flooding.
	ECCC	Noted concern with respect to the Proponent's proposal to not use clean waste rock material to cap the tailings at closure as it would not be required to prevent resuspension of tailings in the water column. ECCC recommended that the tailings closure plans include an evaluation of the feasibility of introducing a rock cover above the tailings, and identify conditions where this may be warranted. In addition, it was recommended that the closure monitoring plans include pore water quality monitoring and contingencies for mitigation if exposure to pore water constituents would be undesirable for aquatic life.
	DFO	Given the uncertainty related to fish use of the flooded in-pit tailings areas with regards to suitability of the substrate, and potential delays in use of the tailings substrate; DFO recommended the following to the Proponent: ▪ Provide additional information to support the prediction that the areas as identified would provide viable or suitable habitat once fish are reintroduced to the in-pit tailings areas in the absence of a granular cap. ▪ Provide details respecting how differences in physical features of the substrate (i.e. tailings vs. coarse granular cover / capping materials) impact habitat use. ▪ Provide updated rationale for how predicted impacts of in-pit storage deposition will "diminish over time". The rationale should include, but not be limited to, an assessment of the magnitude of impacts as they relate to life stages of fish and benthic organisms. ▪ Provide updated contingency offsetting options to address the potential risk that water quality may not be suitable for the reintroduction or establishment of fish at closure. ▪ Continue to work with the department to update the accounting of habitat gains and losses, and associated offsetting resulting from any additional serious harm from the proposed In-pit Tailings Disposal Modification proposal, or from modifications to the accounting in the existing No Net Loss Plans.

3.1.1 Geology Features, Soil and Permafrost

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) noted within its final written submission[22] that Agnico Eagle did not present geochemical test data from tailings that are representative of the actual project tailings (e.g., Whale Tail and Meadowbank) but relied on metallurgical test data for water quality prediction for the water quality forecast model. Without this information, CIRNAC noted it was difficult to assess the potential effect of acid rock drainage and/or metal leaching on the predicted water quality. Further, CIRNAC noted that without the information provided it was difficult to confirm the basis for the water quality predictions for the pit during operation and at closure. CIRNAC requested that the geochemical test data completed on the Whale Tail tailings be provided for review and incorporate the data into the model to more accurately characterize future in-pit tailings and refine water quality predictions. Agnico Eagle noted in its response[23] that the information has already been provided within a technical memorandum.[24]

In its final written submission, Environment and Climate Change Canada (ECCC) noted concern with respect to the Proponent's proposal to not use clean waste rock material to cap the tailings at closure as Agnico Eagle concluded that the rock cap would not be required to prevent resuspension of tailings in the water column. [25] ECCC recommended that the tailings closure plans include an evaluation of the feasibility of introducing a rock cover above the tailings, and identify conditions where this may be warranted. In addition, ECCC recommended that the closure monitoring plans include pore water quality monitoring and contingencies for mitigation if exposure to pore water constituents would be undesirable for aquatic life. Agnico Eagle committed to integrate recommendations as provided by stakeholders in the closure monitoring plan, including the recommendation on evaluating options for capping the tailings.

3.1.2 Hydrogeology and Groundwater Quantity and Quality

CIRNAC noted within its final written submission[26] that it was necessary for Agnico Eagle to update its hydrogeological model, tailings consolidation model, groundwater flow and contaminant transport model, pit lake mixing modelling and the water quality forecast model. Throughout the Prefeasibility Study reports, recommendations and commitments were made to update and refine modelling assumptions as more data becomes available from laboratory and field investigations. CIRNAC noted that reducing modelling uncertainty through timely model updates is crucial to preventing unanticipated project impacts and noted that strict adherence to recommendations and commitments cannot be overemphasized and stressed the need for assurances from the Proponent to follow through with the commitments made. In response, Agnico Eagle agreed with CIRNAC's recommendations and provided timelines for updating its

[22] Crown-Indigenous Relations and Northern Affairs Canada Final Written Submission, August 1, 2018.
[23] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018.
[24] Golder Associates Ltd. 2017. Whale Tail Pit Project, Laboratory Testing on Process Plant Tailings AEM Document: 6112-E-105-001-REP-002. December 14, 2017.
[25] Environment and Climate Change Canada Final Written Submissions, August 1, 2018.
[26] Crown-Indigenous Relations and Northern Affairs Canada Final Written Submission, August 1, 2018.

various models.[27] CIRNAC also noted that throughout the Prefeasibility Study reports, the Proponent and its consultants acknowledged and identified data gaps and limitations that would be required to verify and refine the in-pit tailings project, as well as recommended updates required to the monitoring and modelling activities for additional technical studies that are needed to be completed prior to the deposition of tailings. CIRNAC noted that it would expect these data gaps and limitations be addressed going forward if the in-pit tailings deposition project is approved. Further, CIRNAC recommended that diligent tracking and implementation of these recommendations and commitments that were made would be required to provide assurance that actual project impacts would be monitored and appropriately mitigated. Agnico Eagle agreed with CIRNAC's recommendation with respect to creating a tracking document but disagreed that it should be considered by the NIRB for incorporation into the approval conditions and that some of the requirements are part of the Nunavut Water Board Type "A' Water Licence.

