



August 5, 2025

Varun Nayak  
Monitoring Officer  
Nunavut Impact Review Board

**Re: Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2024 Annual Report comments**

Dear M. Nayak,

The following information are intended to address regulator's comments regarding the Meadowbank (03MN107) and Whale Tail (16MN056) 2024 Meadowbank Complex Annual Report:

- Government of Nunavut – June 23, 2025: Comment Request for Agnico Eagle's Meadowbank Complex Project 2024 Annual Report.
- Fisheries and Oceans Canada – June 20, 2025: 03MN107 & 16MN056 – Agnico Eagle – Meadowbank Gold Mine and Whale Tail Pit Projects (Meadowbank Complex) – 2024 Annual Monitoring Report.
- Crown-Indigenous Relations and Northern Affairs Canada – July 2, 2025: Comment Request for Agnico Eagle Mines Limited's Meadowbank Complex Project 2024 Annual Report.
- Kivalliq Inuit Association – June 24, 2025: Review of Agnico Eagle Mines Limited's Meadowbank Complex 2024 Annual Report; NIRB File No.: 03MN107 & 16MN056.
- Environment and Climate Change Canada – 03MN107, 16MN056 – Agnico-Eagle Mines Ltd. – Meadowbank Complex – 2024 Annual Report.
- Transport Canada – June 23, 2025: Transport Canada's comments for NIRB 2024 Annual Report - Meadowbank Complex
- Health Canada – June 23, 2025: Health Canada's response to the Comment Request for Agnico Eagle Mines Limited's Meadowbank Complex Project 2024 Annual Monitoring Report

Should you have any questions or require further information, please do not hesitate to contact us at the below.

Regards,

**Agnico Eagle Mines Limited – Meadowbank Complex**

Eric Haley

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Environment & Critical Infrastructures Superintendent

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# 1 Government of Nunavut (GN)

## 1.1 Caribou Road Crossings

**Term and Condition:** 28 (Project Certificate No. 008, Amendment No. 1)

**References:** Agnico Eagle Mines Limited – Meadowbank Complex. Agnico Eagle Meadowbank Complex 2024 Annual Report 61-000-100-REP-007 (March 2025); Government of Nunavut. Government of Nunavut Comments on Agnico Eagle Mine’s Meadowbank and Whale Tail Project 2021 Annual Report (June 2022); Government of Nunavut. Government of Nunavut Comments on Agnico Eagle’s Meadowbank Complex 2022 Annual Report (June 2023).

**Identification of issue:** The Agnico Eagle Meadowbank Complex 2024 Annual Report (2024 AR), states that most caribou crossing events observed on the All-Weather Access Road (AWAR) and the Whale Tail Haul Road (WTHR) occurred on days with a 24-hr or partial closure.

The Government of Nunavut (GN) is concerned that the above results potentially reflect caribou avoidance behaviour of open roads. The GN believes that an in-depth analysis of the caribou crossing data is needed to monitor project effects and inform adaptive management.

**Importance to review and supporting rationale:** Section 8.18.2 of the 2024 AR includes a summary of caribou that were observed crossing Project roads in 2024. Specifically, this section states:

“...[f]or annual caribou crossing observations on the AWAR, 82% (7,595 of 9,243 caribou) of observed crossing events occurred on dates with an AWAR closure...” (Agnico Eagle, 2025, p.339)

And

“...[f]or annual caribou crossing observations on the WTHR, 96% (2,376 of 2,468 caribou) of observed crossing events occurred on dates with a WTHR 24-hour closure or partial closure, and 4% (89 of 2,468 caribou) occurred on a day with a speed or access restriction in place...” (Agnico Eagle, 2025, p.340)

The GN believes that the above results could indicate that caribou actively avoid crossing roads when they are open. The GN has flagged this concern in previous years (GN, 2022; GN, 2023). For example, in response to the Proponent’s 2021 Annual Report, the GN presented a rudimentary analysis that illustrated that caribou were 2 to 4 times more likely to be observed crossing closed versus open roads (GN 2022, GN AR #05 – Remote Camera Study). As such, the GN suggested that caribou may be avoiding open roads, rather than crossing solely due to well-timed closures.

To adequately monitor Project effects and the effectiveness of mitigation, the Proponent should undertake analyses to distinguish between effective mitigation and avoidance behaviour with respect to caribou crossing.

