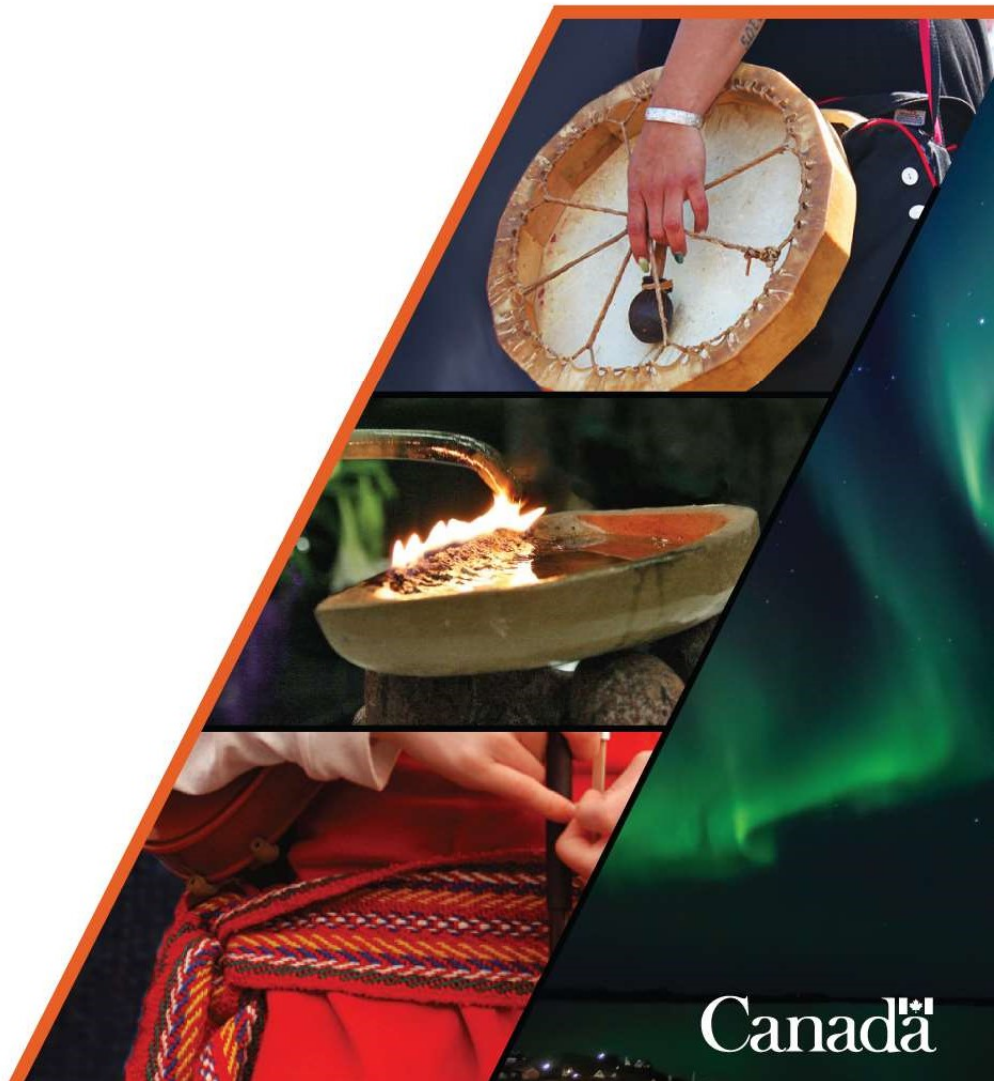




Crown-Indigenous Relations  
and Northern Affairs Canada

Relations Couronne-Autochtones  
et Affaires du Nord Canada

# CIRNAC Comments to NIRB Re: Agnico Eagle Mines Limited's Meadowbank Complex Project 2024 Annual Report



Canada

Nunavut Regional Office  
918 Sivumugiaq Street  
Iqaluit, Nunavut, X0A 3H0

Your file - Votre référence  
03MN107 and 16MN056  
Our file - Notre référence  
GCdocs# 138849829

July 02, 2025

Keith Morrison  
Manager, Project Monitoring  
Nunavut Impact Review Board  
29 Mitik Street, P.O. Box 1360  
Cambridge Bay, Nunavut, X0B 0C0  
via email at [info@nirb.ca](mailto:info@nirb.ca)

**Re: Comment Request for Agnico Eagle Mines Limited's Meadowbank Complex Project 2024 Annual Report**

Dear Keith Morrison,

On May 21, 2025, the Nunavut Impact Review Board (NIRB) requested parties to review and provide comments on Agnico Eagle Mines (AEM) Limited's Meadowbank Complex Project 2024 Annual Report for effects and compliance monitoring, pursuant to Section 12.7.3 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty The Queen in Right of Canada* (Nunavut Agreement), s. 135(4) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14 (NuPPAA), the amended Meadowbank Gold Mine Project Certificate No. 004, and the amended Whale Tail Pit Project Certificate No. 008.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reviewed the 2024 Annual Report and related documents for effects and compliance monitoring, according to its mandated responsibilities and jurisdiction, and has provided comments for NIRB's consideration.

CIRNAC appreciates the opportunity to review AEM's Meadowbank Complex Project 2024 Annual Report and looks forward to working with the NIRB and AEM through any future reviews for these projects. Should you have any questions, please do not hesitate to contact Aminul Haque or David Abernethy by email at [aminul.haque@rcaanc-cirnac.gc.ca](mailto:aminul.haque@rcaanc-cirnac.gc.ca) or [david.abernethy@rcaanc-cirnac.gc.ca](mailto:david.abernethy@rcaanc-cirnac.gc.ca).

Sincerely,



Richard Bingley  
Manager, Impact Assessment



## 1. Effects Monitoring

CIRNAC reviewed the 2024 Annual Report to assess measurable effects to valued components under its mandate against the potential effects that were predicted from the proposed development of the Meadowbank Gold Mine and Whale Tail Pit Projects, taking into account their respective Final Environmental Impact Statements (FEIS), previous years' monitoring reports, and the requirements included in the Project Certificates (as amended). This assessment considered the following:

- a. Whether the conclusions reached by AEM in the 2024 Annual Report are valid; and**
- b. Any areas of significance requiring further supporting information or any changes to the monitoring program which may be required.**

CIRNAC did not identify information under its mandate and jurisdiction that would invalidate the conclusions reached by AEM in the 2024 Annual Report, but has identified information that warrants further clarification. CIRNAC has provided the NIRB and AEM with the following comments for consideration.

Comment Number:	CIRNAC #1
Subject:	Closure Planning
References:	<ul style="list-style-type: none"><li>2024 Annual Report: Section 9</li><li>NIRB Project Certificate No. 004, Amendment No. 003: Term &amp; Condition 78, 79, and 80</li><li>NIRB Project Certificate No. 008, Amendment No. 001: Term &amp; Condition 7 and 13</li></ul>
Background/Rationale:	<p>Section 9 of the 2024 Annual Report provides high-level discussions of the closure planning and implementation process. For example, the section describes the state of the closure planning process, ongoing studies, information gaps, and progressive reclamation. While CIRNAC appreciates receiving this information, the Department has a wide range of questions and comments regarding the closure planning process for the Meadowbank and Whale Tail sites, including issues related to:</p> <ul style="list-style-type: none"><li>Freeze-back and capping thickness;</li><li>Progressive reclamation;</li><li>Results of thermistor measurements for tailings and waste rock storage facilities (WRSF);</li><li>Meadowbank water treatment requirements;</li><li>Meadowbank WRSF seepage quality;</li><li>Meadowbank post-closure in-pit water quality;</li><li>Meadowbank in-pit tailings covers;</li><li>Thermal performance of Meadowbank WRSF covers; and</li><li>Whale Tail Project post-closure water quality.</li></ul> <p>These questions and comments have been submitted in prior annual report reviews conducted by CIRNAC and are pending resolution, as summarized in Table A.</p>



Comment Number:	CIRNAC #1
	<p>While these questions and comments could be deferred until the submission of formal closure planning documents (e.g., periodic updated Interim Closure and Reclamation Plans (ICRPs) and security estimates), CIRNAC is of the view that a more active dialogue on closure planning is justified and would be beneficial for all parties. This is particularly important given that the project is scheduled to begin active closure within three years (i.e., by 2028).</p> <p>CIRNAC notes that AEM initiated a process early in 2025 to advance discussions regarding the closure of the Meadowbank and Whale Tail Projects. That process, which is continuing throughout 2025, has yet to fully resolve the broad spectrum of technical questions and concerns previously identified by CIRNAC.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that AEM ensure all previously identified closure questions and concerns, as identified by the Department, are explicitly addressed and documented during the ongoing closure planning process occurring in 2025. For reference, Table A (appended) presents a consolidated list of prior CIRNAC closure-related questions and comments requiring resolution.</p>

Comment Number:	CIRNAC #2
<b>Subject:</b>	Approval of Major Project Changes and Revised Management Plans
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report</li> <li>• All Management Plans</li> </ul>
<b>Background/Rationale:</b>	<p>The 2024 Annual Report introduces multiple major changes to the Meadowbank and Whale Tail Projects. For example, in the case of the Meadowbank Mine, the 2024 Annual Report indicates that AEM intends to make the following major changes to the closure approach for the site:</p> <ol style="list-style-type: none"> <li>1. Permanently storing contaminated water in the Vault Pit instead of treating and discharging it to the environment; and</li> <li>2. Covering the Tailings Storage Facility (TSF) with a 1 m thick intrusion barrier instead of a thermal cover with a minimum thickness of 2 m, as agreed to during the original Project approval process.</li> </ol> <p>Both of the above items represent major changes to the closure approaches described in the conceptual Closure and Reclamation Plan (CRP) and subsequent Interim Closure and Reclamation Plans (ICRPs) for the Meadowbank Mine. The major changes have yet to be approved through an approved Closure Plan.</p> <p>In addition to describing these unapproved changes throughout the Annual Report, numerous Management Plans submitted with the Annual Report also describe the changes as if they are part of the approved project. Furthermore, Sections 10.2.1 and 10.2.2 of the 2024 Annual Report with respect to the management plans state:</p> <p>“Plan(s) will be considered approved unless a notification from the NWB requested the formal approval process.”</p> <p>This implies that all changes presented in a revised Management Plan will</p>

