Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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Iqaluit, NU, X0A 3H0

Your file - Votre référence
2AM-MEA1530/2AM-WTP1830
Our file - Notre référence
GCDocs#140496315

October 06, 2025

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC's) Reply to Agnico Eagle's Response on the 2024 Annual Report Review Comments for Meadowbank and Whale Tail Gold Mine Projects, Type A Water Licence Nos. 2AM-MEA1530 and 2AM-WTP1830.

Dear Mr. Dwyer,

Thank you for your September 04, 2025, invitation to review Agnico Eagle Mines' response to the 2024 Annual Report Review Comments for Meadowbank and Whale Tail Gold Mine Projects, Type A Water Licence Nos. 2AM-MEA1530 and 2AM-WTP1830.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the response and its attachments pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC's reply to Agnico Eagle's response in the attached Technical Memorandum for the Nunavut Water Board's (NWB) consideration.

If there are any questions or concerns, please contact me at Aminul.Haque@rcaanc-cirnac.gc.ca or (867) 975-4282 or Andrew Keim at (867) 975-4550 or Andrew.Keim@rcaanc-cirnac.gc.ca.

Sincerely,

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Aminul Haque
Senior Environmental Assessment Specialist

Technical Review Memorandum

Date: October 06, 2025

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Aminul Haque, Senior Environmental Assessment Specialist, CIRNAC

Subject: **Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC's) Reply to Agnico Eagle's Response on the 2024 Annual Report Review Comments for Meadowbank and Whale Tail Gold Mine Projects, Type A Water Licence Nos. 2AM-MEA1530 and 2AM-WTP1830.**

Region: ☐ Kitikmeot ☒ Kivalliq ☐ Qikiqtani

CIRNAC 01: Closure Planning [with Appendix A]

Recommendation:

(R-01) CIRNAC recommends that Agnico Eagle ensure all previously identified closure questions and concerns, as identified by CIRNAC, are explicitly addressed and documented during the ongoing closure planning process occurring in 2025. For reference, Appendix A presents a consolidated list of prior CIRNAC closure-related questions and comments requiring resolution.

Agnico Eagle's Response

Agnico Eagle updated the Closure and Reclamation Plan (CRP) for the Meadowbank Complex and submitted it to CIRNAC and the KivIA in November 2024. This was a proactive approach by Agnico Eagle to initiate dialog with respect to closure for the Meadowbank Complex.

This said, there has been active dialogue with CIRNAC and the KivIA since November 2024 on this updated plan. Questions and comments made by CIRNAC and the KivIA on the closure plan are being addressed through this initial review process. Once we have addressed the comments, the updated CRP will be submitted to the NWB for distribution and comment by parties.

Agnico Eagle agrees that topics noted in Appendix A are best handled through the detailed review of the updated CRP for the Meadowbank Complex, and not through the annual report review.

In addition, the NWB has jurisdiction over waters and waste in Nunavut: this means that it is the regulatory authority in Nunavut with specialized expertise over closure matters, per

the Nunavut Waters and Nunavut Surface Rights Tribunal Act. Approval of closure plans is not an environmental assessment matter and is a post project approval matter.

The terms and conditions of the Type A Water Licenses do not require submission of closure plans to the NIRB for review. The NWB requires studies and designs to support the closure activities, which are carefully being prepared by Agnico Eagle to meet the rigorous technical requirements of the NWB.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC has no further comments other than to remind Agnico Eagle that the comments generated were and are specific to the water licensing process and germane to the review.

CIRNAC 02: Approval of Major Project Changes and Revised Management Plans

Recommendation:

(R-02) CIRNAC recommends that:

a) Nunavut Water Board clarify whether Annual Report review processes are intended to consider the implications of major project changes that have yet to be authorized through an appropriate formal process, such as Project Certificate Amendments and/or Water Licence Amendments or Modifications;
Agnico Eagle voluntarily request that revised Management Plans undergo a formal review and approval process by the NWB if they have the potential to require a Water Licence Amendment or Modification.

Agnico Eagle's Response

Agnico Eagle respectfully disagrees with CIRNACs position that a major unauthorized change has not undergone the appropriate reviews; nor has there been "significant project changes".

This activity was approved by the NWB (March 25, 2025):

- As noted in the NWB letter, on March 21, 2025, NIRB confirmed by email that the proposed activity appears to be within the non-significant amendment: NIRB assessment not required category.
- The NWB confirms that the proposed activity is not in conflict with the existing terms and conditions of the Licence.
- The NWB looks forward to receiving the updated Water Management Plan as per Part B, Item 16 of the Water Licence 2AM-MEA1530.

As part of our submission on February 26, 2025, Agnico Eagle submitted a self-assessment to the NWB related to the activity of the Vault distribution line at Meadowbank. As noted in the submission:

• The distribution line is required for operations and closure.