**Recommendation 1:** The GN recommends that the Proponent conduct separate analyses for the AWAR and the WTHR using road survey data from 2019–2024 to test whether:

1. Caribou are more likely to cross roads when they are closed than when they are open, after accounting for factors like caribou numbers, distance from roads, and survey effort; or, if
2. Road closures are effective because they occur when caribou are near roads and likely to cross.

This information will help the GN monitor project effects and the effectiveness of the Proponent's mitigations in protecting caribou that may interact with the Project.

**Agnico Eagle's Response:** *This topic has been discussed in 2022 and 2023 Annual Report comment responses (Agnico Eagle 2022; 2023). As road closure mitigations are applied in response to the proximity of caribou and when caribou are close to roads, all observations of crossing animals are more likely to occur during road closures. Testing caribou response to mitigation when the mitigation is applied in response to caribou is circular, which presents problems for the requested analysis. In order to be able to test caribou responses to closed road versus open roads as the GN requested, there would need to be comparable data collected for caribou exposed roads without mitigation. So far, there has not been TAG support to test this due to the potential risks for caribou-vehicle interactions and the TAG indicated they prefer mitigation to be applied when large numbers of caribou are present (Agnico Eagle 2025).*

*Currently, there is no comparable data to see how migrating caribou groups that trigger a road closure (i.e., greater than the Group Size Threshold [GST]) would respond to an open road, because the large groups approaching the road triggers a closure immediately. The only data available for caribou in relation to open roads would be small groups. Observations of small groups (i.e., below GST) could be compared in relation to open vs. closed roads, but these results would not be applicable to large groups and would not be informative for understanding herd responses to open roads. The objective of the GST is that 75% of caribou encounter closed roads, and results indicate this value is exceeded.*

**References:**

*Agnico Eagle (Agnico Eagle Mining Limited). 2022. Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2021 Annual Report comments. 75 p.*

*Agnico Eagle. 2023. Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2022 Annual Report comments. 74 p.*

*Agnico Eagle. 2025. Meadowbank Terrestrial Advisory Group Official Meeting No. 23 (Minutes). 10 p.*

## **1.2 Caribou Behaviour Study**

**Term and Condition:** 28 (Project Certificate No. 008, Amendment No. 1)

**References:** Agnico Eagle Mines Limited – Meadowbank Complex. Appendix 39: Meadowbank and Whale Tail 2024 Wildlife Monitoring Summary Report, Part 8 (March 2025a); Agnico Eagle Mines Limited – Meadowbank Complex. Appendix 39: Meadowbank and Whale Tail 2024 Wildlife Monitoring Summary Report, Part 9 (March 2025b)

**Identification of issue:** Agnico Eagle's Meadowbank and Whale Tail 2024 Monitoring Summary Report (2024 WMSR) presents the Meadowbank Mine 2024 Caribou Behaviour Study.

To strengthen the interpretation of the caribou behavioural data, the GN recommends refining the study methods, by collecting more detailed information on the "walking" behavioural category. Additional information in this area will help the Proponent and the GN and other intervenors reviewing future Caribou Behaviour Study reports to determine whether the walking behaviour by caribou reflects a response or non-response to disturbance.

Better understanding of caribou behaviour helps the GN understand the potential impacts from the project to caribou, and the effectiveness of mitigation, monitoring and management actions by the Proponent.

**Importance to review and supporting rationale:** As detailed in the 2024 Caribou Behaviour Study, the Project's Terrestrial Advisory Group (TAG) had previously recommended various changes to the Caribou Behaviour Study protocol land analysis methods, including "...testing whether the behaviour "walking" could be considered a response behaviour..." (Agnico Eagle, 2025a, pp. 13– 14). This change was recommended to understand whether and to what extent walking behaviour by caribou was a response to Project-related disturbances.

Walking was incorporated as a behaviour category in the 2024 Caribou Behaviour Study and defined as "Walking similar to standing posture but moving at a slow gait (<5 km/h)." (Agnico Eagle, 2025b, p. 41).