Natural Resources Canada (NRCan) indicated within its final written submission that NRCan and the Proponent disagreed about several issues related to groundwater modelling while only agreeing on some issues.[28] NRCan recommended that several elements of the groundwater monitoring plan be updated prior to in-pit tailings deposition as the Proponent is only proposing to update the groundwater monitoring plan at a later date "after the dikes are breached and the pits are flooded." NRCan stressed that adaptive management of potential groundwater contaminant migrations requires an effective groundwater monitoring plan with strategically positioned groundwater monitoring wells and an appropriate frequency of groundwater monitoring. NRCan also recommended that updated groundwater modelling be used to assess the predicted breakthrough curves of groundwater contaminants at existing monitoring wells and assess the suitability of these wells which may be too deep to serve as sentinels of groundwater contamination. In response, Agnico Eagle agreed with the NRCan's recommendation to use updated groundwater modelling to continue to assess the predicted breakthrough curves of groundwater contaminants at existing monitoring wells. However, Agnico Eagle noted that they are very confident the wells are at a suitable depth and the wells were installed in the summer of 2018 in accordance with Version 1 of the hydrogeological modelling results.

In addition, NRCan noted that the groundwater simulations should include tailings as a potential source of contamination and not just the reclaim water as the tailings would not be treated. NRCan stressed the importance to evaluate the potential for tailings to contaminate surface water. In addition, NRCan indicated that this information would be needed to update the groundwater model to ensure that potential contaminant transport from the tailings to the overlying Third Portage Lake does not occur following breaching of the dikes and flooding of the pits. If significant transport of contaminants is predicted, groundwater contaminant fluxes could be integrated into surface water quality modelling. In response, Agnico Eagle agreed with NRCan's recommendation to include the entire extent of tailings in subsequent groundwater simulation and noted that this has been added to Version 2 of the hydrogeological modelling as a potential source of contaminant. Further, this recommendation will be incorporated into Version 3 of the hydrogeological modeling and provided to the NWB for review. In addition, Agnico Eagle agreed to update the groundwater

[27] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018
[28] Natural Resources Canada Final Written Submission, August 3, 2018.

modelling to assess the potential for groundwater flow through tailings. However, Agnico Eagle disagrees with NRCan's opinion that the contaminant transport simulation as presented cannot be relied upon to assess potential contaminant transport during the post-closure period. The current hydrogeological modelling provided to the NIRB is sufficient in Agnico Eagle's opinion for the assessment of potential effects of the project as it was developed according to the industry standard and based on conservative assumption that were confirmed during the field investigation completed in 2017.

The most significant of NRCan's recommendations were related to the current hydrogeological modelling and NRCan considered the model to be insufficient for the assessment of potential effects related to groundwater contaminant migration. NRCan noted shortcomings of the hydrogeological modelling; some of these having substantial implications for the contaminant transport results and their use for the assessment of potential impacts. NRCan recommended that the Proponent extend the hydrogeological model to adjacent large lakes to ensure appropriate model boundaries and to have appropriate predictions of contaminant movement with groundwater flow and transport models on which predictions of contaminant movement are based. Furthermore, a sensitivity analysis on the specified heads in the sub-permafrost groundwater would be needed to assess their influence on groundwater flowpaths in the open talik and, in particular, on the vertical gradients and related vertical groundwater flow. NRCan also disagreed with the Proponent's results within the contaminant transport modelling for post closure scenarios because the assessment of permafrost conditions for the post-closure conditions remains incomplete and because of the substantial effect of permafrost extent on the modelling results NRCan recommended that the permafrost extent be delineated for post-closure conditions and that the permafrost extent should be mapped for several model layers to indicate the distribution of thawed permafrost with depth. The delineation of permafrost should be justified either by thermal modelling or by making assumptions to delineate a "worst case" scenario of permafrost thawing.

In response to NRCan's above concerns, Agnico Eagle noted that it agrees to address the NRCan's recommendation and will adjust the boundary conditions in a follow up submission to the NWB for consideration as part of Agnico Eagle's modification request. However, Agnico Eagle believes the current hydrogeological modelling provided to NIRB is sufficient for the purposes of the assessment of potential effects of the project. However, Agnico Eagle disagreed with NRCan's recommendation with respect extending the contaminant transport simulation model to adjacent lakes as in its opinion using a larger model and elements could lead to numerical dispersion and to numerical errors. Further, Agnico Eagle noted that it disagrees with NRCan's recommendation with respect to the permafrost extent be delineated for post-closure conditions as permafrost assumptions made for the contaminant transport modelling for the post-closure conditions was already confirmed during the thermal model update. This thermal model was used as an input of the Version 2 hydrogeological modeling and the thermal modelling assumptions were representative of a worst case scenario of permafrost thawing. Agnico Eagle also noted that it considers that the contaminant transport modelling results for post closure scenarios provided to NIRB are sufficient for the assessment of potential effects of the project.

Concerns were noted by NRCan within its final written submissions regarding the unexpectedly high seepage rates beneath the Central Dike and NRCan noted that this should be regarded as a warning that hydrogeological predictions at the Meadowbank Mine site are subject to the

uncertainty in upper bedrock hydraulic conductivity. NRCan recommended that the hydrogeological model should include a sensitivity analyses to a tenfold variation in upper bedrock hydraulic conductivity. In response, Agnico Eagle disagreed with NRCan's recommendation and did not agree that it is necessary or appropriate to carry out a sensitivity analysis of post-closure contaminant transport modelling results to a tenfold variation of the hydraulic conductivity. Agnico Eagle noted that pit wall monitoring and physical observations completed during the mining of Goose and Portage Pits provided actual field information to define the extent of potential seepage pathways. In the case of the Central Dike seepage, Agnico Eagle did not have the bedrock exposed beneath the Central Dike to physical observed seepage areas; only field investigation performed by drilling and geophysical surveys were used to define the potential seepage pathways following the seepage occurrence. Agnico Eagle used these results in the development of the different hydrogeological models and the 2017 field investigations completed for the in-pit disposal project.