• The objective of the distribution line is to transfer contact water from Portage pits to the bottom of Vault Pit within an area of our approved footprint.
• An update to the Water Management Plan would be submitted to NWB (as per Part B, Item 16 of the Water Licence) within 60 days of approval of this notice.
• The updated WMP was included with the 2024 annual report.

In addition, when the Vault distribution line was discussed in May at the latest CRP working session with CIRNAC and the KivIA, CIRNAC representative (Andrew Keim) indicated there was no need to discuss further. As ultimately, by reviewing the information provided from CIRNAC and Agnico Eagle, as well as soliciting the NIRB's opinion, the NWB made a decision on the activity.

Regarding the TSF cover. Agnico Eagle has advanced the closure cover for the TSF. This is one of the items currently in review with KivIA and CIRNAC. CIRNAC has attended all of those meetings. Updated information on the TSF cover will be provided once the review process with CIRNAC and KivIA is complete.

The annual reporting process was the most appropriate time to submit the updated Water Management Plan that reflected the approved activity.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC thanks Agnico Eagle for the detailed response to CIRNAC's comment regarding the introduction of major project changes through the 2024 Annual Report and associated Management Plans.

While CIRNAC acknowledges the efforts made by Agnico Eagle to engage with regulators and provide updated information through the annual reporting process; CIRNAC maintains its position that the changes described constitute significant departures from previously approved closure approaches; specifically, permanent storage of contaminated water in Vault Pit and the revised cover design for the Tailings Storage Facility (TSF)—. CIRNAC's response below clarifies its basis for this position and outlines the importance of adhering to established regulatory pathways.

1. Regulatory Pathways and Scope of Review

CIRNAC emphasizes that major changes to project closure strategies; particularly those that materially alter how environmental risks are managed over the long term should be subject to review and approval through formal regulatory mechanisms, such as Water Licence Amendments or Modifications.

Both the Vault Pit water storage proposal and the revised TSF cover design alter core assumptions underlying previous environmental assessments and closure planning

commitments. The appropriate venue for assessing the implications of such changes is through a robust review process that includes opportunities for technical input and public transparency.

2. Vault Pit Water Storage and the Water Management Plan (WMP)

CIRNAC acknowledges that the NWB issued letter dated March 25, 2025, confirmed that the proposed activity (i.e., the Vault distribution line) is not in conflict with the existing terms of the Licence. However, it is essential to distinguish between the infrastructure (i.e., the distribution line) and the underlying operational change—namely, the permanent storage of contaminated water in the Vault Pit, rather than treatment and discharge.

While the distribution line may have been assessed consistent with the current Licence, **permanent in-pit storage of contact water** represents a substantive shift in closure water management strategy. This change was not subject to a comprehensive technical or public review to assess potential long-term implications for groundwater, geochemistry, pit stability, or future monitoring requirements.

The fact that this change was introduced within the Annual Report and Water Management Plan, without undergoing a formal review or approval process, reinforces CIRNAC's concern regarding regulatory clarity and procedural consistency.

3. Tailings Storage Facility (TSF) Cover Design

CIRNAC recognizes that discussions regarding the revised TSF cover design are ongoing with KivIA and CIRNAC. However, the 2024 Annual Report and related Management Plans describe the 1 m isolation cover as a selected or preferred approach, without clear qualifiers indicating that the cover is still under review or subject to approval.

It is critical that Management Plans and Annual Reports clearly distinguish between approved measures and proposed changes under review. Presenting unapproved modifications as established elements of the closure strategy risks undermining the integrity of regulatory processes, public confidence, and the confidence of landowners.

4. Role of the Annual Report Process

CIRNAC reiterates that while Annual Reports are valuable tools for tracking performance and compliance with approved activities, they are not appropriate mechanisms for introducing or approving material changes to project scope. Substantial changes to closure methods and environmental risk management require dedicated technical scrutiny, clear documentation of rationale and alternatives, and regulatory decisions made within the appropriate legal framework.

CIRNAC reiterates its original recommendations. CIRNAC remains committed to working collaboratively with Agnico Eagle, the NWB, KivIA, and NIRB to ensure that changes to project closure strategies are reviewed in a manner that upholds environmental protection, regulatory consistency, and public trust. CIRNAC appreciates the opportunity to continue these important discussions through the appropriate channels.

CIRNAC 03: Water Quality Predictions of Unapproved Activities

Recommendation:

(R-03) CIRNAC recommends that Agnico Eagle resubmit Appendix 13 and 14 of the 2024 Annual Report with predictions that are limited to project components that have been approved under the relevant Project Certificates and Water Licences. Predictions associated with proposed but unapproved project activities should not be included in the updates. The revised Appendices should be submitted by October 1, 2025.

Agnico Eagle's Response

Agnico Eagle respectfully disagrees with CIRNACs position that a major unauthorized change has not undergone the appropriate reviews. As noted above, the Vault distribution line has been approved, and the updated TSF cover design is currently in review with CIRNAC and the KivIA. As part of the TSF cover design, it is necessary to carry forward models that incorporate the proposed design features. It is not reasonable to present multiple models as this will create confusion.