Concerning walking, the 2024 Caribou Behaviour Study found that:

“...disturbances were found to statistically affect the proportion of caribou walking. In both 2023 and 2024 disturbances were found to statistically increase the proportion of caribou walking...” (Agnico Eagle, 2025a, p. 7)

And

“...[r]oad closure status did not affect response behaviour, though the road being open was positively correlated with walking behaviour...” (Agnico Eagle, 2025a, p. 8)

And

“...caribou were more likely to be walking on the upstream side of the road. The dominant behaviours on the downstream side were feeding or laying down...” (Agnico Eagle, 2025a, p. 8)

These results suggest that walking may be a response behaviour to disturbance.

While 2024 Caribou Behaviour Study categorizes walking as a distinct behaviour, it does not clearly distinguish whether it reflects a response to disturbance. To address this, information should be collected and subsequently incorporated into analyses on the direction of travel of caribou. This will help determine whether caribou are walking toward, away from, or parallel to potential disturbances such as roads and vehicles.

The GN can use this information to better understand the effectiveness of monitoring, management and mitigation measures undertaken by the Proponent to minimize or avoid impacts to caribou from the Project and its activities.

**Recommendation 2:** The GN recommends that the Proponent revise the study design and collect data that classifies walking behaviour as movement toward, away from, or parallel to roads or other disturbance sources.

***Agnico Eagle’s Response:*** *Agnico Eagle appreciates this comment and agrees that further investigation of walking behaviour as a potential response provides value in terms of understanding caribou response to potential disturbance events. As recommended by the Terrestrial Advisory Group in 2022, data on the predominant direction of travel in relation to roads has been recorded during behaviour surveys. For future behaviour survey reporting, Agnico Eagle will endeavour to further incorporate this information into analyses, particularly to investigate potential links between walking direction of travel and potential disturbance events.*

## 2 Fisheries and Oceans Canada (DFO)

### 2.1 Correction of DFO File Numbers

**References:** Main Report Section 11.5.7

**Comment:** Gap/Issue: The annual report reports DFO occurrence file number incorrectly (#4- HCAA-02467 and #4-HCAA-02468).

**Conclusion/Request:** Proponent to correct DFO file numbers to 24-HCAA-02467 and 24-HCAA-02468 respectively.

**Agnico Eagle's Response:** *Agnico Eagle apologizes to DFO for this error and will ensure that the correct DFO occurrence file numbers are referenced in the next submission of the annual report.*

### 2.2 Culverts: Barriers to Fish Passage and Sedimentation

**References:** Appendix 7: 2024 Geotechnical Inspection Report

**Comment:** Gap/Issue: AEM notes potential barriers to fish passage and sedimentation (buried culverts, signs of erosion, and granular material from the road). However, gravel deposition from the road has not been removed from culverts that were identified in the 2023 annual report and remain buried.

**Conclusion/Request:** Proponent to remove gravel that is burying culverts posing a risk to fish passage, potential sedimentation into fish bearing waters, and impeding drainage. While some of the culverts buried or blocked by gravel have not been identified as fish-bearing, DFO recommends removal of gravel at all culverts to ensure protection of fish habitat.

This work can be done following DFO's Culvert Maintenance Code of Practice.

**Agnico Eagle's Response:** *Agnico Eagle is currently in communication with DFO regarding culverts that are potentially a barrier to fish passage. During Freshet 2024, Agnico Eagle visited all the culverts on the AWAR and WTHR to conduct a fish-bearing assessment. The results of this assessment were communicated to DFO prior to their 2025 site visit and were re-assessed in the field with DFO in June 2025. Agnico Eagle will continue to work in collaboration with DFO to find the best path forward to ensure protection of fish habitat.*

*Agnico Eagle also acknowledges the recommendation regarding the removal of gravel at all culverts not being identified as fish bearing. Obstructed and damaged culverts are listed in the Annual Geotechnical Inspection Report. As per this report, if insufficient capacity to handle the flow is*

*observed at locations where culverts are obstructed or damaged, Agnico Eagle will implement a plan to clear the obstruction, repair or replace the culvert.*

### **2.3 Marine Mammal Monitoring Program**

**References:** Appendix 32: Meadowbank and Whale Tail 2024 Marine Mammal and Seabird Report

**Comment:** Gap/Issue: Current Marine Mammal Monitoring survey efforts (1 survey per day, lasting 1.5-2 hours) are not sufficient for effective marine mammal monitoring.