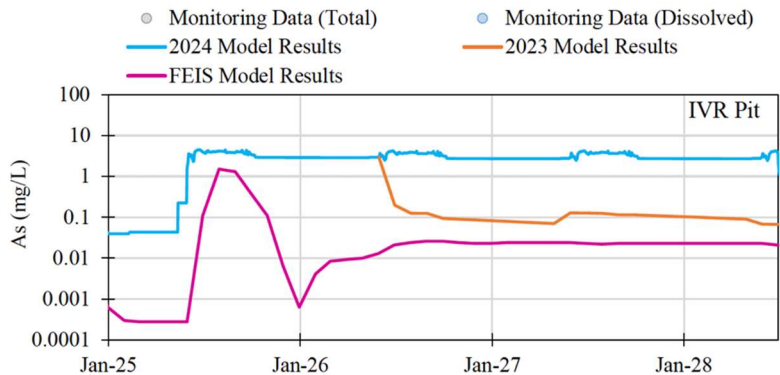


Comment Number:	CIRNAC #2
	<p>automatically be classified as approved unless the Nunavut Water Board (NWB) requests that the plan undergo a formal approval process.</p> <p>It is CIRNAC's position that:</p> <ol style="list-style-type: none"> <li>1. Major project changes should be authorized only through appropriate application through the Institutes of Public Governance, including Project Certificate Amendments and/or Water Licence Amendments or Modifications;</li> <li>2. Any Management Plans that are revised to reflect Major Project Changes must undergo a formal approval process by the NWB; and</li> <li>3. Annual Report submissions are not the appropriate forum to review or approve Management Plans containing major changes to the scope of a project. Doing so requires reviewers to assess, and potentially discuss with the public, the technical implications of proposed project changes in the context of a process that is only intended to assess the annual performance of approved activities.</li> </ol> <p>Given the implications of such changes, clear guidance on the appropriate pathways for their assessment—particularly in relation to the scope and intent of annual performance reviews—would help ensure that technical and regulatory considerations are adequately addressed through the proper channels.</p>
<b>Recommendation:</b>	CIRNAC recommends that the Nunavut Impact Review Board (NIRB) clarify whether the Annual Report review process is intended to encompass the review of significant project changes.

Comment Number:	CIRNAC #3
<b>Subject:</b>	Water Quality Predictions of Unapproved Activities
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: Section 4.4</li> <li>• Appendix 13</li> <li>• Appendix 14</li> </ul>
<b>Background/Rationale:</b>	<p>As required, the 2024 Annual Report includes predictions of the future environmental performance of the project. For instance, the Meadowbank Water Management Plan presents a Water Quality Forecasting Update (Appendix C from Appendix 13). Predictions have also been prepared for the Whale Tail Site (Appendix C from Appendix 14). These predictions serve as critical information for CIRNAC when assessing the trends and potential emerging impacts of the mining operations.</p> <p>CIRNAC notes that the above-referenced predictions have incorporated major project changes that have yet to be approved. Specifically, the predictions include the major changes to closure strategies for water management and tailings covers. As described in TRC #2, those changes have yet to be approved through a Final Closure and Reclamation Plan, Project Certificate Amendment, Water Licence Amendment or Modification. Given that the major changes have not been publicly reviewed, commented on, or approved, it is inappropriate to include them in the Annual Report predictions. Furthermore, by assessing project components that are unapproved, AEM has neglected to provide water quality predictions for the approved project. Consequently, CIRNAC is unable to assess whether there are emerging environmental quality issues associated with the approved</p>



<b>Comment Number:</b>	<b>CIRNAC #3</b>
	project that have the potential to cause impacts in the future. This is contrary to the objective of the Annual Reporting process.
<b>Recommendation:</b>	CIRNAC recommends that AEM resubmit Appendix 13 and 14 of the 2024 Annual Report with predictions that are relevant 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 no later than October 1st, 2025.

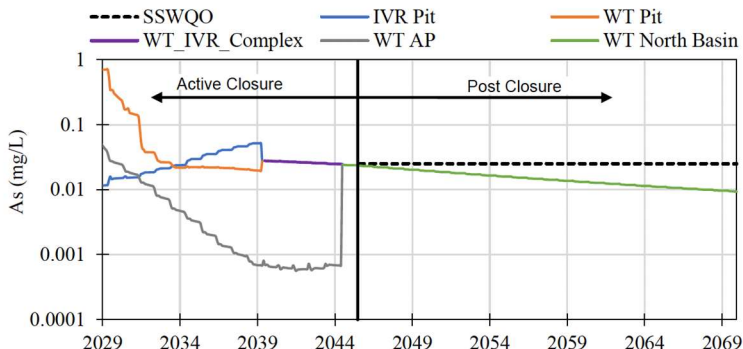
<b>Comment Number:</b>	<b>CIRNAC #4</b>
<b>Subject:</b>	Model Prediction Accuracy and Decision Making
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: All sections</li> <li>• Appendix 13</li> <li>• Appendix 14</li> </ul>
<b>Background/Rationale:</b>	<p>CIRNAC draws attention to the following three example figures:</p>  <p>Figure 6-1 from Appendix 14 (Whale Tail site)</p> <p>In this case, the figure clearly demonstrates that there has been a wide range of water quality predictions throughout the evolution of the Whale Tail Project. At the right side of the figure, the current 2024 arsenic concentration predictions for the IVR Pit are approximately two orders of magnitude greater (i.e., 100x) than what was predicted in the 2019 FEIS.</p>





Comment Number:	CIRNAC #4
	<div data-bbox="581 258 1382 615"> </div> <div data-bbox="591 638 1242 669"> <p>Figure 10 from 2024 Annual Report (Meadowbank Site)</p> </div> <div data-bbox="584 686 1451 781"> <p>In this case, the figure illustrates that measured TDS concentrations in the Vault Pit are approximately one order of magnitude (i.e., 10x) greater than AEM's "poor end" prediction during the original Water Licence application.</p> </div> <div data-bbox="597 812 1414 1169"> </div> <div data-bbox="584 1190 1279 1222"> <p>Figure 11 from the 2024 Annual Report (Meadowbank Site)</p> </div> <div data-bbox="584 1239 1451 1333"> <p>In this case, the figure shows that measured arsenic concentrations in Goose Pit are two orders of magnitude (i.e., 100x) greater than the most recent ICRP water quality predictions from as recently as 2019.</p> </div> <div data-bbox="584 1350 1481 1476"> <p>Collectively, the example figures demonstrate that predictions can change significantly over time and that measured concentrations often differ by multiple orders of magnitude relative to predictions. The 2024 Annual Report and supporting documents contain numerous similar variances.</p> </div> <div data-bbox="584 1493 1481 1745"> <p>CIRNAC notes that such variances are common with predictions of complex environmental systems that can be challenging to model. In this regard, CIRNAC is not criticizing AEM's predictions; to the contrary, competent professionals perform AEM's predictions, using a large inventory of monitoring data and industry best practices. CIRNAC is, however, concerned that the uncertainty associated with the predictions has been overlooked when making some project decisions. Following is an example from the 2024 Annual Report:</p> </div>



Comment Number:	CIRNAC #4
	 <p>Figure 6-4 From Appendix 14 of the 2024 Annual Report</p> <p>In this instance, arsenic concentrations in Whale Tail Lake are predicted to equal the Site-Specific Water Quality Objective (SSWQO) in 2044. On that basis, AEM indicates that it will reconnect the pit lake to the receiving environment, and the post-closure phase will begin immediately afterward. Taking into consideration the uncertainty associated with model predictions (as noted above), CIRNAC considers it not a safe practice to make closure decisions without any “margin of error”. The additional information is necessary to verify AEM’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. CIRNAC’s position is that closure decisions should be based on a more conservative set of assumptions regarding future water quality, taking into account the accuracy of past predictions.</p>
<b>Recommendation:</b>	CIRNAC recommends that AEM 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.

Comment Number:	CIRNAC #5
<b>Subject:</b>	Duration of Modelling Predictions
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: All sections</li> <li>• Appendix 13</li> <li>• Appendix 14</li> </ul>
<b>Background/Rationale:</b>	During the approval process for the Whale Tail Project, a slug of contaminated seepage was predicted to occur more than 80 years after mine closure when the waste rock storage facilities (WRSF) reached their hydraulic field capacities. Similarly, the effects of climate change are likely to become increasingly significant over the next century. To anticipate these long-term changes, water quality predictions should extend for an appropriate time into the post-closure phase.





<b>Comment Number:</b>	<b>CIRNAC #5</b>
<b>Subject:</b>	Duration of Modelling Predictions
	With few exceptions, the majority of modelling predictions presented in the updated Water Quality and Load Balanced Models (Appendices 13 and 14 to the Annual Report) end shortly after the closure phase has been initiated. Consequently, the predictions are of insufficient duration to demonstrate that environmental quality will continue to be acceptable throughout the post-closure phase.
<b>Recommendation:</b>	CIRNAC recommends that AEM extend the duration of all future water quality modelling predictions to 100 years post-closure. Shorter durations should only be considered if AEM can demonstrate that site factors (e.g., WRSF hydraulic field capacities) or climate change are not relevant to the system being modelled.