In addition, the annual report should focus on monitoring and predictions for operations, and leave predictions for closure for the active dialogue on the updated CRP.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC thanks Agnico Eagle for its response regarding the inclusion of water quality predictions based upon unapproved project components in the 2024 Annual Report. While CIRNAC acknowledges the intention to provide forecasts aligned with evolving closure planning, CIRNAC maintains that predictive modelling within the Annual Report must reflect only those components that have been formally approved under current Water Licences and Project Certificates.

As noted in CIRNAC's previous response for CIRNAC R#02 concerning unapproved project changes. The inclusion of unapproved changes, like the permanent contact water storage in Vault Pit and the revised TSF cover design, prevents CIRNAC from assessing trends and potential impacts associated with the approved project. These unapproved changes have been incorporated into the water quality predictions presented in Appendices 13 and 14 of the Annual Report, which limits CIRNAC's ability to assess the environmental performance

of the currently approved project. This directly impacts the effectiveness of the Annual Report as a tool for regulatory oversight. CIRNAC's ability to fulfill oversight responsibilities and the core purpose of annual reporting are significantly limited.

While Agnico Eagle notes the importance of avoiding confusion by presenting a single scenario; replacing the approved configuration entirely with an unapproved one that creates greater regulatory uncertainty. If proposed changes are to be modelled, they should be clearly distinguished from the approved project and submitted through the appropriate review processes. In the context of the Annual Report, water quality forecasts must be grounded within the currently authorized project to ensure transparency, comparability, and consistency with established regulatory expectations. CIRNAC is therefore maintaining its original recommendation that Agnico Eagle resubmit Appendices 13 and 14 with predictions limited to approved project components.

CIRNAC 04: Model Prediction Accuracy and Decision Making

Recommendation:

(R-04) CIRNAC recommends that Agnico Eagle perform quantitative sensitivity analyses of their water quality predictions. The analyses should quantify potential variability in all major source terms and associated pathways (e.g., elevated arsenic seepage from pit walls, waste rock storage facilities (WRSFs) and mine areas). CIRNAC acknowledges that some sensitivity analyses have already been performed in prior predictions, but a more comprehensive analysis of all variables is justified. The additional information is necessary to verify Agnico Eagle's conclusion that their modelling results are conservative and over-predict any potential impacts. Results from past predictions demonstrate that this is not the case.

Agnico Eagle's Response

Agnico Eagle disagrees to the degree of uncertainty in the model. The differences between model outputs are not because of uncertainty, rather they are because of changes in water management strategy and movement of water, in particular, for Goose Pit and IVR Pit. For example, Figure 6-2 shows monitoring data compared with the 2023 and 2024 models. Generally, both water quantity (water levels) and water quality (concentration) are in agreement with monitoring results, and there is a high degree of certainty in model predictions.

Differences between model iterations are also explained by source term updates through laboratory testing and model calibration to site monitoring data. Agnico Eagle progressively investigates opportunities for model improvements via model verification and calibration exercises each year. These exercises provide an opportunity to verify model results with monitoring data and calibrate model components where necessary. It is Agnico Eagle's opinion that there is greater benefit to taking this approach, whereby the model is iteratively

validated and updated based on real world data, then by running a broad range of 'what if' sensitivity analyses.