**Conclusion/Request:** DFO requests increasing monitoring effort to 2 surveys per day minimum, with a break in between to alleviate monitor eye fatigue and/or consider using technology to scan for marine mammals

**Agnico Eagle's Response:** *Agnico Eagle acknowledges DFO's request and continues to promote shipping companies to conduct, where possible, monitoring efforts for the 2025 MMSO program to a minimum of two surveys daily.*

### **2.4 Marine Mammal Monitoring Program: Vessels travelling in sensitive habitat**

**References:** Appendix 32: Meadowbank and Whale Tail 2024 Marine Mammal and Seabird Report

**Comment:** Gap/Issue: Project Certificates 004 and 008 require vessels supplying the Meadowbank Complex and Meliadine mines to avoid sensitive marine mammal and seabird habitats such as haul-outs and breeding colonies. Vessels are required to avoid sensitive wildlife habitat and travel south of Coats Island when it is safe to do so. However, vessels transited north of Coats Island on 3 occasions.

**Conclusion/Request:** Proponent to firstly ensure compliance with setbacks from sensitive habitat. Additionally, DFO recommends when compliance cannot occur due to safety, a marine mammal observer monitor for marine mammals during all transits north of Coats Island and when crossing setback distances, in addition to their regular monitoring schedule.

DFO to work with the proponent to update their marine mammal monitoring protocol and include these additional monitoring efforts

**Agnico Eagle's Response:** *Agnico Eagle acknowledges DFO's request and has advised the shipping companies to increase monitoring efforts during all transits north of Coats Island.*

## 2.5 Aquatic Invasive Species

**References:** Shipping Management Plan (Version 5)

**Comment:** Gap/Issue: Current monitoring plans do not include a monitoring program for aquatic invasive species.

There is a risk of introducing aquatic invasive species through hull contamination from ships coming from Quebec. The Shipping Management Plan requires the shipping companies contracted to supply the mine through the annual sea-lift operations to comply with the Ballast Water Regulations, which reduces the risk of invasive species being introduced as a result of shipping activities, but does not eliminate this risk so that monitoring for the occurrence of aquatic invasive species is required to confirm this. There is a greater risk of invasive species establishment due to Meadowbank shipping activities since vessels are travelling from freshwater (Quebec) to freshwater (Baker Lake).

**Conclusion/Request:** Proponent to consider a Non-Indigenous Species/Aquatic Invasive Species Monitoring Program around zones of higher risk (Baker Lake).

Proponent to provide specific monitoring and mitigation measures that are being conducted, including but not limited to any ballast water treatment, monitoring for aquatic invasive species (eDNA, hull, and ballast water sampling), any hull clean-up and maintenance protocols, etc.

***Agnico Eagle's Response:*** *As per Agnico Eagle's response to DFO's comment on the 2023 Annual Report, Agnico Eagle contracts Transport Canada certified shipping companies that are using standard and acceptable practices common for all vessels in the Canadian Arctic, complying with the requirements and shipping regulations related to the concerns DFO has expressed, including Project Certificate Terms and Conditions, the Shipping Act, and the Ballast Water Regulations. Agnico Eagle feels this issue is resolved.*

*The shipping companies (Groupe Desgagnés Inc. and Woodward Group and Companies – Coastal Shipping Ltd.) servicing the Meadowbank Complex have confirmed that both monitoring and mitigation measures for aquatic invasive species is currently being done. Ballast water treatment is conducted by all contracted vessels, with procedures and systems complying with the D2 requirements indicated under the International Maritime Organization's Ballast Water Management Convention.*

*Groupe Desgagnés Inc. has indicated that monitoring and mitigation for aquatic invasive species is done through monthly visual hull inspection and underwater surveys, hull clean-up and maintenance protocols when indicated by underwater survey, and annual ballast water sampling. Desgagnés is*

*currently engaged in a ballast water treatment systems efficiency study with Transport Canada until 2027.*

*Woodward Group and Companies – Coastal Shipping Ltd. has indicated that monitoring and mitigation for aquatic invasive species is done through coating vessel hulls with approved antifouling coatings and cleaning of hulls at dry dockings as required.*

*Both Desgagnés and Woodward are Green Marine certified and as of 2024 have achieved the top ranking of Level 5 in the Aquatic Invasive Species category. The objective of this category is to “Reduce the risk of introducing and propagating aquatic invasive organisms and pathogens associated with ballast water discharges and biofouling.”. A Level 5 ranking indicates that both companies exhibit “excellence and leadership” in this category.*

## **2.6 Underwater Noise**

**References:** Shipping Management Plan (Version 5)

**Comment:** Gap/Issue: Underwater noise from shipping vessels has the potential to elicit disturbance effects on marine mammals by reducing their ability to travel, communicate, and find food.