<b>Comment Number:</b>	<b>CIRNAC #6</b>
<b>Subject:</b>	Waterline to Vault
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report</li> <li>• Appendix 13 Meadowbank Water Management Plan, V14</li> <li>• NWB Letter to AEM, dated March 25, 2025, RE: Water Licence No: 2AM-MEA1530; Meadowbank Mine Vault Distribution Line. Available at: <a href="https://public.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM-Mining/2AM-MEA1530%20Agnico/3%20TECH/D%20CONSTRUCTION/2025/">https://public.nwb-oen.ca/registry/2 MINING MILLING/2A/2AM - Mining/2AM-MEA1530 Agnico/3 TECH/D CONSTRUCTION/2025/</a></li> </ul>
<b>Background/Rationale:</b>	<p>As described in Comment #2 above, AEM recently proposed to make significant changes to the management of Meadowbank contact water during the closure phase of the project. The changes involve pumping contaminated reclaim water in the Portage and Goose Pits 10 km via a new pipeline to the Vault Pit. The reclaim water would be permanently stored in the base of the pit using engineered meromixis (i.e., stratification with contaminated water at depth). A 15-m deep cap of clean water placed on the top of the pit will serve as aquatic habitat after re-connecting the pit lake to Wally Lake. By comparison, the currently approved approach involves treating the Portage and Goose Pit reclaim water to meet discharge criteria and actively releasing the treated water to the receiving environment. The transfer of reclaim water from the Portage and Goose Pits to the Vault Pit will be achieved using a new 10-km long pipeline that was not included in the original scope of the project. The water transfer will occur at a rate of up to 1,600 m<sup>3</sup>/hour or 38,400 m<sup>3</sup>/day.</p> <p>CIRNAC has the following concerns regarding the transfer of contact water to the Vault Pit using a new pipeline:</p> <ol style="list-style-type: none"> <li><b>1. Closure Activity:</b> The transfer of contact water to the Vault Pit is not part of AEM's water management strategy for the current operational phase of the Meadowbank Mine. It is, instead, a component of AEM's proposed revised closure strategy for the project.</li> </ol> <p>In this context, it is CIRNAC's position that the transfer of contact water to the Vault Pit should only be approved and implemented as a component of a fully integrated, publicly reviewed, and approved Closure Plan for the entire Meadowbank Mine. Given that the full Closure Plan is currently under development, it is premature to</p>



Comment Number:	CIRNAC #6
<b>Subject:</b>	Waterline to Vault
	<p>approve or implement the transfer of contact water to the Vault Pit using a new pipeline.</p> <p><b>2. Impact Assessment:</b> For context, the Meliadine saline water pipeline had a volumetric capacity of 12,000 m<sup>3</sup>/day when it was originally proposed and assessed by the Nunavut Impact Review Board (NIRB). In contrast, the new Vault pipeline will convey 38,400 m<sup>3</sup>/day (i.e., 3.2 X greater capacity) of contaminated water over 10 km through a minimally disturbed area. Notably, the Environmental Assessment (EA) of the Meliadine Pipeline resulted in substantive project refinements and terms and conditions to ensure the environment was adequately protected. Based on this precedent, CIRNAC is of the view that the construction of a new pipeline and transfer of reclaim water to the Vault Pit represents a significant change to the scope of the approved project. As a consequence, the activity should be subjected to an EA as part of the entire Closure Plan for the Meadowbank site.</p> <p>Notwithstanding the above, on 25 March 2025, the Nunavut Water Board (NWB) issued a letter to AEM summarizing its analysis and conclusions regarding the issue described above. Within that letter the NWB states:</p> <p><i>"In the meantime, the NWB shared the Agnico Eagle's submission including the "Table 1: Agnico Eagle NuPPAA Section 90 Self-Assessment" with the Nunavut Impact Review Board (NIRB) to determine significance for an amendment or modification to the project, requesting for a confirmation on whether NIRB agrees with Agnico Eagle's assessment. 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."</i></p> <p>In summary, based on a self-assessment from AEM, NIRB concluded that an EA is not required. On this basis, after acknowledging the concerns identified by CIRNAC, the NWB concluded:</p> <p><i>"Upon review of all information submitted, and acknowledging that an impact assessment of the proposed activity by NIRB is not required, the NWB confirms that the proposed activity is not in conflict with the existing terms and conditions of the Licence. The NWB also recognizes that while the Final Closure and Reclamation Plan for Meadowbank Gold Mine is not still submitted, some of mine facilities and infrastructures may be going through progressive reclamation."</i></p> <p>CIRNAC notes the following for consideration:</p> <ol style="list-style-type: none"> <li>1. As noted above, the activity is not part of AEM's approved operations and has not seen public commenting and review in the standard Institute of Public Governance processes. Instead, it is a component of the closure strategy for the mine which has not yet been finalized, assessed or approved. Consequently, the activity is not within the scope of the approved project and the existing terms and conditions of the Licence are not applicable, and may not</li> </ol>



Comment Number:	CIRNAC #6
<b>Subject:</b>	Waterline to Vault
	<p>sufficiently protect valued ecosystemic components.</p> <p>2. Progressive reclamation should only be implemented if it is consistent with the conceptual Closure and Reclamation Plan (CRP) and/or the most recent approved versions of Interim CRPs (ICRP). Any actions taken to implement proposed modifications to a CRP or ICRP prior to being approved does not constitute progressive reclamation. In this regard, transferring contact water to the Vault Pit should not be classified as progressive reclamation until such time that the activity has been formally assessed and approved.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that:</p> <ul style="list-style-type: none"> <li>a) AEM defer from implementing any newly proposed closure related activities until the full CRP has been finalized, assessed and approved.</li> <li>b) Within the limits of applicable legislation, NIRB reconsider whether the construction and/or operation of the new pipeline to the Vault Pit requires an Environmental Assessment.</li> </ul>

Comment Number:	CIRNAC #7
<b>Subject:</b>	Meromixis Stability in Vault Pit
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report</li> <li>• Appendix 13</li> </ul>
<b>Background/Rationale:</b>	<p>As described in Comment #2 above, AEM has proposed a revised water management strategy in which, at the end of mill operations and after initial treatment of mill reclaim waters, reclaim water from the Portage and Goose Pits will be pumped to the Vault Pit for permanent storage throughout the post-closure phase. AEM indicates that the reclaim water, which is not amenable to discharge, will remain in the base of the Vault Pit through engineered meromixis (i.e., stratification with contaminated water remaining in the base of the pit). Although the approach has yet to be formally assessed or approved, AEM indicates that pumping to the Vault Pit will begin in 2026.</p> <p>Through the informal ongoing closure planning process initiated in late 2024, AEM has provided qualitative evaluations to demonstrate that meromixis within the Vault Pit will remain stable indefinitely. However, the evidence provided to date does not include any quantitative analysis or modelling demonstrating that meromixis will be effective, and in response CIRNAC provided multiple recommendations to AEM regarding concerns and issues related to meromixis. CIRNAC does not expect responses to these recommendations in the context of the current Annual Report Review; the recommendations are provided here solely to inform NIRB of the topics being considered. Specifically, CIRNAC requested that AEM provide:</p> <ul style="list-style-type: none"> <li>a) A detailed rationale for rejecting the previously proposed water management strategy for the Meadowbank pits.</li> <li>b) Hydrodynamic and geochemical modelling to assess stratification</li> </ul>



Comment Number:	CIRNAC #7
<b>Subject:</b>	Meromixis Stability in Vault Pit
	<p>stability, contaminant migration, and the long-term maintenance of meromixis within the Vault Pit.</p> <ul style="list-style-type: none"> <li>c) Hydrogeological and permafrost studies to evaluate groundwater-seepage risks within the Vault Pit.</li> <li>d) An assessment of potential failure modes that could destabilize meromixis (e.g., extreme storm events, thermal extremes, sub-aqueous pit wall failures).</li> <li>e) Demonstrate that the proposed 15 m depth of freshwater cover in the flooded Vault Pit is sufficient to protect aquatic life.</li> <li>f) Confirmation that the flooded Vault Pit Lake will become an aquatic habitat that protects aquatic life after connection to Wally Lake.</li> <li>g) Descriptions of the approaches that could be taken if post-closure monitoring determines that the revised water management approach is not performing as intended (e.g., meromixis is not stable, and water in the Vault Pit becomes fully or partially mixed).</li> </ul>
<b>Recommendation:</b>	CIRNAC recommends that AEM 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.

Comment Number:	CIRNAC #8
<b>Subject:</b>	Water Treatment of Reclaim Water
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: Section 4.4.3.1</li> <li>• Appendix 13: Section 3.2</li> </ul>
<b>Background/Rationale:</b>	<p>Prior to tailings deposition into pits, AEM had been optimistic that pit waters on reflooding may not need water treatment. During the amendment applications and approval process for In-Pit Tailings Deposition at the Meadowbank Mine, AEM indicated that the water in the open pits above the settled tailings (referred to as “reclaim” water) would likely need to be treated prior to release to the environment. This requirement was verified during the initial years of in-pit deposition, prompting AEM to investigate water treatment needs and methods. Towards this end, a series of lab and bench-scale tests were performed to refine the water treatment approach. The expectation that reclaim water would be treated and discharged to surface water receivers has been an integral part of the closure strategy for the site. As described in CIRNAC Comment #2 above, in late 2024 AEM shared its working draft Closure Plan that included its proposed changed water management approach for the pits. The revised (but not yet approved) approach involves pumping reclaim water to the Vault Pit for permanent storage under meromictic conditions. Based on current plans, AEM indicates that they will perform in-pit biological treatment in the Portage and Goose pits to remove nitrogen species before pumping to the Vault. For that treatment to be effective, AEM anticipates that the pit water will need to be</p>



<b>Comment Number:</b>	<b>CIRNAC #7</b>
<b>Subject:</b>	Meromixis Stability in Vault Pit
	<p>pre-treated in a Water Treatment Plant (WTP) to reduce arsenic and copper concentrations to levels that are conducive for the biological nitrogen removal. CIRNAC anticipates that this pre-treatment step will also reduce other parameter concentrations that are elevated in the reclaim water.</p> <p>Given that the reclaim water will be treated for nitrogen, arsenic, copper and potentially other elevated parameters, it is unclear to CIRNAC what additional parameters will remain elevated above concentrations that would prevent the direct discharge of the treated reclaim water to the environment.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that AEM:</p> <ol style="list-style-type: none"> <li>Clarify why the approved strategy of treating and discharging reclaim water to the surface water environment is no longer a viable closure approach; and</li> <li>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).</li> <li>Provide a list of public discussions, technical and general community input, on the proposed new use of the Vault Pit.</li> </ol>