Finally, NRCan noted within its final written submission that there appears to be inconsistency with respect to the Proponent's proposed timing of flooding of the pits and the anticipated pit water levels prior to and during flooding. NRCan recommended the Proponent clearly state when the area surrounding the pits would be flooded and whether this would result from natural drainage or pumping, or breaching of the dikes. In response, Agnico Eagle agreed to provide further information to address the recommendation and developed a flowchart that summarizes the closure sequence with the water elevation at the end of each phases within the pits. Agnico Eagle also agreed with NRCan's recommendation that "post-closure" groundwater contaminant migration towards Second Portage Lake should begin when pit water levels exceeding those of the Second Portage Lake and will integrate this recommendation in the Version 3 of the hydrogeological model and the results from this version would be submitted to the NWB as part of the NWB's consideration of the modification.

3.1.3 Surface Water Hydrology, Surface Water Quality and Sediment Quality

Within its final written submission[29], the Kivalliq Inuit Association (KivIA) noted that the proposal as presented by Agnico Eagle relies heavily on forecasts related to mitigation and treatment options that will be evaluated over the life of the milling operation with no examples provided from other northern Canada or northern jurisdictions for comparison, especially for the treatment options of sulphate. The KivIA suggested that annual reporting on water quality be submitted to all the agencies involved in a timely manner, possible ahead of the much larger annual report submission related to the Meadowbank Gold Mine Project; to allow for more timely response to any potential issues by all involved. In response, Agnico Eagle noted that the proposed treatment systems have been used in other comparable mine sites and considers that the sulphate level in the pit lake prior to reconnection with Third Portage Lake to be protective despite there being no guidelines. Agnico Eagle further stated that the treatment performance of a physio-chemical based water treatment technology is less impacted by cold water temperature and ideally, a biological treatment would be implemented over the short summer season if required.[30] ECCC also noted similar concerns as

[29] Kivalliq Inuit Association Final Written Submission, August 1, 2018.
[30] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018.

KivIA, indicating that ECCC had concern with respect to the treatment options selected by the Proponent for major ions such as total dissolved solids and sulphate found in the mixed pits and recommended that plans for management and treatment of high-sulphate and total dissolved solids water be developed. ECCC recommended that the plans should be developed sufficiently in advance of the end of deposition to be implemented prior to re-flooding.[31] In response, Agnico Eagle committed to continue regular monitoring of the surface water quality at site and update on an annual basis the water management plan, which includes an update of the water balance, the water quality forecast and the water treatment requirements at closure. Furthermore, Agnico Eagle committed to develop the Final Closure Plan which will include details on the final design of the water treatment plant and the detailed management strategy for pit lake treatment and brine and/or residual waste management of the treatment plant.

CIRNAC noted within its final written submission[32] that there was insufficient information on pit water treatment options to ensure that that the closure objectives are met. CIRNAC noted that the Proponent proposes to treat pit water quality to meet discharge criteria at closure but does not present details or specific information in the Prefeasibility Study reports with respect to basic engineering concepts, flowsheets or planned operation of the pit water treatment system. To ensure that the closure objectives are met, a more comprehensive discussion on the proposed water treatment approach for contaminants exceeding criteria needs to be presented. CIRNAC recommended that the Agnico Eagle develops and provides a standalone water treatment document that includes a discussion of design uncertainties and measures to mitigate the uncertainties or manage unforeseen outcomes.[33] In response, Agnico Eagle agreed to address CIRNAC's recommendations and committed to providing an updated water management plan as noted above with respect to ECCC's concerns.[34]

Within its final written submission[35], ECCC noted similar concerns as CIRNAC with respect to the Proponent's treatment of reclaim water in the South Cell Tailings Storage Facility prior to transfer to the pits as well as treatment of the pit water following the end of in-pit deposition and prior to flooding. ECCC noted concern that there might treatment residuals on the tailings surface which would be subject to bioturbation and ingestion by benthic organisms, and dietary uptake by fishes at post-closure. ECCC recommended that external treatment processes be considered and used to the maximum extent, such that treatment sludges can be disposed of outside the pits. If it is necessary to use in-pit treatment, the selected treatment process should be evaluated in the context of conditions in the pit, for long-term stability of the treatment residuals. ECCC further recommended that commitments made by Agnico Eagle to conduct annual updates of predictive modeling, conduct pore water quality monitoring, and identify treatment plans prior to re-flooding be incorporated by the Nunavut Water Board as conditions for the water licence modification. In response, Agnico indicated that in the design of the water treatment system, it will consider the management of any residuals produced by the treatment outside of the pit. Further, the detail

[31] Environment and Climate Change Canada Final Written Submissions, August 1, 2018.
[32] Crown-Indigenous Relations and Northern Affairs Canada Final Written Submission, August 1, 2018.
[33] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018.
[34] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018.
[35] Environment and Climate Change Canada Final Written Submissions, August 1, 2018.

design will evaluate the best approach to manage the residuals on site, considering its long-term stability. Agnico Eagle also committed to conduct annual updates of the Meadowbank water management plan which would include updating the water balance model, water quality forecasting model and the water treatment requirements at closure based on the latest forecasting results, bench and pilot scale tests, expected Life of Mine and actual operating site conditions.[36]