During the 2024 shipping season, 16 vessel trips served the project. We currently do not know what noise level and characteristic is produced by those shipping vessels and the potential impact on marine mammals.

The FEIS predicted the residual environmental effect of a change in marine mammal behaviour as a result of Project vessel noise was considered to be low in magnitude, however the likelihood of behavioural disturbance from Project related vessel noise was considered likely. However there is no monitoring of noise levels to help understand and mitigate these effects.

**Conclusion/Request:** Proponent to provide any data or modeling work to date by the Proponent or the shipping company. DFO to work with the Proponent to monitor and model their noise footprint using expert support. This model should aim at evaluating the impact of shipping noise on marine mammals present on the shipping route. A Shipping Management Plan should be updated according to the model.

**Agnico Eagle’s Response:** *As per Agnico Eagle’s response to DFO’s comment on the 2023 Annual Report, Agnico Eagle has noted that discussion has formerly been initiated between Agnico Eagle and DFO on the topic of underwater noise monitoring. Agnico Eagle is willing to participate in a committee led by DFO and including all relevant stakeholders involved with shipping activities in Nunavut.*

As mentioned above, both Desgagnés and Woodward are Green Marine certified and as of 2024 have achieved a ranking of Level 5 and Level 3 respectively in the Underwater Noise category. The objective of this category is to “Reduce underwater noise made by ship operations to reduce impacts to marine mammals.”. A Level 5 ranking indicates that Desgagnés exhibits “excellence and leadership” and Woodward exhibits “integrated management and quantified impacts”.

## 2.7 Updated DFO Regions & Contacts for Emergency Response

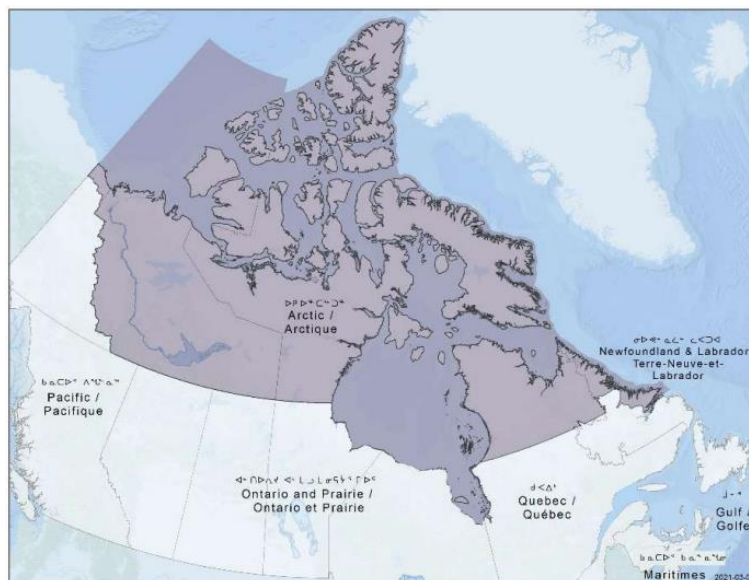
**References:** Appendix 25: Meadowbank OPEP and OPPP Version 18

**Comment:** Gap/Issue: The Department of Fisheries and Oceans separated the Central and Arctic Region in April of 2024.

**Conclusion/Request:** Proponent to update the information in Appendix 25 with new DFO Arctic Region information and contact list for environmental emergency response.

- DFO Arctic Environmental Incident Coordinator  
[dfo.arcenvincident-incidentenvarc.mpo@dfo-mpo.gc.ca](mailto:dfo.arcenvincident-incidentenvarc.mpo@dfo-mpo.gc.ca)

E.g., Replacing Figure 1-1 with updated DFO regions. Example figure shown below.