<b>Comment Number:</b>	<b>CIRNAC #9</b>
<b>Subject:</b>	Recontamination of Goose and Portage Pit Lakes
<b>References:</b>	<ul style="list-style-type: none"> <li>2024 Annual Report: Section 4.4.2, 4.4.3</li> <li>Appendix 13</li> <li>Appendix 14</li> </ul>
<b>Background/Rationale:</b>	<p>Fish and other aquatic species will enter Portage and Goose pit lakes once they are reconnected to the surface water environment after closure. Consequently, there will need for confirmation that the water and sediment quality within the pits will continue to provide safe aquatic habitat over the long-term. Given the ongoing presence of tailings within the pits and contaminant loadings from other sources (e.g., groundwater from the TIA – see CIRNAC Comment 11), long-term predictions of water and sediment quality are necessary. Based on the information reviewed to date, it is CIRNAC's understanding that detailed long-term water and sediment quality predictions for the pit lakes have not yet been prepared.</p> <p>In addition to predictions, CIRNAC is concerned that any emerging trends in the water quality of the pit lakes will be masked/diluted once they are connected with the surface water environment. It is, therefore, important that water quality is shown to be stable for a sufficient duration of time before the dikes surrounding the pit lakes are breached.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that AEM:</p> <ol style="list-style-type: none"> <li>Perform detailed long-term modelling of water and sediment quality in the Portage and Goose Pit Lakes, taking into consideration all</li> </ol>



<b>Comment Number:</b>	<b>CIRNAC #9</b>
<b>Subject:</b>	Recontamination of Goose and Portage Pit Lakes
	<p>potential source terms; and</p> <p>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.</p>

<b>Comment Number:</b>	<b>CIRNAC #10</b>
<b>Subject:</b>	Meadowbank TSF Cover Design
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: Section 9.1.1</li> <li>• Appendix 13: Appendix C</li> </ul>
<b>Background/Rationale:</b>	<p>As indicated in CIRNAC Comment #2, the 2024 Annual Report and supporting documents (e.g., Management Plans) have incorporated several changes that have yet to be formally assessed and licensed. One of those changes involves covering the Tailings Storage Facility (TSF) with a 1 m thick intrusion barrier instead of a thermal cover with a minimum thickness of 2 m, as agreed to during the original Project approval process.</p> <p>The updated Water Quality and Load Balance Model (WQLBM) for the Meadowbank site (Appendix 13, Appendix C) includes source terms from the TSF. However, it is unclear to CIRNAC whether the predictions are based on the approved 2 m thick thermal cover or the unapproved 1 m thick intrusion barrier.</p> <p>In addition, the 2024 and prior Annual Reports have presented a summary of progressive reclamation that has occurred on the TSF. It is unclear to CIRNAC whether the progressive reclamation has followed the approved design concept of a 2 m thick thermal cover or the unapproved 1 m thick intrusion barrier.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that AEM:</p> <ul style="list-style-type: none"> <li>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 intrusion barrier; and</li> <li>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 intrusion barrier.</li> </ul>

<b>Comment Number:</b>	<b>CIRNAC #11</b>
<b>Subject:</b>	Groundwater Migration of TSF Reclaim Water
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report: Section 8.7.1</li> <li>• Appendix 35</li> </ul>
<b>Background/Rationale:</b>	<p>The Meadowbank 2024 Groundwater Monitoring Report (Appendix 35 to the 2024 Annual Report) concludes that the groundwater quality at monitoring well MW-16-01 has been impacted by reclaim water from the South Cell TSF. This conclusion is based the well having chemical signatures that are similar</p>





Comment Number:	CIRNAC #11
<b>Subject:</b>	Groundwater Migration of TSF Reclaim Water
	<p>to samples collected from TSF surface water and dike seepage.</p> <p>So far, contaminant transport from the TSF has locally affected groundwater quality to the west side of the central dump and mined-out pits. AEM has determined that the gradient between the surrounding lakes and the mined-out pits is currently preventing advection from carrying contaminants further eastwards. This barrier will, however, cease to exist once the pits are fully flooded. On this basis, AEM has concluded that subsequent groundwater monitoring programs are required to help mitigate the effect of mining on local hydrogeology and ensure these contaminants do not alter the regional groundwater quality in the future.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that AEM:</p> <ul style="list-style-type: none"> <li>a) Confirm that the updated WQLBM predictions presented in Appendix 13 have included potential loadings of TSF reclaim water migrating via the groundwater pathway;</li> <li>b) Describe the migration pathway of reclaim water from the TSF into the groundwater system; and</li> <li>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.</li> </ul>

Comment Number:	CIRNAC #12
<b>Subject:</b>	Workforce data
<b>References:</b>	<ul style="list-style-type: none"> <li>• 2024 Annual Report, Section 11.10.3.1</li> <li>• Appendix 47. Kivalliq Projects 2024 Socio-Economic Monitoring Program Report, Section 1</li> </ul>
<b>Background/Rationale:</b>	<p>In Section 11.10.3.1 of its 2024 Annual Report, Agnico Eagle provides data on the size of its workforce at the Meadowbank and Whale Tail project sites. This data is provided in both headcounts (snapshot of active employees taken at the end of the year, which includes full-time and part-time employees) and Full-Time Equivalents (FTE) (number of full-time positions based on hours worked, where one full-time position is equivalent to 2,184 hours worked). Workforce data is provided for both active Agnico Eagle employees and contractors employed at the project, disaggregated by Inuit identity.</p> <p>Agnico Eagle presents that in 2024, “the respective full-time equivalencies were 929 Agnico Eagle employees in total and 145 FTE of Inuit Agnico Eagle employees.” Additionally, it is noted that in 2024, the number of contractors employed at the projects were “727 full-time equivalent contractor positions, and approximately 30 contractor Inuit.”</p> <p>Agnico Eagle goes on to report that in total there were “1,831 FTE employees (Agnico Eagle permanent, temporary, on-call, students, and contractors), working full- and part-time jobs, at the end of 2024.”</p> <p>The way that the data presented in Section 11.10.3.1 of the 2024 Annual Report by FTE can be a source of confusion. As written, it is not clear if the</p>



<b>Comment Number:</b>	<b>CIRNAC #12</b>
<b>Subject:</b>	Workforce data
	value of 929 Agnico Eagle employees in total, includes the 145 Inuit Agnico Eagle employees. Similarly, the contractor FTE value could be more clearly presented by distinguishing the number of Inuit and non-Inuit contractors. Section 1 (p. 9) of Agnico Eagle's 2024 Socio-Economic Monitoring Plan Report, presents the same workforce data but in a more succinct and clear manner.
<b>Recommendation:</b>	CIRNAC recommends that Agnico Eagle ensure that future Annual Report submissions clearly present the number of Inuit and non-Inuit FTEs for Agnico Eagle employees and contractors.

<b>Comment Number:</b>	<b>CIRNAC #13</b>
<b>Subject:</b>	Cultural Awareness Training
<b>References:</b>	<ul style="list-style-type: none"> <li>• NIRB Project Certificate No. 008 Amendment 1, T&amp;C 59</li> <li>• 2024 Annual Report, Section 11.10.3.2.3</li> </ul>
<b>Background/Rationale:</b>	<p>T&amp;C 59 of NIRB Project Certificate No. 008, Amendment 1 for the Whale Tail Project states:</p> <p><i>"The Proponent is encouraged to work with the Kivalliq Inuit Association to establish cross-cultural training initiatives, which promote respect and consideration for the importance of Inuit Qaujimajatuqangit to the Inuit identity and to make this training available to Project employees and on-site subcontractors. The Proponent should actively monitor the implementation of these initiatives, including the following items:</i></p> <ul style="list-style-type: none"> <li>• <i>Descriptions of the goals of each program offered;</i></li> <li>• <i>Language of instruction;</i></li> <li>• <i>Schedules and location(s) of when each program was offered;</i></li> <li>• <i>Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and</i></li> <li>• <i>Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates."</i></li> </ul> <p>Section 11.10.3.2.3.2 of the submitted 2024 Annual Report provides an overview of activities performed by Agnico Eagle to deliver revamped Cultural Awareness courses. While the information provided is beneficial, details are not provided for the itemized points included in T&amp;C 59 of the Whale Tail Project Certificate. An effort should be made to address these points in future Annual Monitoring Report submissions.</p>
<b>Recommendation:</b>	<p>CIRNAC recommends that Agnico Eagle ensure future Annual Monitoring report submissions include details on how it is addressing the specific items identified in T&amp;C 59 of NIRB Project Certificate No. 008, Amendment 2, which concern cross-cultural training initiatives. These are:</p> <ol style="list-style-type: none"> <li>a) Descriptions of the goals of each program offered;</li> <li>b) Language of instruction;</li> <li>c) Schedules and location(s) of when each program was offered;</li> <li>d) Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and</li> </ol>



<b>Comment Number:</b>	<b>CIRNAC #13</b>
<b>Subject:</b>	Cultural Awareness Training
	e) Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates.