3.1.4 Freshwater Aquatic Environment

Within its final written submission[37], Fisheries and Oceans Canada (DFO) noted that it is important to have a complete understanding of the habitat conditions at closure, and whether they would be appropriate for fish and other aquatic life; this applies to both *serious harm* to fish as well as proposed habitat compensation/offsetting measures. Given the uncertainty related to fish use of the flooded in-pit tailings areas with regards to suitability of the substrate, and potential delays in use of the tailings substrate; DFO recommended the following to the Proponent:

- Provide additional information to support the prediction that the areas as identified would provide viable or suitable habitat once fish are reintroduced to the in-pit tailings areas in the absence of a granular cap.
- Provide details respecting how differences in physical features of the substrate (i.e. tailings vs. coarse granular cover/capping materials) impact habitat use.
- Provide updated rationale for how predicted impacts of in-pit storage deposition will "diminish over time". The rationale should include, but not be limited to, an assessment of the magnitude of impacts as they relate to life stages of fish and benthic organisms.
- Provide updated contingency offsetting options to address the potential risk that water quality may not be suitable for the reintroduction or establishment of fish at closure.
- Continue to work with the department to update the accounting of habitat gains and losses, and associated offsetting resulting from any additional serious harm from the proposed In-pit Tailings Disposal Proposal, or from modifications to the accounting in the existing No Net Loss Plans.

In response, Agnico Eagle indicated that following tailings deposition in Portage Pit and Goose Pit, the habitat is categorized as Type 7 (fine substrate; > 4 metres in depth) and would be suitable for supporting aquatic life. Further, Agnico Eagle noted that the habitat in the Portage pit lake (which is a combination of pit area and former lake area) is predicted to provide viable habitat once fish are introduced into the area. Based on historical subaqueous tailings disposal case study sites in British Columbia, Manitoba and Northwest Territories that found the lakes to have insignificant impacts on lake water and aquatic populations due to historical subaqueous tailings deposition in these lakes; and based on current water quality predictions, Agnico Eagle is expecting these areas would perform in a manner that is consistent with the case studies and slightly improve fish occupancy as compared to deeper pits areas and as originally modelled in Agnico Eagle's 2012 offsetting plan.

[36] Agnico Eagle Mines Ltd. Response to Final Written Submissions, August 17, 2018.
[37] Fisheries and Oceans Canada Final Written Submissions, August 1, 2018.

In addition, Agnico Eagle provided other historical case studies from mines from Manitoba, Ontario and Tasmania, Australia to illustrate specific lines of evidence for diminishing contaminant levels and improving water quality with improvement to the benthic environment and fish habitat. The studies provided evidence that water quality would be suitable for the re-introduction and/or establishment of fish at closure.

3.1.5 Recommended Mitigation Measures/and or Changes to PC Terms and Conditions/Project Monitoring

Parties' recommendations to the NIRB were generally seeking additional modelling to inform mitigation measures or changes to project monitoring. The Board has addressed these in more detail in Section 7 of this report.

3.2 Summary of Submissions in Respect of Socio-Economic Effects

No comments or submission were provided in respect of Socio-Economic Effects for the In-Pit Tailings Proposal from any participating Intervenors.

3.3 Other Issues Considered by The Board

No other issues were considered by Intervenors with respect to Agnico Eagle's In-Pit Tailings Disposal Proposal.

4. CONSULTATION OPPORTUNITIES

4.1 Public Consultation

With respect to Agnico Eagle Mines Ltd.'s "In-Pit Tailings Disposal Proposal", the NIRB determined that due to the scale of the modification being proposed, the limited and technical nature of the issues related to the modification, and results of public engagement undertaken by the Proponent regarding the proposal, the NIRB would conduct the reconsideration via written submissions only. Community organizations, including the Hamlet, Hunters and Trappers Organization, and Regional Inuit Organization continued to be included on all distributions to solicit for feedback on the application, and were included in the opportunity to file Information Requests followed by final written submissions on the Project proposal.

5. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS OF THE BOARD

5.1 Ecosystemic Effects

5.1.1 Views of the Board

The Board notes that the "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal) as proposed by Agnico Eagle Mines Ltd. (Agnico Eagle or Proponent) would continue the use of the Meadowbank Gold Mine facilities for ore processing and tailings management as was proposed with the Whale Tail Pit Project (Project Certificate No. 008). At this

stage of assessment there is sufficient evidence that the environmental risks associated with this approach to tailings disposal can be mitigated through the NWB technical assessment and regulatory process and would not appear to represent a major technical change for tailings management, provided Agnico Eagle fully addresses the commitments made throughout this reconsideration process. The In-Pit Tailings Disposal Proposal would continue to use the infrastructure at site, would also mitigate the risks of continued operations of the South Cell of the Meadowbank Tailings Storage Facility for the storage of tailings from the Whale Tail Pit project (NIRB File No. 16MN056) given the concern raised by parties with the under-seepage at the Central Dike and the activities would be located within the area of impact previously assessed.

With respect to the potential impacts of the project to the geological features, geochemistry, and permafrost, the Board notes the proposed environmental design features and mitigation measures identified by Agnico Eagle are, in the Board's view, satisfactory for this stage of project development. The Board believes that the collection of additional data and updating the closure monitoring plans as recommended by the Regulatory Authorities and as committed to by Agnico Eagle for review during the regulatory phase, will be critical in ensuring that the measures proposed are, and will continue to be, effective in achieving the desired objectives and adequately addressing concerns related to the geological features, geochemistry, and permafrost for the In-Pit Tailings Disposal Proposal.