DFO to work with the Proponent to ensure all necessary changes and updates are made, and provide a contact list for marine environmental emergencies.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges DFO's recommendation and will consider including an updated figure of DFO regions and contact information in the next version of the Meadowbank OPEP/OPPP. Agnico Eagle looks forward to receiving further information from DFO regarding this recommendation.*

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

#### **3.1 Closure Planning**

**References:** 2024 Annual Report: Section 9; NIRB Project Certificate No. 004, Amendment No. 003: Term & Condition 78, 79, and 80; NIRB Project Certificate No. 008, Amendment No. 001: Term & Condition 7 and 13.

**Background/Rationale:** 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:

- Freeze-back and capping thickness;
- Progressive reclamation;
- Results of thermistor measurements for tailings and waste rock storage facilities (WRSF);
- Meadowbank water treatment requirements;
- Meadowbank WRSF seepage quality;
- Meadowbank post-closure in-pit water quality;
- Meadowbank in-pit tailings covers;
- Thermal performance of Meadowbank WRSF covers; and
- Whale Tail Project post-closure water quality.

These questions and comments have been submitted in prior annual report reviews conducted by CIRNAC and are pending resolution, as summarized in Table A.

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).

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.

**Recommendation 1:** 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.

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

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

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

*In addition, the NWB has jurisdiction over waters and waste in Nunavut: this means that it is the regulatory authority in Nunavut with specialized expertise over closure matters, per the Nunavut Waters and Nunavut Surface Rights Tribunal Act. Approval of closure plans is not an environmental assessment matter and is a post project approval matter.*

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

### **3.2 Approval of Major Project Changes and Revised Management Plans**

**References:** 2024 Annual Report; All Management Plans.

**Background/Rationale:** 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:

1. Permanently storing contaminated water in the Vault Pit instead of treating and discharging it to the environment; and
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.

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.

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:

“Plan(s) will be considered approved unless a notification from the NWB requested the formal approval process.”

This implies that all changes presented in a revised Management Plan will automatically be classified as approved unless the Nunavut Water Board (NWB) requests that the plan undergo a formal approval process.

It is CIRNAC’s position that:

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;
2. Any Management Plans that are revised to reflect Major Project Changes must undergo a formal approval process by the NWB; and
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.

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.

**Recommendation 2:** 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.

**Agnico Eagle's Response:** *While the recommendation in this comment is directed to the NIRB, Agnico Eagle respectfully disagrees with CIRNAC's position that a major unauthorized change has not undergone the appropriate reviews; nor has there been "significant project changes".*

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

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

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

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

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

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

### **3.3 Water Quality Predictions of Unapproved Activities**

**References:** 2024 Annual Report: Section 4.4; Appendix 13; Appendix 14

**Background/Rationale:** 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.

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 project that have the potential to cause impacts in the future. This is contrary to the objective of the Annual Reporting process.

**Recommendation 3:** 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.

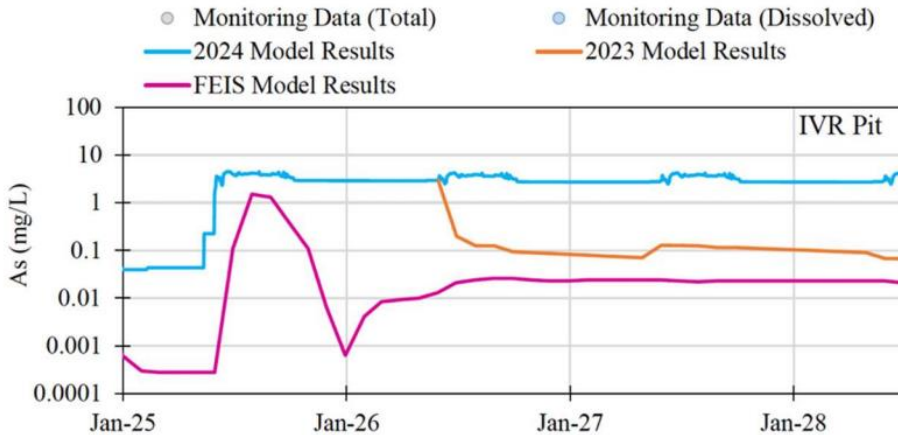
***Agnico Eagle's Response:*** *Agnico Eagle respectfully disagrees with CIRNAC's position that a major unauthorized change has not undergone the appropriate reviews. As noted above, the Vault distribution line has been approved, and the updated TSF cover design is currently in review with CIRNAC and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