**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
<b>Prior 1</b>	Freeze back and Capping Thickness	CIRNAC recommended that AEM include a meaningful discussion of the results from the thermal monitoring in the Annual Report. FEIS predictions should be compared with monitoring results and be clearly presented. AEM should present the updated modeling supporting their conclusions that the conceptual plans for thermal encapsulation of the Tailings Storage Facility (TSF) and the Waste Rock Storage Facility (WRSF) remain effective to prevent and control deleterious seepage over long term. Finally, if results show discrepancies from the predicted values, AEM should discuss the management actions that should be implemented to address the risk.	Agnico Eagle acknowledges CIRNAC's comment on thermal monitoring of the WRSF and will continue to report in the annual report the work and the data that are being gathered to assess the performance of the WRSF. These data will continue to be analysed to ensure they are aligned with closure prediction and the model will be revised periodically to ensure the goal of meeting closure objective. In 2020 instrumentation installation continued on both sites as per O'Kane recommendation. The data gathered at Meadowbank are aligned with the latest review of the thermal model performed in 2019. Agnico Eagle also acknowledges CIRNAC's comment on the progressive reclamation for the cover of the WRSF. Agnico Eagle will be submitting in due time the necessary documentation to support its claim of completion of the progressive reclamation work done on the WRSF.	<p>AEM continues to assess the existing and predicted long-term thermal performance of mine wastes and cover systems. However, similar to prior years, the 2024 Annual Report provides limited new information in this regard and the topic remains a work in progress.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>
<b>Prior 2</b>	Freeze back and Capping Thickness	CIRNAC recommended that AEM provide more information on the nature and extent of research efforts, results of the research and a discussion of how the proposed cover design has been influenced by these results.	Refer to response for 1	<p>AEM, their consultants and research partners continue to assess the existing and predicted long-term thermal performance of mine wastes and cover systems. However, similar to prior years, the 2024 Annual Report provides limited new information in this regard and the topic remains a work in progress.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>

**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
<b>Prior 3</b>	Progressive Reclamation – Mine Site	CIRNAC recommended that future updates to the Interim Closure and Reclamation Plan (ICRP) include more details on progressive reclamation at Meadowbank such as areas of Tailings Storage Facility (TSF) and Waste Rock Storage Facility (WRSF) facilities covered in the prior year, total areas covered to date, along with the volumes associated with these areas.	In response to 2019-2020 NIRB recommendations, Agnico Eagle has committed to include more details on progressive closure in the 2020 Annual Report. Relevant information to progressive closure can be found in Section 9.1 of the 2020 Annual Report and will continue to be updated annually. Details related to work completed and schedules of progressive reclamation is also included in the closure schedule presented in Appendix P of the ICRP which was updated in March 2020 and provided in the 2019 Annual Report in Appendix 55. Agnico is of the opinion that the last update March 2020 version fulfills the current request. Agnico Eagle is nevertheless committed to providing more details on the progressive closure in the next iteration of the Meadowbank ICRP.	<p>AEM's Annual Reports only provide high level summaries of progressive reclamation completed to date. CIRNAC requested that the missing information be incorporated into future ICRPs.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>
<b>Prior 4</b>	Results of Thermistor Measurements for Tailings and Waste Rock Storage Facilities	CIRNAC recommended that AEM analyze the thermistor monitoring results against early thermal modelling predictions and update its Waste Rock and Tailings Management Plans if large discrepancies are observed between the monitoring results and model predictions. While the 2020 Annual Report presents a high-level summary of the topic, the document contains insufficient detail to understand the status of thermal monitoring/modelling as it relates to final closure. CIRNAC expects that the next iteration of the Meadowbank Interim Closure and Reclamation Plan (ICRP) will include a comprehensive analysis of all thermal monitoring data and modelling.	Agnico Eagle is monitoring freeze back in tailings and the waste rock and will continue to do so and expand the monitoring program as required. The data gathered will continue to be analyzed and compared to the FEIS prediction as more data becomes available to ensure that the closure strategy and concept still meet the closure prediction. Agnico Eagle acknowledges CIRNAC's comment and will evaluate this recommendation during the next updated of the Meadowbank ICRP.	<p>AEM continues to assess the existing and predicted long-term thermal performance of mine wastes and cover systems at the Meadowbank and Whale Tail sites. While the Annual Reports present a high-level summary of the topic, the documentation contains insufficient detail for the reader to understand the status of thermal monitoring/modelling as it relates to final closure. CIRNAC expects that the next iteration of the Meadowbank Complex ICRP will include a comprehensive analysis of all thermal monitoring data and modelling.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and</p>



**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
				reclamation planning process.
<b>Prior 5</b>	Meadowbank Water Treatment Requirements	CIRNAC recommended that the next iteration of the Meadowbank ICRP identify and examine potential water treatment scenarios based on current and future water quality projections during the closure phase. Although final decisions are not required at this time, costs associated with implementing the most likely water treatment scenario should also be incorporated into security estimates.	Agnico Eagle acknowledges CIRNAC comments and intends to assess the requirement for treatment of the re-flooded pits within the next iteration of the ICRP.	<p>AEM indicates that it continues to assess the requirements for treatment of reclaim water stored in the Goose and Portage pits at the Meadowbank Mine. CIRNAC notes that the strategy is limited to treatment of reclaim water and does not address whether water in the re-flooded pits will require on-going treatment after the reclaim water has been treated and discharged. Despite the progress, the topic remains a work in progress and significant work will need to be done prior to reaching final decisions.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>
<b>Prior 6</b>	Meadowbank WRSF Seepage Quality	CIRNAC recommended that AEM confirm whether long-term modelling of seepage from the Meadowbank Waste Rock Storage Facilities (WRSFs) is of sufficient duration to characterize seepage after breakthrough. If not, CIRNAC recommends that AEM extend the temporal scope of its WRSF seepage modelling to ensure that potential seepage impacts after breakthrough are accurately characterized.	Long term seepage from the Meadowbank WRSF was not identified as a concern during the FEIS and was not examined. For the next iteration of the Interim Closure & Reclamation Plan, Agnico Eagle will review if this mechanism can have an impact on the closure objectives and if so, will do the necessary analysis to characterize this impact and develop mitigation measure as required. However, it must be noted that, as opposed to Whale Tail WRSF, there is no metal leaching material in the Meadowbank WRSF and the pile is expected to remain in	AEM's response does not address CIRNAC's request. They have, however, indicated the issue will be considered during preparation of the next Meadowbank Interim Closure and Reclamation Plan (ICRP) if they determine there is a potential impact on the ability of AEM to achieve the closure objectives. The response indicates that the potential for leaching from the Meadowbank WRSF is lower than for the Whale Tail WRSF due to an absence of metal leaching material and the expectation that the rock will remain frozen. On this basis, AEM





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CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
			permafrost condition which would suggest that water seeping from the Meadowbank WRSF beyond the NAG capping is unlikely and would have little bearing on the water quality objective at closure.	concludes that water seeping from the Meadowbank WRSF beyond the non-potentially acid generating (NAG) capping is unlikely and would have little bearing on the water quality objective at closure. Regardless, CIRNAC is of the opinion that quantitative long-term modelling of seepage from the Meadowbank WRSF is required to confirm AEM's assumptions.  <b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.
<b>Prior 7</b>	Meadowbank Post-Closure In-Pit Water Quality	CIRNAC recommended that AEM:  a) Conduct a modelling exercise to predict post-closure water quality in the re-flooded Goose and Portage mine pits at the Meadowbank Gold Mine site.  b) Incorporate the findings of the modelling into the next iteration of the Meadowbank ICRP.  c) Use the modelling results to inform the design of various other closure components, including but not limited to capping of the in-pit tailings and post-closure water management, water treatment facility designs, sludge generation and disposal, requirements as well expected treatment duration all of which should be included in the next	a) Agnico Eagle acknowledges CIRNAC's comments. Agnico Eagle will integrate this recommendation during the next update of the Meadowbank ICRP.  b) Agnico Eagle acknowledges CIRNAC's comment. Findings of the modelling will be taken into consideration in a future update of the Meadowbank ICRP.  c) Agnico Eagle acknowledges CIRNAC's comments. Agnico Eagle will integrate this recommendation during the next update of the Meadowbank ICRP.	While the topics included in the comment have yet to be resolved, AEM has committed to address CIRNAC's recommendations during future updates to the Meadowbank ICRP.  <b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.



**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
		iteration of the Interim Closure and Reclamation Plan (ICRP).		
<b>Prior 8</b>	Meadowbank In-Pit Tailings Covers	<p>CIRNAC recommended that AEM:</p> <p>a) Describe the strategy they will use to evaluate cover requirements and methods for the in-pit tailings (e.g., water covers, coarse/fine granular covers, construction/leave a submerged berm at the connection to the pit).</p> <p>b) Provide the strategy and an update on progress towards the selection of a preferred closure concept in the next update to the Meadowbank Interim Closure and Reclamation Plan (ICRP).</p> <p>CIRNAC requested that this information be provided to assist in satisfying the New Commentary of Project Certificate 004 (Amendment 003) Term and Condition 19.</p>	<p>a) Agnico Eagle will present a timeline for further study to determine the requirement of a cover and possible construction strategy during the next update of the ICRP.</p> <p>b) Agnico Eagle will present this information in the next update of the ICRP.</p>	<p>While the topics included in the comment have yet to be resolved, AEM has committed to address CIRNAC's recommendations during future updates to the Meadowbank ICRP.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>
<b>Prior 9</b>	Thermal Performance of Meadowbank WRSF Covers	<p>CIRNAC recommended that AEM describe the technical rationale for using different WRSF cover thicknesses at the Meadowbank Gold Mine and Whale Tail Pit sites. Any notable differences in the design assumptions for the two sites should be provided in the rationale.</p>	<p>Waste rock covers are designed based on project specific attributes and will naturally have variables that differentiate between sites (i.e., the active layer depth in the region is variable). The freezing mechanism is impacted by the material characteristics, such as the grain size distribution. The attributes of the cover system at Whale Tail include low annual precipitation (less than 300 mm per year); high summer</p>	<p>AEM has yet to address the specific recommendation. While the topics included in the comment have yet to be resolved, CIRNAC is of the opinion that the recommendation is best addressed through the closure and reclamation planning process.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends</p>



**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
			<p>evapotranspiration; coarse-texture soil availability; high spring surface runoff; and creation of low permeability ice barriers.</p> <p>The development of the 4.7 m cover was based on an active layer depth in the WRSF of 4.2 m during operations and closure with an additional 0.5 m for contingency. The active layer was determined by preliminary 1D steady-state numerical modelling and further confirmed by O'Kane's 2D transient model. Both simulations considered predicted effects of climate change. Material properties for the cover system and waste rock materials were calibrated based on observed ground temperature measurements obtained from thermistors in Meadowbank's WRSFs. Numerical modelling considered the effect of slope angle, slope aspect, wind exposure on thermal conditions within the WRSF. Modelling of the WRSF cover system indicates a greater thaw depth in the WRSF than observed regional data. Thus, the thaw depth simulated by numerical modelling, rather than the less conservative regional thaw depth, was used in support of the detailed design of the Whale Tail and IVR WRSF cover system. Agnico Eagle refers CIRNAC to the Whale Tail Project – Thermal Modelling of Whale Tail and IVR WRSFs (O'Kane 2019) report which was previously issued to address CIRNAC's comments under the Whale Tail Expansion Project.</p>	that AEM explicitly address and document the issue through the closure and reclamation planning process.
<b>Prior 10</b>	Whale Tail Project Post-Closure Water Quality	CIRNAC recommended that AEM address the following in the next iteration of the Whale Tail Interim Closure and	a) Agnico Eagle agrees with CIRNAC to indicate which modelling parameters were adjusted since the last modelling run and to	AEM has yet to address the specific recommendation. While the topics included in the comment have yet to be resolved,