The Board notes that many commenting parties requested the Proponent update its hydrogeological model, tailings consolidation model, groundwater flow and contaminant transport model, pit lake mixing modelling and the water quality forecast model. The Board agrees with parties that addressing data gaps and limitations is necessary to verify and refine the In-Pit Tailings Disposal Proposal. The Board notes that to reduce modelling uncertainty it is crucial that Agnico Eagle provide timely model updates. Pro-actively addressing existing data gaps and limitations is vital to providing regulatory authorities and the public with assurances that project impacts remain within expected limits.

With respect to the groundwater monitoring plan and groundwater modelling, the Board has determined that from a general perspective, that most of the relevant issues have been adequately addressed for this stage of assessment, recognizing that the NWB's more in-depth consideration of the technical issues associated with the modification under the existing Water Licence will follow the conclusion of the NIRB's assessment. The Board notes that the Proponent has committed to undertake continued monitoring as well as implement preventative mitigation measures to reduce the potential project impacts to hydrogeology and groundwater quality and quantity. However, the Board encourages Agnico Eagle to continue to work with Regulatory Authorities as it updates its modelling, mitigation measures and management plans throughout the life of the Project including at the post-closure stage.

Further, the Board notes that Agnico Eagle relies heavily on forecasts related to mitigation and treatment options that will be evaluated over the life of the milling operation and despite providing examples on which to base its discussion, no examples were provided from other northern Canada or comparable northern climates for comparison. The NIRB notes that there are a few examples in northern Canada (and Nunavut) with respect to the reclamation, maintenance and monitoring associated with long-term tailings storage facilities and the use of water covers that could be

instructive for Agnico Eagle to consider, such as the decommissioned Polaris Mine, currently licenced by the Nunavut Water Board under Type "A" Water Licence No.: 1AR-POL1531.

The Board also emphasizes that since the 2014 breach of the tailings storage facility at the Mount Polley copper/gold mine near Williams Lake, B.C., public concern has been heightened about tailings facilities, and a regulatory focus on maintaining the long-term integrity of tailings management facilities has occurred. The Board encourages Agnico Eagle and the NWB to consider the independent expert panel reports, recommendations and best practices that have been issued in response to the Mount Polley unplanned breach, and where appropriate incorporate lessons learned from the resulting investigation as Agnico Eagle moves forward with the In-Pit Tailings Disposal Proposal. The Board acknowledges that part of the justification for the In-Pit Tailings Disposal Proposal was the observed seepage associated with the downstream toe of the Central Dike at the Tailings Storage Facility, and the recommendation of the Meadowbank Dike Review Board (MDRB) resulting from the seepage. The MDRB noted that the structural changes of the dike proposed to accommodate additional tailings may increase the seepage, and as such could pose a long-term risk to the ongoing integrity of the structure. The MDRB also noted that although the risks associated with this issue could be managed with increased monitoring of the structure and area, the use of the mined-out pits for tailings storage was considered to be preferable to increasing the height of the dikes in the existing Tailings Storage Facility to allow for additional tailings deposition. The Board expects Agnico Eagle will provide updates through the NIRB's monitoring program for Project Certificate No. 004 regarding results of the ongoing management of seepage associated with the existing Tailings Storage Facility for the Project.

The Board also notes that there remains uncertainty with respect to Agnico Eagle's proposed treatment of the reclaim water and the pit water following the end of in-pit deposition and prior to flooding. As noted by parties, the plans with respect to the management and treatment options selected by the Proponent should be developed sufficiently in advance of the end of the in-pit deposition and should be approved by Regulatory Authorities prior to re-flooding. The Board would expect this issue to be addressed further through the Nunavut Water Board's (NWB) further consideration of the modification.

The Board acknowledges the measures that have been developed and proposed by the Proponent to date to mitigate potential impacts to surface water resources; however, the Board remains aware of the risk of changes in surface water hydrology, surface water quality, permafrost/talik distribution, groundwater distribution and flow paths that may be directly or indirectly attributable to modification of the three (3) pits into in-pit tailings facilities. The Board is aware that these issues will require further consideration and approval by respective Regulatory Authorities and recognizes the NWB's role in conducting a more-in-depth consideration of the technical issues associated with the water quality and general water management issues associated with the In-Pit Tailings Disposal Proposal. The Board again stresses the need for these issues to be assessed and monitored throughout the life of the Project, and that a precautionary approach be taken in relation to consideration of these topics.

With respect to the freshwater aquatic environment, the Board examined the information provided by Agnico Eagle and noted the representations made by intervening parties in their final written submissions. The Board has determined that from a general perspective, the relevant issues have

been adequately addressed for this stage of assessment, recognizing again that the NWB's consideration of the modification provides a greater level of expertise with which to address the technical aspects of the In-Pit Tailings Disposal Proposal.

The Board's preference would be that all aquatic habitat is protected and maintained; however the Board recognizes that Agnico Eagle will work with DFO and other Regulatory Authorities to establish appropriate fish habitat compensation, and that a complete understanding of the habitat conditions at closure of the pits are presented and supported by parties to ensure that the proposed flooding of the in-pit tailings area would be appropriate for fish and other aquatic life at post-closure. The Board is aware that there are a number of issues such as the offsetting plan that will require further updating, consideration and approval by the respective Regulatory Authorities.