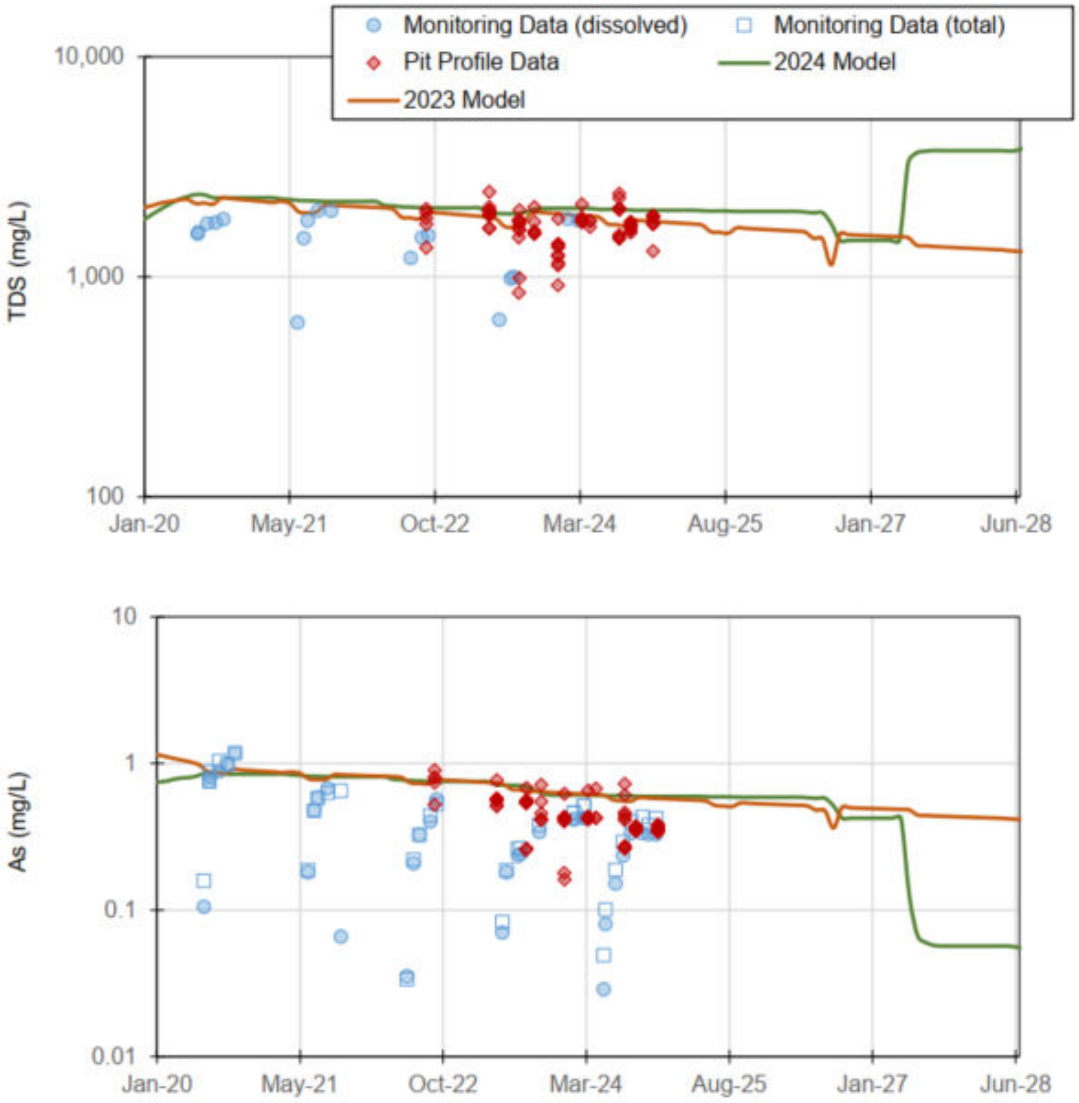

Figure 6-2: Water quality model results for TDS (top) and As (bottom) in Goose Pit during Operations Phase plotted alongside available monitoring data.

Regarding Figure 6-4, the ICRP states that active closure period is defined by the period until which water quality in Whale Tail North Basin meet CCME or SSWQO guidelines. In this case, the parameter of concern is arsenic, and the guideline is a SSWQO of 0.025 mg/L for total arsenic. This is the criteria for defining when post-closure period begins. Post-closure period cannot begin unless all parameters meet CCME or SSWQO guidelines, including arsenic. As noted above, Agnico Eagle disagrees with the conclusion of the degree of uncertainty in model predictions. Regardless, if SSWQO for arsenic are not met, Agnico Eagle will continue with active closure water management practices.

In addition, monitoring is ongoing during operations, as well as the 17-year active and passive closure life cycle. Throughout this time period, the water balance and water quality model will be compared to monitoring data and calibrated on an annual basis as per Water Licence conditions. There will be sufficient time to recognize changes from the predicted water quality and take corrective action in the form of adaptive management.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC thanks Agnico Eagle for its response regarding model prediction accuracy. CIRNAC acknowledges that differences between earlier predictions and current results are, in part, attributable to changes in water management strategies and improvements to source term data. CIRNAC also recognizes the value of the iterative calibration process described, including the evidence presented in Figure 6-2, which demonstrates closer alignment between recent predictions and monitoring data. This adaptive approach strengthens the credibility of the models over time.

CIRNAC notes that past experience has shown measured concentrations can differ from predictions by one to two orders of magnitude, either due to system complexity, strategic changes, or underlying uncertainty. Given that closure decisions, such as the timing of pit reconnections, carry long-term environmental implications, it remains critical to ensure that decision-making is based on a conservative understanding of potential outcomes. Quantitative sensitivity analyses provide a systematic way to evaluate the range of plausible conditions and to test whether conclusions drawn from modelling are robust across uncertainties.

CIRNAC, therefore maintains its original recommendation that Agnico Eagle undertake quantitative sensitivity analyses of their water quality predictions. This would complement the current iterative calibration approach, ensuring that both model refinement and conservative risk assessment inform closure planning and decision-making.

CIRNAC 05: Duration of Modelling Predictions

Recommendation:

(R-05) CIRNAC recommends that Agnico Eagle extend the duration of all future water quality modelling predictions to 100 years post-closure. Shorter durations should only be considered if Agnico Eagle can demonstrate that site factors (e.g., WRSF hydraulic field capacities) or climate change are not relevant to the system being modelled.