**Table A: Previously Identified CIRNAC Closure and Reclamation Comments to be Addressed During Ongoing Closure Planning Processes**

CIRNAC Prior Closure and Reclamation Comment #	Topic	CIRNAC's Prior Recommendations	AEM Prior Response/Action	Current Status
		<p>Reclamation Plan (ICRP):</p> <p>a) Clearly indicate which modelling parameters have been adjusted since the last modelling run. In situations where the level of conservatism has reduced relative to FEIS predictions, appropriate justification should be provided.</p> <p>b) Future modelling results should explicitly and quantitatively report the range of predicted modelling outcomes based on AEM's assumptions regarding model prediction accuracy (i.e., +/- one order of magnitude). Any required mitigations should be based on a reasonable worst-case scenario. For example, what actions would be required if post-closure arsenic concentrations in Mammoth Lake are at the upper end of the potential prediction range?</p> <p>c) Water quality predictions should clearly indicate the spatial extent of post-closure water quality exceedances within surface water receivers.</p>	<p>explain situations where the level of conservatism has reduced relative to FEIS predictions.</p> <p>b) Agnico Eagle agrees with CIRNAC for the next iteration of the water quality forecast model to explicitly report the range of predicted modelling outcomes based on model prediction accuracy.</p> <p>c) Agnico Eagle acknowledges CIRNAC's recommendation for the next iteration water quality forecast model to clearly indicate the spatial extent of post-closure water quality exceedances within surface water receivers.</p>	<p>CIRNAC is of the opinion that the recommendation is best addressed through the closure and reclamation planning process.</p> <p><b>CIRNAC Recommendation:</b> The issue has yet to be resolved. CIRNAC recommends that AEM explicitly address and document the issue through the closure and reclamation planning process.</p>



## **2. Compliance Monitoring**

CIRNAC has a broad mandate for the co-management of water resources and the management of Crown land in Nunavut under the following applicable acts and regulations:

- The *Department of Crown-Indigenous Relations and Northern Affairs Act*;
- The *Nunavut Land Claims Agreement Act* and the Nunavut Agreement;
- The *Arctic Waters Pollution Prevention Act and Regulations*;
- The *Nunavut Waters and Nunavut Surface Rights Tribunal Act and Regulations*; and
- The *Territorial Lands Act and Regulations*.

CIRNAC's monitoring responsibilities are fulfilled by reviewing and providing expert advice and comments to the NIRB and the Nunavut Water Board (NWB) on Annual Reports and conducting site inspections. CIRNAC Inspectors conduct site inspections to ensure project activities are compliant with terms and conditions in any water licence(s), land use authorization(s), such as land use permits and leases, and the Project Certificate. Inspectors prepare site inspection reports with observations and recommendations, and they have the authority to issue and enforce directions with a timeline for implementing corrective measures.

The NIRB requested that regulatory authorities provide comments and/or information associated with their mandates and jurisdictions with respect to the following:

- a. Provide a summary of any compliance monitoring and/or site inspections undertaken in association with the Project, including specifically:***
  - i. Identify the terms and conditions from the Project Certificate which have been incorporated into any permits, certificates, licenses or other approvals issued for the Project, where applicable, and report annually to the NIRB on the status of those incorporated terms and conditions.***

CIRNAC issued the following Crown Land Leases for AEM's Meadowbank Gold Mine and Whale Tail Pit projects, respectively:

- 66A/8-71-3 (AWAR) and 66A/8-72-6 (AWAR Quarries); and
- 66H/8-02-1 (Whale Tail Haul Road) and 66H/8-01-4 (Whale Tail Haul Road Quarries).

CIRNAC has reviewed the Type A Water Licences associated with the Meadowbank Gold Mine and Whale Tail Pit Projects with respect to Project Certificate No. 004 (Amendment No. 003) and Project Certificate No. 008 (Amendment No. 001) and has included concordance tables (Appendix A and Appendix B) that outline how Project Certificates Terms & Conditions have been incorporated in the Water Licences and Crown Land Leases.

- ii. A summary of any inspections conducted during the 2024 reporting period, and the results of these inspections;***

In 2024, the project's activities and monitoring were conducted under the following NWB Water Licences:

- Type A Water Licence [2AM-MEA1530](#) (Meadowbank Gold Mine Project); and
- Type A Water Licence [2AM-WTP1830](#) (Whale Tail Pit Project).

An overview of the inspections is presented below, and a detailed summary can be accessed using the hyperlinks above.

<b>Inspection 1</b>	<b>Licence No. 2AM-MEA1530</b>
<b>Area(s)</b>	Meadowbank site
<b>Inspection Dates</b>	May 28 and 30, 2024
<b>Observations</b>	<p>The inspection was focused on the on-site freshet water management.</p> <p>The Inspector highlighted concerns over three recent spills (IDs: 2023-524, 2024-207, and 2024-232) near the Assay Lab Road, all of unknown quantity. While the source of the 2023 spill remains inconclusive, the 2024 spills were traced to the leach pad, which had been dewatered and partially remediated at the time of inspection. A potential seep origin was identified and sealed. The Inspector expressed concern about contaminated water potentially entering Third Portage Lake, citing Part H Item 2 of the water licence, which prohibits unauthorized discharges. The Licensee's representative indicated that an expert is being enlisted to inspect the infrastructure and make recommendations.</p> <p>The Inspector has identified a concerning trend of tailings spills associated with the project, noting five specific incidents between February 2023 and May 2024, involving volumes ranging from 2 to 10 m<sup>3</sup>. Tailings were observed being deposited into Pit E during the inspection, while Goose Pit operations were paused.</p> <p>The Inspector noted that the Vault Pit is currently refilling naturally, with ongoing research into optimal refill methods, and only the Vault Dyke remains in place and monitored. Some reclamation is underway at the Vault Waste Rock Storage Facility to remove materials for use as granular fill.</p> <p>The Inspector noted that the downstream section of the new diversion ditches, implemented under the Baker Lake Water Management Project to manage surface runoff and snowmelt, was not functioning as intended.</p> <p>The Inspector noted that previously identified concerns for culverts between NP-2 and NP-1 under Whale Tale Haul Road were not resolved and require attention.</p> <p>No instances of non-compliance were noted during the inspection.</p>
<b>Result</b>	<p>The Inspector requested a response from the Licensee by August 31, 2024, addressing the following items :</p> <ul style="list-style-type: none"> <li>• Results of the inspection by the expert of the Assay Lab road Seep area and mill infrastructure, and what steps will be taken to prevent future Seeps, along with the anticipated completion date of the works.</li> <li>• A detailed analysis of the tailings-related spills and mitigation to be implemented to prevent future tailings-related spills.</li> <li>• An analysis of the effectiveness of the Baker Lake Water Management Project.</li> <li>• A plan for the culverts installed under the Whale Tale Haul Road connecting NP-2 and NP-1 lakes based on the recommendations of a geotechnical review.</li> </ul>





<b>Inspection 2</b>	<b>Licence No. 2AM-WTP1830</b>
<b>Area(s)</b>	Whale Tail site
<b>Inspection Date</b>	May 29, 2024
<b>Observations</b>	<p>The inspection was focused on the on-site freshet water management.</p> <p>The Inspector noted:</p> <ul style="list-style-type: none"> <li>• Groundwater Storage Pond 1 is effectively collecting brine water from underground operations, primarily containing salts used to prevent drill pipe freezing.</li> <li>• IVR Diversion Ditch, directing non-contact water to Nemo Lake, showed no signs of erosion or sedimentation, although signage at sampling station ST-WT-37 needs updating.</li> <li>• Freshwater intake from Nemo Lake is appropriately marked and reports 55,086 m<sup>3</sup> usage as of May 31, 2024. The Whale Tail WRSF's access road was partially impassable, but sump systems are functioning correctly, channelling water to designated ponds.</li> <li>• No issues were found with key infrastructure such as the Whale Tail and Mammoth Lake Dykes or the newly completed Whale Tail Dyke rehabilitation.</li> </ul> <p>No instances of non-compliance were noted during the inspection.</p>
<b>Result</b>	The Licensee will replace the label for ST-WT-37.

<b>Inspection 3</b>	<b>Licence No. 2AM-MEA1530</b>
<b>Area(s)</b>	Meadowbank site
<b>Inspection Date</b>	October 31, 2024
<b>Observations</b>	<p>The purpose of the inspection was to collect compliance water samples from the discharge of ST-8. Water samples at ST-S-8 were collected on the inspection date at 17:39 hours and were analyzed for Discharge Criteria under Part F Item 7 of the water licence.</p> <p>No instances of non-compliance were noted during the inspection.</p>
<b>Result</b>	The results of the water samples were within the criteria.

<b>Inspection 4</b>	<b>Licence No. 2AM-WTP1830</b>
<b>Area(s)</b>	Whale Tail sites
<b>Inspection Date</b>	November 1, 2024
<b>Observations</b>	<p>The purpose of the inspection was to collect compliance water samples from the discharge of ST-WT-24. Water samples at ST-WT-24 were collected on the inspection date at 08:45 hours and were analyzed for Discharge Criteria under Part F Item 5 of the water licence.</p> <p>No instances of non-compliance were noted during the inspection.</p>
<b>Result</b>	The results of the water samples were within the criteria.