The Board notes that Natural Resources Canada (NRCan) directed two (2) of its final written submissions at the NIRB;[38] recommending the current hydrogeological modelling be considered insufficient to assess effects of the proposal, the Proponent be required to update the modelling according to the elements and scenarios provided, and the updated modelling present all pertinent results to allow for the assessment and review of the proposed project modification. NRCan also recommended that the NIRB or the Nunavut Water Board should establish a timetable for updating the groundwater monitoring plan and which should be re-assessed prior to in-pit deposition. NRCan noted the groundwater monitoring plan should explicitly state: which monitoring wells will be maintained in the post-closure period (and groundwater monitoring period) along with monitoring and sampling frequencies, and discuss contingency measures to deal with potential contaminant migration issues. Finally, NRCan recommended to the NIRB that the Proponent develop a monitoring approach to assess groundwater contaminant migration from the in-pit tailings to the overlying surface water following flooding of the pits. The Board has considered NRCan's recommendations and has determined that from a general perspective, the relevant issues have been adequately addressed for this stage of assessment, recognizing that the Nunavut Water Board's consideration of the modifications to Water Licence No.: 2AM-MEA1526 will provide a more appropriate venue for the in-depth consideration of these topics.

5.1.2 Conclusions and Recommendations of the Board

Following a review of the material presented by Agnico Eagle in the application, additional information submitted during the reconsideration process and a consideration of the views of the parties, the Board believes that the potential effects to the valued ecosystemic components as discussed throughout within this report would be appropriately managed through the continued application of key mitigation measures and commitments made by the Proponent during this assessment. As noted earlier in this report, at this stage of assessment there is sufficient evidence that the environmental risks associated with the approach to tailings disposal set out in the In-Pit Tailings Disposal Proposal can be mitigated through the NWB technical assessment and regulatory process. In addition, with the recognition that the nature, magnitude, complexity, probability, frequency, reversibility, and cumulative impacts as outlined in the original Meadowbank Final Environmental Impact Statement are unaffected by the activities in the In-Pit Tailings Disposal

[38] Natural Resources Canada Final Written Submission, August 3, 2018.

Proposal as submitted, the NIRB believes that any potential impacts would be mitigable through the implementation of the management plans provided by Agnico Eagle for both the Meadowbank Gold Mine Project (NIRB File No. 03MN107) and the Whale Tail Pit Project (NIRB File No. 16MN056), the implementation of the commitments made by Agnico Eagle throughout this reconsideration and the possible outcomes of the subsequent water licensing process.

The Board expects that the Proponent will continue to consult and cooperate with regulators and stakeholders as the project activities are undertaken. As changing climatic conditions have the potential to impact project components in unexpected ways, the Board stresses the importance of diligent mitigation and rigorous monitoring to ensure that all potential effects are forecasted and adaptively managed if unanticipated effects are identified. The Board expects that with diligence in monitoring throughout the project lifecycle, the Proponent can address and prevent residual impacts to the terrestrial and aquatic environment from the In-Pit Tailings Disposal Proposal.

5.2 Socio-Economic Effects

5.2.1 Views of the Board

The Board notes that the "In-Pit Tailings Disposal Modification" Proposal (In-Pit Tailings Disposal Proposal) as proposed by Agnico Eagle Mines Ltd. (Agnico Eagle or Proponent) would continue the use of the Meadowbank Gold Mine facilities as was proposed within the Whale Tail Pit Project (Project Certificate No. 008). The In-Pit Tailings Disposal, as noted by Agnico Eagle, would not result in an expansion to the mine footprint, and activities would be located within the area of impact previously assessed. The Board agrees and would expect that no additional historical, cultural or archaeological significance would arise as a result of this proposal. The nature, magnitude, complexity, probability, frequency, reversibility, and cumulative impacts as outlined in the original Meadowbank Final Environmental Impact Statement remain unaffected, and in reviewing the proposal as submitted, the NIRB believes that any potential for socio-economic impacts are mitigable through the implementation of the existing management plans provided by Agnico Eagle for both the Meadowbank Gold Mine Project (NIRB File No. 03MN107) and the Whale Tail Pit Project (NIRB File No. 16MN056).

5.2.2 Conclusions and Recommendations of the Board

In considering the views of the Proponent and parties throughout the reconsideration of the In-Pit Tailings Disposal, the Board believes that there are unlikely to be changes to the effects to the socio-economic environment associated with the In-Pit Tailings Disposal Proposal. If, however, there are unpredicted effects, the Board is confident that such effects would be appropriately managed through the continued application of mitigation measures and commitments made by the Proponent during the review and assessment for the Meadowbank Gold Mine Project (NIRB File No. 03MN107) and the Whale Tail Pit Project (NIRB File No. 16MN056).

The Board observed that Agnico Eagle has worked with Elders and community members at various meetings held throughout the Kivalliq region. The Board encourages the Proponent to continue the involvement of Elders and community members in the further revisions of its monitoring and mitigative plans as necessary through the subsequent permitting process.

6. RECOMMENDATION TO THE MINISTER

The NIRB provides this Reconsideration Report and Recommendations to the Responsible Minister as required under Article 12, Section 12.8.3 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (*Nunavut Agreement*) and s. 112(5) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*). Following the NIRB's assessment of the potential ecosystemic and socio-economic effects of Agnico Eagle Ltd.'s In-Pit Tailings Disposal Modification" Proposal (the Proposal), the NIRB has concluded that:

> After due consideration of all information provided throughout the Board's assessment of the Proposal, and in accordance with the process and primary objectives of the *Nunavut Agreement* and the *NuPPAA*, the Board has recommended that the Proposal should be allowed to proceed in accordance with this Reconsideration Report and Recommendations, with no revisions to the Terms and Conditions of the existing Project Certificate No. 004 having been identified as required.