Agnico Eagle's Response

Agnico Eagle can only provide model results (for future iterations) out to 2100. This is because IPCC projections do not extend further than this and is an industry standard to cut off model predictions at 2100.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges Agnico Eagle's explanation that climate model inputs constrain water quality modelling, and that this approach is consistent with standard industry practice. The iterative calibration of models against monitoring data also provides a valuable mechanism for refining predictions over time.

At the same time, CIRNAC remains concerned that the current modelling horizon may be insufficient to demonstrate the long-term stability of pit lakes, waste rock seepage, and other closure elements. This is based upon the assumption that potential impacts have been projected many decades after closure and that mine liabilities extend in perpetuity. Where climate projections are limited, scenario-based extensions or bounding analyses can be used to assess water quality performance beyond. This type of analysis would help ensure that a precautionary view of potential long-term risks informs decisions regarding closure.

CIRNAC 06: Waterline To Vault

Recommendation:

(R-06) CIRNAC recommends that Agnico Eagle defer from implementing any newly proposed closure-related activities until the full CRP has been finalized, assessed and approved.

Agnico Eagle's Response

As noted in responses above, and as referenced in letters from the NIRB and the NWB, the activity of moving water between exhausted pits has been approved and is within the conditions of the licence. NIRB has already provided an opinion that the Vault distribution line is within the thresholds of a non-significant amendment; therefore, a NIRB assessment was not required.

When the Vault distribution line was discussed in May at the latest CRP working session with CIRNAC and the KivIA, CIRNAC representative (Andrew Keim) indicated there was no need to discuss further. As ultimately, by reviewing the information provided from CIRNAC and Agnico Eagle, as well as soliciting the NIRB's opinion, the NWB made a decision on the activity.

Agnico Eagle will not be deferring the Vault distribution line as it is a form of operational management of moving water around site.

In addition, an assessment through the NIRB is not required, as the overarching water management strategy has not changed from what was previously proposed:

• The key component of the strategy remains the same: flooding the open pit mines at closure.

• Water is being treated, whether via active treatment, in-situ/aeration method, or some combination.
• Treated water would be discharged to the environment, albeit much lower volumes and loadings.

Finally, Agnico Eagle would like to address some comments raised by CIRNAC in their background/rationale preamble:

1) The Vault distribution line is not just for closure. As per communication sent to the NWB on March 5, 2025 from Agnico Eagle “Agnico Eagle confirms this line is needed for and will be used in Operations and into Closure.”. This was also discussed with CIRNAC, KivIA, and the NWB at a meeting in Toronto on March 4, 2024.

It is inappropriate to make a comparison to the Meliadine Waterline file and associated NIRB process. While the objectives are the same, to move water, the undertakings and technical details are not. The Meliadine waterline application was to convey treated saline effluent for discharge directly to the marine environment. The Vault distribution line is moving water around site between exhausted pits.

CIRNAC’s Reply to Agnico Eagle’s Response

CIRNAC acknowledges that the NWB and NIRB have reviewed Agnico Eagle’s proposed Vault waterline and determined that it does not conflict with existing licence terms or require a significant amendment. CIRNAC also notes Agnico’s clarification that the waterline is necessary for both operational and closure purposes, which helps explain why it has been advanced at this stage.

CIRNAC remains concerned that the approval of the waterline as an operational activity does not fully address the broader implications of the associated closure strategy. This represents a substantive departure from the initially approved approach of treating and discharging water. While regulators have confirmed that the pipeline itself is permissible, the long-term plan to permanently store contaminated water in Vault Pit should be reviewed within the context of the full Closure and Reclamation Plan to ensure that cumulative impacts, alternatives, and risk management strategies are appropriately considered. CIRNAC maintains its original recommendation that implementation of closure-related activities, such as the Vault waterline, be formally considered through the approval of the final CRP.

CIRNAC 07: Meromixis Stability in Vault Pit

Recommendation:
(R-07) CIRNAC recommends that Agnico Eagle clarify whether it will pump reclaim water from the Portage and Goose Pits to the Vault Pit beginning in 2026 if the revised water management approach has not been approved through the approval of a final CRP for the project.

Agnico Eagle's Response
As noted in responses above, Agnico Eagle reiterates the activity of moving water between exhausted pits **has been approved** by the NWB and is within the conditions of the licence. At this time, it is predicted that water will be moved between the pits in 2026.

CIRNAC's Reply to Agnico Eagle's Response
CIRNAC acknowledges that the NWB and NIRB have confirmed the Vault water transfer infrastructure is permissible under current licence conditions, and that Agnico Eagle plans to begin pumping in 2026. We also recognize that water transfer between pits can be considered part of operational flexibility, not only closure.