**iii. A summary of AEM's compliance status with regard to authorizations that have been issued for the project.**

No non-compliances related to Water Licence conditions and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act S.C 2002, c. 10* were noted during 2024 inspections. As required in the May 28 and 30, 2024 inspection report, Agnico Eagle submitted the required responses, including: the expert inspection results for the Assay Lab Road Seep area and mill infrastructure; an analysis of tailings-related spills with proposed mitigation measures; an assessment of the effectiveness of the Baker Lake Water Management Project; and a plan for the Whale Tail Haul Road culverts between NP-2 and NP-1 lakes, informed by geotechnical review recommendations.

CIRNAC will continue to work with Agnico Eagle to ensure continued compliance with all water licence requirements associated with this project.



**Appendix A. Meadowbank Gold Mine Project Certificate Terms and Conditions (T&C) incorporated into any permits, certificates, licenses or other approvals issued for the Project<sup>1</sup>**

T&C#	NIRB Project Certificate No. 004	Implemented in Licences or Permits
5	Cumberland shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins. This bonding should not duplicate other amounts of security required (e.g., the NWB).	All of Part C of NWB Water Licence (2AM-MEA1530).  Parts 16-19 of Lease No. 66A/8-71-3 (covers the sections of the all-weather access road) located on Crown land).  Part 34-37 of Lease No. 66A/8- 72-6 (covers the quarries located on Crown land).
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.	Part B, Item 13 of NWB Water Licence (2AM-MEA1530).
13	Cumberland shall not permit the water discharged into Wally Lake and Third Portage Lake to exceed receiving environment discharge criteria established by the NWB or as otherwise required by law.	Partially, the portion referring to criteria established by the NWB is found in Part F, Items 3 and 4 within the NWB Water Licence (2AM-MEA1530).
14	Cumberland shall not remove dewatering dikes until the quality of water contained within them is of sufficient quality to meet receiving environment discharge criteria established by the NWB or as otherwise required by law.	Part E, Item 7 of NWB Water Licence (2AM-MEA1530).
15	Cumberland shall within two (2) years of commencing operations re-evaluate the characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non-metal constituents to confirm FEIS predictions, and re-evaluate rock disposal practices by conducting systematic sampling of the waste rock and tailings in order to incorporate preventive and control measures into the Waste Management Plan to enhance tailing management during operations and closure. The results of the re-evaluations shall be provided to the NWB and NIRB's Monitoring Officer.	Part B, Item 13 of NWB Water Licence (2AM-MEA1530).
18	Cumberland shall commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation. The tailings management strategy will include the review and evaluation of any future changes to the rate of global warming, compliance with regulatory changes, and the ongoing review and evaluation of relevant technology developments, and will respond to studies conducted during the mine operation.	Part B, Item 13 of NWB Water Licence (2AM-MEA1530).
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 freeze-back efficiency. Cumberland shall report to NIRB's Monitoring Officer for the annual reporting of freeze-back effectiveness.	Schedule B, Item 18 and Part B, Item 13 of NWB Water Licence (2AM-MEA1530).

<sup>1</sup> The following Meadowbank Gold Mine Project Certificate No. 004 (Amendment No. 003) T&Cs continue to apply also to the Whale Tail Pit Project: 9, 13, 14, 18, 19, 23, 25-27, 35, and 79.



T&C#	NIRB Project Certificate No. 004	Implemented in Licences or Permits
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.	Part B, Item 13 of NWB Water Licence (2AM-MEA1530).
22	Prior to the commencement of the Project, Cumberland shall fund and install an onsite lab that has the capability to monitor parameters at a type and at a frequency acceptable to the NWB and EC at all site discharge points. The results of these analyses, as well as any other water quality monitoring required by regulatory authorities shall be used in the submission of a receiving water assimilative capacity water quality assessment study of concern to regulators. The lab shall be certified for environmental water quality analysis purposes with standards to include the calibration of water quality monitoring instruments. Cumberland shall file proof of application to become accredited upon the request of the NWB.	Partially, Part I, Items 16, 17, 18, 19 and 20 of NWB Water Licence (2AM-MEA1530) relate to this condition, but not to the installation of an onsite lab prior to construction.
23	For the purposes of monitoring quality assurance and quality control ("QA/QC"), Cumberland shall ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB. Results of analysis shall be provided to the NWB and NIRB's Monitoring Officer.	Part I, Item 16 of NWB Water Licence (2AM-MEA1530).
24	Cumberland shall identify an area and design for a landfill for disposal of operational and closure non-salvageable materials, including a list of any non-salvageable materials, and a procedural manual for preparation of location and placements of these materials, and incorporate the design into the final Waste Management Plan as instructed by the NWB.	Part B, Item 13 of NWB Water Licence (2AM- MEA1530).
25	Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. The deterrents are to be developed taking into consideration Traditional Knowledge and in consultation with the HTO, EC and CIRNAC and incorporated into the final Waste Management Plan prior to filing the Plan with the NWB.	Partially, this was not captured within the NWB Water Licence as it was already completed prior to licence approval. AEM's NWB Water Licence (2AM-MEA1530) does however require adherence to the Waste Management Plan under Part B, Item 13.
26	Cumberland shall ensure that spills, if any, are cleaned up immediately and that the site is kept clean of debris, including wind-blown debris.	Part H, Items 1 and 2 of NWB Water Licence (2AM- MEA1530).  Partially, Conditions 45-47 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).  Partially, Conditions 47, 52-56 and 55 of Lease No. 66A/8-72-6 (covers the quarries located on Crown land).



T&C#	NIRB Project Certificate No. 004	Implemented in Licences or Permits
27	Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.	<p>Part H, Item 3 of NWB Water Licence (2AM-MEA1530).</p> <p>Partially, Conditions 45-47 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).</p> <p>Partially, Conditions 52-56 of Lease No. 66A/8-72-6 (covers the quarries located on Crown land).</p>
33	<p>Cumberland shall update the Access and Air Traffic Management Plan to:</p> <ol style="list-style-type: none"> <li>1. Include an All-weather Private Access Road Management Plan, including a right-of-way policy developed in consultation with the KivlA, GN, CIRNAC and the Hamlet of Baker Lake, for the safe operation of the all-weather private access road; and</li> <li>2. To facilitate monitoring of the environmental and socio-economic impacts of the private road and undertake adaptive management practices as required, including responding to any concerns regarding the locked gates.</li> </ol>	Partially, item 1 is addressed under Condition 54 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).
35	Cumberland shall reclaim the all-weather private access road at the end of the mine life to prevent any future use of the road, including scarification of the road and restoration of the natural hydrology, topography, and vegetation, subject only to Cumberland and/or its successor seeking NIRB Article 12 approval for the road to be maintained and operated beyond the life of the mine.	Partially, Conditions 12 and 15 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).
78	Cumberland shall file a complete Closure and Reclamation Plan developed to comply with CIRNAC's policy of full cost of restoration and any related NWB requirements such that the Inuit and taxpayers are not liable for any cost associated with the cleanup, modification, decommission, or abandonment.	<p>Partially, Part B, Item 13 of NWB Water Licence (2AM- MEA1530).</p> <p>Partially, Conditions 12, 15, 16-19, 26 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).</p> <p>Partially, Conditions 14, 17, 26, 34-38 of Lease No. 66A/8-72-6 (covers the quarries located on Crown land).</p>
79	<p>In addition to the NWB's requirements, the final Closure and Reclamation Plan shall require Cumberland to:</p> <ol style="list-style-type: none"> <li>a. Ensure that mine facilities and infrastructure are abandoned in such a manner that: <ul style="list-style-type: none"> <li>• The Project site is physically stable and any requirements for long term maintenance and monitoring are minimized;</li> <li>• Threats to public safety and wildlife are eliminated; and</li> <li>• Affected areas are returned to the original undisturbed conditions to the fullest extent possible.</li> </ul> </li> <li>b. Prevent continuing impacts from contaminants and wastes on the environment including those associated with acid rock drainage;</li> <li>c. Remove all hazardous materials and waste and as much salvageable waste as practicable from the Project area; and</li> <li>d. Enter into written arrangements with its abandonment and reclamation contractors to ensure all site debris is cleaned up off the lands, including wind-blown debris.</li> </ol>	<p>Partially, Part B, Item 13 of NWB Water Licence (2AM- MEA1530).</p> <p>Partially, Conditions 12, 15, 16-19, 26 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).</p> <p>Partially, Conditions 14, 17, 26, 34-38 of Lease No. 66A/8-72-6 (covers the quarries located on Crown land).</p>



T&C#	NIRB Project Certificate No. 004	Implemented in Licences or Permits
80	Cumberland shall file annually with NIRB's Monitoring Officer an updated report on progressive reclamation and the amount of security posted, as required by KivIA, CIRNAC, and/or the NWB.	<p>Does not incorporate filing to the NIRB's Monitoring Officer, but does refer to reporting on progressive reclamation and security:</p> <p>Partially, Conditions 19 (bi-annual reporting requirement), 20, and 33 of Lease No. 66A/8-71-3 (covers the sections of the AWAR located on Crown land).</p> <p>Partially, Conditions 24 and 38 of Lease No. 66A/8-72-6 (covers the quarries located on Crown land).</p>





**Appendix B. Whale Tail Pit Project Certificate T&Cs incorporated into any permits, certificates, licenses or other approvals issued for the Project**