7. RECOMMENDATIONS FOR REGULATORY AUTHORITIES, LAND AND MINERAL OWNERS

As the Board has noted extensively throughout its report, numerous issues raised by parties were helpful to the Board in making its decision and specific issues should addressed in detail through the various regulatory processes which follow the Board's decision to allow the In-pit Tailings Disposal Modification to proceed. The list below is not exhaustive, and Parties are encouraged to carry forward the issues within their mandate to be addressed in more detail through permitting. The Board therefore provides the following direction to regulatory authorities of items to be considered in subsequent processes:

- Nunavut Water Board
  - Where necessary, additional data be collected, and modelling be undertaken, related to geological features, geochemistry, and permafrost for the In-Pit Tailings Disposal Proposal to inform updating of closure and monitoring plans prior to closure activities occurring.
  - The site's hydrogeological model, tailings consolidation model, groundwater flow and contaminant transport model, pit lake mixing modelling and the water quality forecast model be updated to address the data gaps and limitations identified by Parties and which caused modelling uncertainty.
  - Additional groundwater modelling be undertaken as necessary to ensure mitigation measures outlined in the groundwater management plans are adequately reducing potential impacts to groundwater quality and quantity through tailings deposition, closure, and post-closure.
  - Uncertainty in Agnico Eagle's proposed treatment of the reclaim water and the pit water following the end of in-pit deposition and prior to flooding be addressed to the satisfaction of Parties.
  - Agnico Eagle meet the requirements of commitments made through this process to Parties especially with regards to commitments made surrounding Agnico Eagle's

Response to Final Written Submissions. As plans and commitments are updated, or adaptive management strategies implemented, revised copies should be provided to the NIRB as soon as they are available.

- The NWB work with Agnico Eagle and Parties to incorporate lessons learned, mitigation and treatment options from similar tailings storage facilities at other similar developments, including those occurring within a northern climate, to inform water treatment options for reclaim water, appropriate water quality objectives, and possible mitigation of tailings movement by a rock cap under the water cover at the Meadowbank site.

- Fisheries and Oceans Canada
  - A complete understanding of the habitat conditions at closure of the pits be presented by Agnico Eagle to support establishment of appropriate fish habitat offset, especially with regards to the interface of the tailings and water cover. As discussions are resolved surrounding the appropriate cap for the tailings (i.e. water cover directly on top of tailings, or consideration of a rock cap covering the tailings in addition to the water cover) the Board understands that Agnico Eagle is required to work with parties to ensure appropriate habitat for fish and other aquatic life is available prior to dike breach and flooding of in-pit tailings areas. As these issues are settled, the Board expects to be informed of the resolution prior to closure plans being finalized and closure activities occurring.

8. RECOMMENDATIONS REGARDING CHANGES TO EXISTING PROJECT MONITORING OR PROJECT CERTIFICATE TERMS AND CONDITIONS

The Board has concluded that the In-Pit Tailings Disposal Proposal should be allowed to proceed with no revisions to the Terms and Conditions of the existing Project Certificate No. 004 having been identified as required. However, the NIRB has identified that for some of the Terms and Conditions in Project Certificate No. 004 (as amended), a non-binding **Commentary** section should be added following the specific term and condition to clarify the Board's intended application of these terms and conditions tor the works or activities associated with the In-Pit Tailings Disposal Proposal as set out in detail in Section 8.2 below.

8.1 Changes to the NIRB's Monitoring Program

The Board would note from its discussion throughout this report and its Recommendations for Regulatory Authorities, that updates to project modelling and monitoring are likely to be identified in the subsequent regulatory processes for the In-Pit Tailings Disposal Modification. As required for the NIRB's ongoing monitoring program for the Meadowbank site, under the NIRB Project Certificate No. 004, the Board would expect to receive updates from Regulatory Authorities on the progress of these subsequent processes, as well as revised mitigation and monitoring plans from Agnico Eagle as they become available. Due to the requirements of adaptive management strategies and updates to agreements surrounding the ongoing use of the Meadowbank Mine site to meet the processing requirements for additional deposits such as Whale Tail Pit (NIRB File No.

16MN056), the Board expects that these closure plans and follow up monitoring requirements would remain somewhat dynamic, and updates would be reported to the Board by both regulators and the Proponent.

8.2 Recommended Additional Commentary to Terms and Conditions

The Board believes that the following Terms and Conditions under Project Certificate No. 004 (as amended) could benefit from additional commentary with respect to In-Pit Tailings Disposal Proposal.

9. Cumberland shall provide detailed plans for water treatment for the tailings (reclaim pond) discharge, and on a contingency basis for the attenuation pond discharge(s) and for the pits, including estimates of treatment efficiency for each parameter of concern and the description of pH adjustments in the water license application to the NWB.

New Commentary:
It is expected that the water treatment as referenced above would include this infrastructure as used in the In-Pit Tailings Disposal Modification Proposal.

19. Cumberland shall provide for a minimum of two (2) metres cover of tailings at closure, and shall install thermistor cables, temperature loggers, and core sampling technology as required to monitor tailing freezeback efficiency. Cumberland shall report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.

Previous Commentary: see page 67 of Final Hearing Report.

New Commentary:
The reference to "two (2) metres cover of tailings" in this term and condition refers to the rock cover that would be placed over the existing Tailings Storage Facility located at the Meadowbank Gold Mine site. The cover proposed in the In-Pit Tailings Disposal Modification Proposal, is a minimum of eight (8) metres of water cover.