CIRNAC's concern remains focused on the revised closure strategy, which involves using engineered meromixis for permanent water storage. To date, no quantitative modelling has been presented to demonstrate that meromixis will remain stable under long-term hydrodynamic and geochemical conditions, or address potential failure modes. Beginning pumping before this analysis is completed risks committing the project to an unapproved closure pathway.

CIRNAC maintains its original recommendation that before pumping commences, the proposed Vault Pit water management approach be reviewed and approved as part of the final Closure and Reclamation Plan.

CIRNAC 08: Revised Criterion for Total Dissolved Solids (TDS)

Recommendation:
(R-08) CIRNAC recommends that Agnico Eagle voluntarily defer applying the SSWQO for TDS until the closure plan for the Meadowbank Mine has been finalized, assessed and approved. This will allow Agnico Eagle to conform with the spirit and intent of the NWB's decision.

Agnico Eagle's Response
Agnico Eagle respectfully disagrees with the recommendation. In the Review and Decision section of the approval letter from NWB (28 May 2025), NWB acknowledged concerns from CIRNAC and ECCC. However, NWB equally acknowledged that "Agnico Eagle's Notice is consistent with the requirements of Part E, Item 7 of Water Licence 2AM

MEA1530. The Licence allows for the development of SSWQOs that are protective of the aquatic environment, subject to Board approval."

Having reviewed the facts of the operational notice, the NWB confirmed that the notice is not in conflict with the conditions of the licence, and that no intervener provided evidence that the proposed SSWQO was not protective of the receiving environment. Furthermore, the NWB acknowledged that the Closure and Reclamation Plan (CRP) is in development, and there will be further discussions regarding overall closure objectives, which may include a revision to the SSWQO if new evidence or information is provided.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges that the NWB has approved Agnico Eagle's request for a revised TDS SSWQO and EQC under the existing licence framework. CIRNAC also note that the NWB explicitly stated that if new information becomes available, the SSWQO may need to be revisited through closure planning.

CIRNAC remains concerned that adopting less conservative criteria before the closure plan is finalized may set an early precedent that reduces flexibility in addressing long-term water quality risks. Given that the revised TDS objective appears to be most relevant to the closure phase, CIRNAC continues to view closure planning as the appropriate forum for assessing whether such a criterion is justified in the context of long-term water management strategies and alternatives.

CIRNAC maintains its original recommendation that the revised TDS SSWQO be deferred until the final Closure and Reclamation Plan has been reviewed and approved.

CIRNAC 09: Water Treatment of Reclaim Water

Recommendation:

(R-09) CIRNAC recommends that Agnico Eagle:

a) Clarify why the approved strategy of treating and discharging reclaim water to the surface water environment is no longer a viable closure approach; and
b) Indicate what additional parameters would need to be removed from the reclaim water after pre-treatment for arsenic and copper, followed by in-situ treatment for nitrogen species before discharging the reclaim water to the environment (i.e., instead of storing the water in the Vault Pit).
c) Provide a list of public discussions, technical and general community input, on the proposed new use of the Vault Pit.

Agnico Eagle's Response

The CRP (ICRP) will be circulated through the NWB in the coming months whereby Agnico Eagle suggests comments are handled through the detailed review of the updated CRP for the Meadowbank Complex, and not through the annual report review. As per responses to other comments, Agnico Eagle has the approval of moving water between exhausted pits and has been approved by the NWB and is within the conditions of the licence.

Managing and treating water is part of standard operational practices. Agnico Eagle has approved water management systems in place on-site to move and treat water to meet water quality objectives; therefore, water quality is protective of the receiving environment.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges Agnico Eagle's view that the evaluation of closure water treatment strategies is most appropriately addressed through the Closure and Reclamation Plan review process, and not within the context of the annual report. CIRNAC agrees that the CRP provides the proper forum for a detailed technical and regulatory assessment.

CIRNAC remains concerned that the revised strategy of pumping water to the Vault Pit for permanent storage represents a significant change from the previously approved "treat and discharge" approach. To date, the rationale for rejecting the discharge option has not been clearly presented, nor has it been demonstrated which parameters remain elevated after pre-treatment. CIRNAC maintains its original recommendation that Agnico Eagle provide a clear justification as to: why discharge is no longer viable, identify the additional contaminants of concern, and document the technical and community input that informed this proposed change within the context of the CRP review.

CIRNAC 10: Recontamination of Goose and Portage Pit Lakes

Recommendation:

(R-10) CIRNAC recommends that Agnico Eagle:

a) Perform detailed long-term modelling of water and sediment quality in the Portage and Goose Pit Lakes, taking into consideration all potential source terms; and
b) Commit to delaying reconnecting the flooded pit lakes to the surface water environment until there is a minimum of 5 years of monitoring data proving that water and sediment concentrations are stable and safe for use by fish and other aquatic receptors.