T&C#	NIRB Project Certificate No. 008	Implemented in Licences or Permits
2	<p>Prior to commencing construction activities the Proponent shall update the existing Dust Management and Monitoring Plan for the Meadowbank Mine site to address and/or include the following additional items:</p> <ul style="list-style-type: none"> <li>Align plan requirements with commitments made in the Final Environmental Impact Statement and during the Final Hearing to monitor dust along the existing all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project.</li> <li>Verify commitments to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project, including a description of the type of suppressant to be utilized and the frequency and timing of applications to be made throughout the various seasons of road use.</li> <li>Outline the specific triggers, thresholds, and adaptive management measures that will apply if monitoring indicates that dust deposition is higher than predicted.</li> </ul>	Part F, Item 12 of NWB Water Licence (2AM-WTP1830)
6	The Proponent shall conduct detailed hydrodynamic modelling during operations and closure to evaluate the mixing of the Waste Rock Storage Facility seepage into Mammoth Lake post-closure; and Based on the results of the modelling implement monitoring programs and adaptive management strategies that minimize the need for active intervention, including long-term treatment of mine contact water.	Part E, Item 8 of NWB Water Licence (2AM-WTP1830)
9	The Proponent shall undertake the additional site-specific geotechnical investigations required to identify sensitive land features and to inform final engineering design prior to the construction of project components such as the waste rock storage facility and quarries.	Part D, Item 2 of NWB Water Licence (2AM-WTP 1830)
11	The Proponent shall develop and implement an Erosion Management Plan to prevent or minimize erosion and its resulting effects from project-related land disturbance.	<p>Lease 66H/8-02-2 Whale Tail Haul Road (lease clauses 32 and 33)</p> <p>Lease 66H/8-01-4 Whale Tail Haul Road Quarries (lease clause 41)</p>
12	<p>As part of the Closure and Reclamation Plan, the Proponent shall develop and implement a program to:</p> <ol style="list-style-type: none"> <li>Progressively reclaim disturbed areas within the project footprint, with an emphasis on restoring the natural aesthetics of the area through re-contouring to the extent practicable; and</li> <li>In a manner that demonstrates that the Proponent has considered the aesthetic values of local communities (e.g. information regarding the acceptability of the topography and landscape of the project areas following progressive reclamation efforts).</li> </ol>	<p>Part J, Item 2 of NWB Water Licence (2AM-WTP 1830)</p> <p>Lease 66H/8-02-2 Whale Tail Haul Road (lease clause 23)</p> <p>Lease 66H/8-01-4 Whale Tail Haul Road Quarries (lease clause 33)</p>
13	The Proponent shall explore the feasibility of topsoil/organic matter salvage as part of project development and provide updates to the Closure and Reclamation Plan based on this investigation.	Part J, Item 3 of NWB Water Licence (2AM-WTP 1830)



T&C#	NIRB Project Certificate No. 008	Implemented in Licences or Permits
15	<p>Subject to the additional direction and requirements of the Nunavut Water Board, the Proponent shall prepare and implement a Groundwater Monitoring Plan that, at a minimum includes:</p> <ul style="list-style-type: none"> <li>• The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, Nunavut Impact Review Board Page 23 of 49 Project Certificate No. 008 construction and operation phases;</li> <li>• Definition of vertical and horizontal groundwater flows in the project development areas;</li> <li>• Delineates monitoring plans for both vertical and horizontal ground water; and</li> <li>• Thresholds that will trigger the implementation of adaptive management strategies that reflect site- specific conditions encountered at the project site.</li> </ul>	Part I, Item 1e of NWB Water Licence (2AM-WTP 1830)
16	<p>Within two years of commencing operations, the Proponent shall:</p> <ol style="list-style-type: none"> <li>Conduct additional analyses to determine the approximate fill time for the Whale Tail Pit at closure;</li> <li>Undertake a hydrogeological characterization study to assess the potential for arsenic and phosphorous diffusion from submerged Whale Tail pit walls;</li> <li>If the results of the characterization study indicate a moderate to high potential for arsenic and/or phosphorous diffusion, perform detailed hydrodynamic modelling of the flooded pit lake prior to closure to evaluate meromictic conditions and flooded pit water quality; and</li> <li>Add these required activities to the site Groundwater Monitoring Plan.</li> </ol>	Part E, Item 7 of NWB Water Licence (2AM-WTP1830)
17	<p>The Proponent shall:</p> <ol style="list-style-type: none"> <li>Monitor the effects of project activities and infrastructure on surface water quality conditions;</li> <li>Ensure the monitoring data is sufficient to compare the impact predictions in the Environmental Impact Statement (EIS) for the Project with actual monitoring results;</li> <li>Ensure that the sampling locations and frequency of monitoring is consistent with and reflects the requirements of the Water Quality and Flow Plan and the Core Receiving Environmental Monitoring Program; and</li> <li>On an annual basis, the Proponent will compare monitoring results with the impact assessment predictions in the EIS and will identify any significant discrepancies between impact predictions and monitoring results.</li> </ol>	Part D, Items 10-14 of NWB Water Licence (2AM-WTP1830)



T&C#	NIRB Project Certificate No. 008	Implemented in Licences or Permits
18	<p>The Proponent shall, reflecting any direction from the Nunavut Water Board, maintain a Site Water Monitoring and Management Plan designed to:</p> <ul style="list-style-type: none"> <li>Minimize the amount of water that contacts mine ore and wastes;</li> <li>Appropriately manage all contact water and discharges to protect local aquatic resources; and</li> <li>Implement water conservation and recycling to maximize water reuse and minimize the use of natural waters.</li> </ul> <p>The Plan should include monitoring that demonstrates contact water (runoff and shallow groundwater) from the ore storage and waste rock storage areas is captured and managed, as per the Waste Rock Facility Management Plan.</p>	Part E, Items 7-11 of NWB Water Licence (2AM-WTP1830)
19	<p>The Proponent shall, reflecting any direction from responsible authorities such as the Nunavut Water Board, Fisheries and Oceans Canada and Environment and Climate Change Canada, maintain a Core Receiving Environment Monitoring Program (CREMP) designed to:</p> <ul style="list-style-type: none"> <li>Determine the short and long-term effects in the aquatic environment resulting from the Project;</li> <li>Evaluate the accuracy of Project effect predictions;</li> <li>Assess the effectiveness of mitigation and management measures on Project effects;</li> <li>Identify additional mitigation measures to avert or reduce environmental effects due to Project activities;</li> <li>Comply with Metal Mining Effluent Regulations requirements, should an Environmental Effects Monitoring program be triggered;</li> <li>Reflect site-specific water quality conditions; <ul style="list-style-type: none"> <li>Include details comparing the watershed features in the Whale Tail watershed to those watersheds used as reference lakes; and</li> </ul> </li> <li>Evaluate the mixing and non-mixing portion of the pit.</li> </ul> <p>The CREMP should include sufficient sampling and monitoring programs to appropriately characterize the receiving environment to ensure that adequate data is available to assess impact predictions made within the Environmental Impact Statement for the Whale Tail Pit Project.</p>	Part E, Items 7-11 of NWB Water Licence (2AM-WTP1830)
20	<p>Unless otherwise authorized, the Proponent shall maintain an appropriate setback distance between project quarries and borrow pits from fish-bearing or permanent waterbodies as required to prevent acid rock drainage or metal leaching into such waterbodies.</p>	<p>Part I, Item 1 of NWB Water Licence (2AM-WTP1830)</p> <p>Lease 66H/8-01-4 Whale Tail Haul Road Quarries (lease clause 54)</p>
21	<p>The Proponent shall ensure that all project infrastructures in watercourses are designed and constructed in such a manner that they do not unduly prevent or limit the movement of water or fish species in fish bearing streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada.</p>	Part E, Item 25 of NWB Water Licence (2AM-WTP1830)



T&C#	NIRB Project Certificate No. 008	Implemented in Licences or Permits
22	The Proponent shall engage with Fisheries and Oceans Canada to develop project specific thresholds, mitigation and monitoring for any blasting activities that would exceed the requirements of Fisheries and Oceans Canada's Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters.	Part I, Item 1 of NWB Water Licence (2AM-WTP1830)
24	<p>The Proponent shall engage Fisheries and Oceans Canada, and other interested parties to further assess:</p> <ul style="list-style-type: none"> <li>• Whether the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from development of the Project; and</li> <li>• Whether Whale Tail end pit would support fish in the post closure scenario.</li> </ul> <p>Results of this assessment should be incorporated into the Habitat Compensation Plan and/or the Conceptual Fisheries Offsetting Plan as appropriate.</p>	Part I, Item 1 of NWB Water Licence (2AM-WTP1830)
26	The Proponent shall include revegetation strategies within its Mine Closure and Reclamation Plan that support progressive reclamation, and promote natural revegetation and recovery of disturbed areas compatible with the surrounding natural environment. These strategies should include exploration of the feasibility and practicality of topsoil/organic matter salvage through Project development. Consideration for the results of similar reclamation efforts at other northern projects, including the Meadowbank Gold Mine Project, must be demonstrated.	Part J, Item 8 of NWB Water Licence (2AM-WTP1830)
31	The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures.	Lease 66H/8-02-2 Whale Tail Haul Road (lease clauses 54 and 60)
56	<p>The Proponent shall report any archaeological site discovered during the construction, operation, and closure phases to the Government of Nunavut – Department of Culture and Heritage and the Kivalliq Inuit Association.</p> <p>Upon discovering an archeological site, the Proponent shall:</p> <ol style="list-style-type: none"> <li>Take all reasonable precautions necessary to protect the site until further direction is received from the Government of Nunavut – Department of Culture and Heritage; and</li> <li>If it becomes necessary to disturb an archaeological site, the Proponent shall consult with the Government of Nunavut – Department of Culture and Heritage, the Kivalliq Inuit Association, and potential impacted communities to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.</li> </ol>	<p>Lease 66H/8-02-2 Whale Tail Haul Road (lease clause 74)</p> <p>Lease 66H/8-01-4 Whale Tail Haul Road Quarries (lease clause 66)</p>



T&C#	NIRB Project Certificate No. 008	Implemented in Licences or Permits
66	<p>The Proponent shall operate the Whale Tail haul road as a private access road, implement any reasonable measures to limit public access to the road, and develop strategies that account for unauthorized use. These measures must include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>a. The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometers of road, stating that public use of the road is prohibited;</li> <li>b. Annually advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is restricted to mine use only;</li> <li>c. Place local notices (e.g., radio, television, social media) at least quarterly to explain to the community that the road is restricted to mine use only;</li> <li>d. Record all unauthorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road; and</li> <li>e. Develop management strategies to ensure public and operator safety in the event of unauthorized public use.</li> </ul>	Lease 66H/8-02-2 Whale Tail Haul Road (lease clauses 61, 62, 63 and 64)