20. Prior to construction, Cumberland shall identify mitigation measures that can be taken if groundwater monitoring around the tailings facility demonstrates that contamination from tailings has occurred through the fault. Upon drawdown of the North arm of Second Portage Lake, Cumberland shall conduct further tests to assess the permeability of any faults and provide the results to regulators. If doubt remains Cumberland shall seal the fault and conduct further permeability testing and monitoring.

Previous Commentary: "Prior to construction" means prior to construction (as defined by Cumberland in its application or during the NIRB review) of any component of the Project, including the road.

New Commentary:
Following completion of the permitting process for the In-Pit Tailings Modification Proposal, the Proponent shall 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 would of tailings and groundwater movement would be undertaken to inform management plans.

Appendix A: List of Acronyms

ACRONYM **ᐅᖃᐅᓯᑦ ᓇᐃᓐᓇᕆᓚᐅᑦ** **ᐱᑎᐊᓐᓄᖑᓂᕐᑎᒍᑦ**	**ENGLISH** **INUKTITUT**
CIRNAC	Crown Indigenous Relations and Northern Affairs Canada ᑲᓇᒪᒃᑯᑦ ᓄᓇᖃᖅᖃᒃᑐᖅ ᐱᓕᕆᖃᑎᑎᑦᓯᓐᓂᖅ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᐱᓕᕆᐊᖏᓪᓗᑦ ᑲᑎᒪᓂᖅ
DFO	Fisheries and Oceans Canada ᑲᓇᑕᒥ ᐃᖃᓗᓕᕆᔨᑦ ᐃᒪᖃᐅᑕᓕᕆᔨᖅᓗ
ECCC	Environment and Climate Change Canada ᐊᓯᑎᓕᕆᓂᖃᖅᑎᑦ ᐊᒻᒪ ᓱᓕᒥᒃ ᐊᓱᓴᖅᓯᖅᓕᐊᓂᖃᖅᓗᑦ ᖃᑲᓇᑕᒥ
EIS	Environmental Impact Statement ᐊᓯᑎᒥᐅᑕᓀᖅᑐᑦ ᐊᑲᑐᖅᑕᐅᓱᒪᖃᑦᑲᓱᐅᑐᖅᓴᐅᑐᐃᓐᓇᕆᐊᖃᖅᖃᓂᖅᓄᑦ ᐅᓂᒃᑲᓕᐊᖅ
FEIS	ᕿᓚᓕᖅᓯᖅ ᐊᓯᑎᒥᐅᑕᓀᖅᑐᑦ ᐊᑲᑐᖅᑕᐅᓱᒪᖃᑦᑲᓱᐅᑐᖅᓴᐅᑐᐃᓐᓇᕆᐊᖃᖅᖃᓂᖅᓄᑦ ᐅᓂᒃᑲᓕᐊᖅ
GN	Government of Nunavut ᓄᓇᕗᑦ ᑲᓕᒪᓐᓗ
IR	Information Request ᑐᓴᖅᑎᑕᐅᑎᐊᒃᑲᓐᓂᕈᒪᓴᐃᑦ
KivIA	Kivalliq Inuit Association ᕿᓚᓕᓂᒥ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑎᑎᑦ
NIRB	Nunavut Impact Review Board ᓄᓇᕗᒥ ᐊᓯᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖅᑎᑦ
Nunavut Agreement ᓄᓇᕗᒍᑦ ᐊᖏᕈᑎᑎᒥ	*Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* *ᐊᖏᕈᑐᑎᐅᔨᖅᖃᖅ ᐅᑯᓂᖏᓐᓄᑦ ᐃᓄᐃᑦ ᓄᓇᕗᓴᒥ ᐊᒻᒪ ᖃᑯᕐᓂᖅᖃᓕᖅᖏᓐᓄᑦ ᑯᐃᐧᐢ ᓴᓇᓄᓂᐅᑎᖏᓐᓄᑦ ᑲᑎᒪᓂᖅ*
NuPPAA	*Nunavut Planning and Project Assessment Act* *ᓄᓇᕗᓴᒥ ᐸᖃᐃᓂᖅᓯᒪᓂᑦ ᐊᒻᒪ ᓴᓇᓄᐊᖅᓴᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓐᓄᑦ ᒪᓕᓴᖅᑎᑦ*

ACRONYM **ᐅᖅᑲᐅᓯᑦ ᓇᐃᓐᓇᕐᓂᕐᒧᑦ** **ᐱᒋᐊᓘᓐᓄᕐᒥᔪᑦ**	**ENGLISH** **INUKTITUT**
NNLP	No Net Loss Plan ᐃᖅᑲᓇᑕᒥᓂᑦ ᐊᐅᑐᖅᑕᐅᓯᒪᖅᑲᓯᐅᕐᓴᐅᖅᑯᓇᒋᑦ ᓄᑦᓄᑦ ᐱᓕᕆᐊᕆᔨᐅᓂᐊᖅᑐᓄᑦ ᐸᖅᓇᐅᑦ
Commission	Nunavut Planning Commission (NPC) ᓄᓇᕗᒻᒥ ᐸᖅᓇᐃᔨᑦ
NRCan	Natural Resources Canada ᑲᓇᑕᒥ ᓄᓇᒥᐅᑕᓕᕆᔨᑦ
NWB	Nunavut Water Board ᓄᓇᕗᒥ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖓᑦ
TC	Transport Canada ᑲᓇᑕᒥ ᐃᖏᕐᕋᔪᓕᕆᔨᑦ