Agnico Eagle's Response

A Human Health and Ecological Risk Assessment (HHERA) was prepared to support the CRP. The objective of the HHERA was to evaluate the potential risks to human health

and the environment from the historical operation and remediation of the Site. The HHERA included evaluation of ecological risks (including aquatic life) to future water quality in the pits. There were no parameters of potential concern (POPCs) identified in Vault Pit. Thus a 15 m depth of freshwater is sufficient to protect aquatic life.

DFO has previously informed Agnico Eagle that they do not have confidence in flooded pits as a fish and fish habitat offsetting measure, as described in a letter from 2015 (DFO, November 27, 2015, Offsetting Proposals).

The flooded Vault Pit will not become aquatic habitat, and there were no parameters of potential concern (POPCs) identified in Vault Pit.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges Agnico Eagle's reference to the HHERA and the conclusion that Vault Pit will not be used as fish habitat. However, CIRNAC's comment was explicitly directed at Goose and Portage Pits, which will be reconnected to the aquatic environment and are expected to support fish and aquatic life after closure. It remains critical to demonstrate through long-term modelling and monitoring that water and sediment quality will be safe and stable for aquatic receptors for these pits.

CIRNAC maintains its original recommendation that Agnico Eagle provide detailed long-term predictions for Goose and Portage Pit Lakes and commit to delaying reconnection until at least five years of monitoring data confirm conditions are protective of fish habitat.

CIRNAC 11: Meadowbank TSF Cover Design

Recommendation:

(R-11) CIRNAC recommends that Agnico Eagle:

a) Indicate whether the updated WQLBM presented in the 2024 Annual Report was based on the approved 2 m thick thermal cover or the unapproved 1 m thick isolation cover; and
b) Indicate whether the progressive reclamation performed on the Meadowbank TSF has been in accordance with the approved 2 m thick thermal cover or the unapproved 1 m thick isolation cover.

Agnico Eagle's Response

The water balance and water quality model is based on the updated tailings cover design, including a contaminant transport model for the cover. This cover consists of varying cover thicknesses, from a minimum 1 meter to a maximum of 6 metres, which has been presented to CIRNAC in Ottawa on May 8-9, 2025. Progressive reclamation of the TSF is in progress as NPAG material becomes available.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges Agnico Eagle's confirmation that the 2024 water quality modelling and progressive reclamation plans are based on the updated TSF cover design of 1–6 m thickness. However, CIRNAC reiterates that the currently approved closure design is a 2 m thermal cover, and the revised cover concept has not yet been reviewed or approved through the appropriate regulatory processes.

Annual Reports and associated models should reflect only the approved project configuration. Presenting unapproved changes as the operational basis for reporting creates confusion, undermines regulatory transparency, and risks placing the proponent in non-compliance if reclamation proceeds according to an unapproved design. CIRNAC is therefore maintaining its original recommendation that Agnico Eagle clearly indicate whether the progressive reclamation completed to date has been constructed to the approved 2 m thermal cover and ensure that annual reporting remains based on the approved project components until a revised cover design is formally authorized.

CIRNAC 12: Progressive Reclamation Documentation

Recommendation:

(R-12) CIRNAC recommends that:

a) The NWB initiate a process involving Agnico Eagle, CIRNAC and other parties to develop guidance regarding the nature and extent of documentation requirements to verify that progressive reclamation and subsequent final closure activities have been carried out by the required criteria and approved designs. CIRNAC suggests that the processes followed by the Mackenzie Valley Land and Water Boards would serve as an appropriate starting point for developing such guidance.
b) Following the guidance noted above, Agnico Eagle should formally document all previously completed progressive reclamation activities.

Agnico Eagle's Response

While the recommendation in this comment is directed to the NWB, Agnico Eagle believes that, as it pertains to the annual report, Agnico Eagle is compliant with Schedule B, Item 17 of the Water Licence. Agnico Eagle will continue to work with CIRNAC and KivIA for additional documentation of progressive closure activities, in addition to what is reported in the annual report.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC has no further comments and defers to NWB for further guidance.

CIRNAC 13: Groundwater Migration of TSF Reclaim Water

Recommendation:

(R-13) CIRNAC recommends that Agnico Eagle:

a) Confirm that the updated WQLBM predictions presented in Appendix 13 have included potential loadings of TSF reclaim water migrating via the groundwater pathway;
b) Describe the migration pathway of reclaim water from the TSF into the groundwater system; and
c) Describe approaches/options that could be used to mitigate TSF reclaim water and/or seepage from entering the groundwater system if flows are deemed to be unacceptable.

Agnico Eagle's Response

Agnico Eagle's responses to CIRNAC's recommendations are below:

a) TSF seepage is currently represented in the WBWQM by the Central Dike flows that move eastwards towards Pit A and Pit E. These flows are driven by the hydraulic gradient that currently exists between these pits and the TSF, and the model assumes that once the pits have been flooded, this gradient is null, and the TSF seepage does not report to Pit A and Pit E.
b) The TSF is constructed within the northern arm of the Second Portage Lake (SPL) within an open talik that extends down to the deep groundwater flow regime. Reclaim water enters into the deep groundwater system by infiltrating downward through the TSF, till, weathered bedrock and into the bedrock. Regional groundwater is interpreted to flow east towards the SPL and Third Portage Lake (TPL). Available thermal monitoring and modeling results (SNCL 2018) indicate that a permafrost bulb exists between the West Road and TPL which extends greater than to an elevation of 200 m (300 m depth). As a result, the migration pathway of reclaim water from the center of the TSF into the groundwater system to the SPL is at least 1,500 m.

   The closure plan includes the capping of the TSF to reduce infiltration and direct it to TPL and flooding of the Central Dike Pond and Portage Pits. This will result in lowering the water level in the TSF and over time it will be similar to the water level in the pit lake. In addition, thermal modelling results indicate that the TSF will gradually freeze over time and a talik zone will develop between the pit lake and the SPL and eventually at the reconnected TPL (SNCL 2018). As a result, the hydraulic gradient between the TSF and the Portage pit areas will be greatly reduced to near zero, and the flux from the tailings area into the lake will be negligible.

c) At closure thermal modelling undertaken by SNC indicates that the groundwater pathway from the TSF through the overburden is frozen and the groundwater pathway needs to flow down and beneath a 300 m deep permafrost bulb to TPL. Darcy's law was used to estimate the potential inflow of reclaim water into the groundwater system. The hydraulic conductivity of the bedrock was conservatively estimated to range between 1.8 x 10-8 m/s and 2.7 x 10-8 m/s. The estimated groundwater flux from the approximate 1,000 m by 900 m area of the TSF along an approximately 1,500 m flow path ranges between 1,500 to 2,250 m3/year. Thermal modelling predicts that after closure the overburden between the TSF and the pit lake will become unfrozen, resulting in a shorter groundwater flow path for the reclaim water. At the Central Dike (CD) a liner is tied into the grout curtain through the weathered bedrock. This results in the groundwater flowing beneath the liner and grout curtain to discharge though the pit lake. In addition, as discussed above, the water level in the TSF and the gradual freezing of the TSF will reduce the water level difference between the TSF and the pit lake. The area of groundwater flow through the overburden is smaller than these area of flow at closure (i.e., approximate thickness of the overburden 30 m by 900 m width of the tailings). The combination of these factors (even if the water level in the TSF is assumed to remain the same) is predicted to result in a discharge of reclaimed water to less than predicted at closure (ranging from about 350 m3/year to 500 m3/year).

It is noted the available groundwater quality at CD monitoring well MW-16-01, located west and downgradient of the TSF currently meets the Third Portage Effluent Discharge Limits of the Meadowbank Water Licence No. 2AM-MEA1530. Hydrogeologic model results (SNCL 2018) indicate the freshwater runoff input to Pit A is 900,000 m3/year. The amount of TSF reclaim water input to the groundwater system that will eventually be discharged to SPL is estimated to be small (less than 0.25% contribution right after closure and 0.06% contribution once the overburden becomes thawed between the CD and the pit lake, which is equivalent to a dilution factor of 400 to 1,800, respectively) compared to surface water runoff and are deemed acceptable; therefore, TSF mitigation is not considered required.

In addition, hydrogeologic model results (SNLC 2018) indicate groundwater seepage volume to Pit A is 43 m3/year, while the freshwater runoff input to the lake 900,000 m3/year. The estimated TSF reclaim water input to the groundwater system that will eventually be discharged to SPL is negligible (0.05% contribution or a dilution factor of 21,000) compared to surface water runoff and are deemed acceptable; therefore, TSF mitigation is not considered required.

Reference: SNC Lavalin (SNCL) (2018). Meadowbank In-Pit Tailings Deposition – Thermal and Hydrogeological Modeling Update to Address NRCan's Comments. Technical memorandum dated December 14, 2018. Reference: 655183-000-4GCA-0001 Rev 01.

CIRNAC's Reply to Agnico Eagle's Response

CIRNAC acknowledges Agnico Eagle's detailed response describing how TSF seepage is represented in the model, the hydrogeologic pathway to surrounding lakes, and the estimated fluxes relative to surface water inflows. These clarifications are helpful and directly address several parts of the original recommendation.

CIRNAC also notes that many of the conclusions, including the prediction that seepage contributions will be negligible and that mitigation is unnecessary. The conclusionsrely on assumptions tied to the updated 1–6 m cover design and long-term freezing behaviour of the TSF. As noted in previous comments, this cover design has not yet been approved, and the currently approved closure strategy remains the 2 m thermal cover.

CIRNAC maintains its original recommendation. Annual Reports must be based on the approved project configuration. Alternative assumptions and results tied to unapproved closure designs can be included as supplementary information; however, they should not serve as the sole basis for predicting groundwater migration and contaminant loadings.