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

### **3.4 Model Prediction Accuracy and Decision Making**

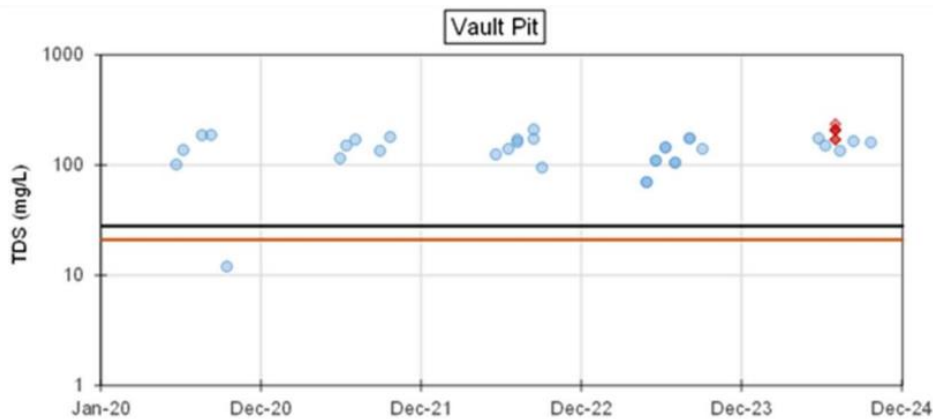
**References:** 2024 Annual Report: All sections; Appendix 13; Appendix 14

**Background/Rationale:** CIRNAC draws attention to the following three example figures:



**Figure 6-1 from Appendix 14 (Whale Tail Site)**

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.



**Figure 10 from 2024 Annual Report (Meadowbank Site)**

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.

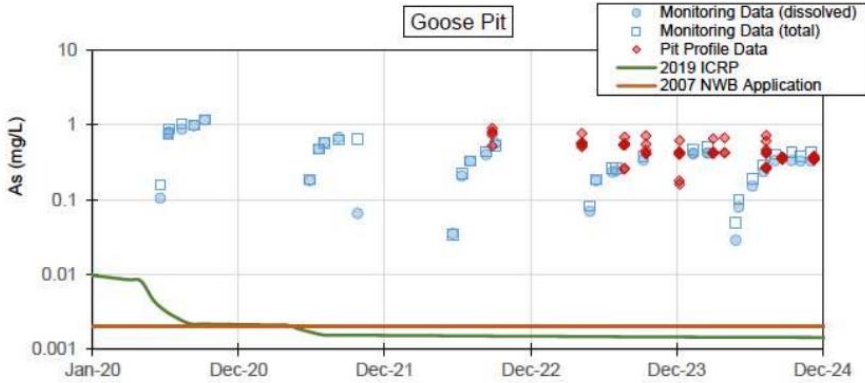


Figure 11 from the 2024 Annual Report (Meadowbank Site)

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.

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.

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:

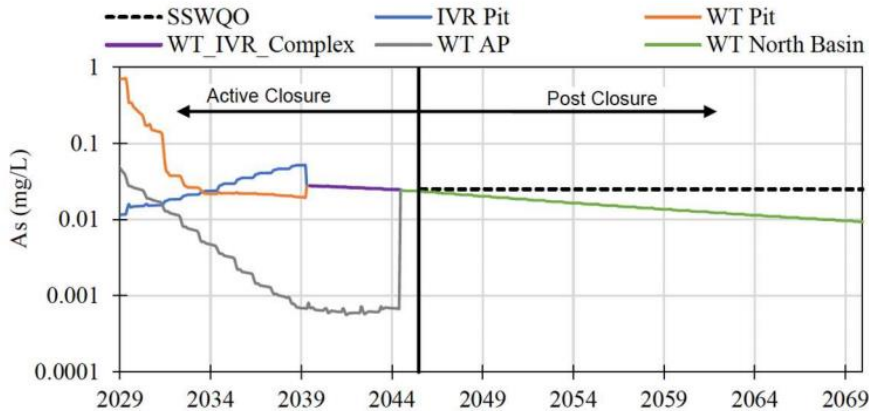
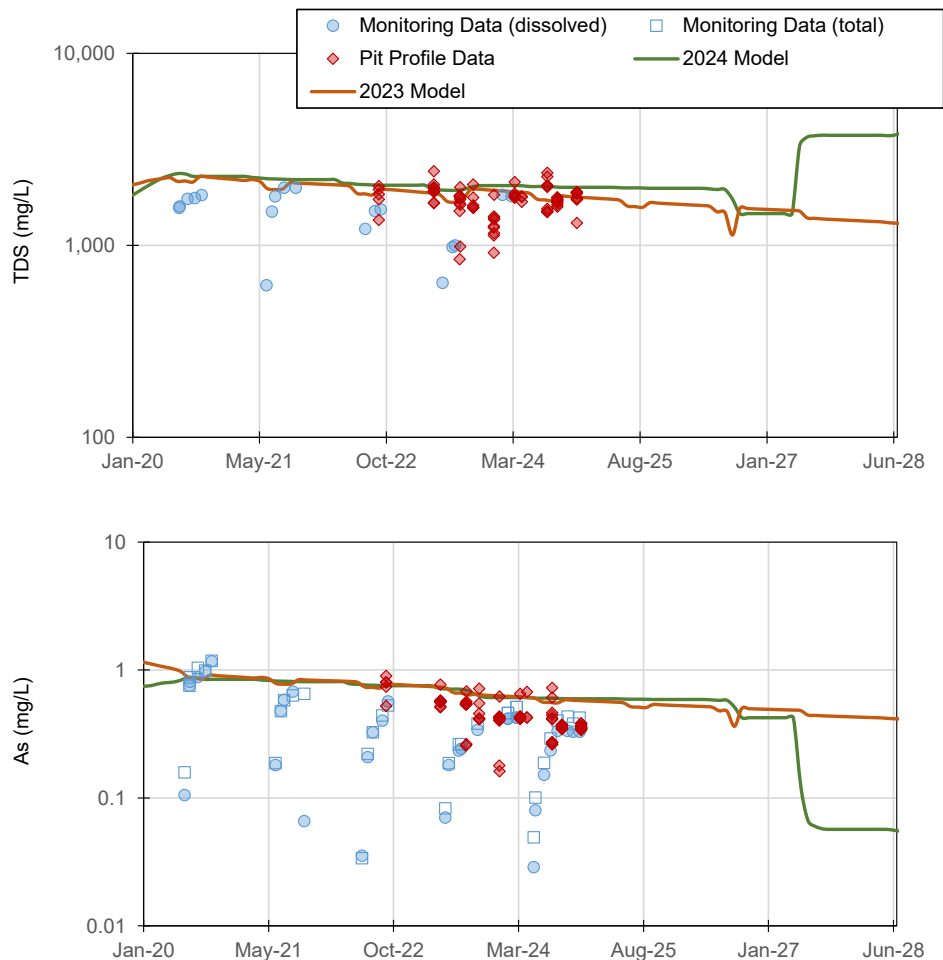


Figure 6-4 from Appendix 14 of the 2024 Annual Report

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.

**Recommendation 4:** 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.

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



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

*Differences between model iterations are also explained by source term updates through laboratory testing and model calibration to site monitoring data. Agnico Eagle progressively investigates opportunities for model improvements via model verification and calibration exercises each year. These exercises provide an opportunity to verify model results with monitoring data and calibrate model components where necessary. It is Agnico Eagle's opinion that there is greater benefit to taking this approach, whereby the model is iteratively validated and updated based on real world data, then by running a broad range of 'what if' sensitivity analyses.*

*Regarding Figure 6-4, the ICRP states that active closure period is defined by the period until which water quality in Whale Tail North Basin meet CCME or SSWQO guidelines. In this case, the*

*parameter of concern is arsenic, and the guideline is a SSWQO of 0.025 mg/L for total arsenic. This is the criteria for defining when post-closure period begins. Post-closure period cannot begin unless all parameters meet CCME or SSWQO guidelines, including arsenic. As noted above, Agnico Eagle disagrees with the conclusion of the degree of uncertainty in model predictions. Regardless, if SSWQO for arsenic are not met, Agnico Eagle will continue with active closure water management practices.*

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

### **3.5 Duration of Modelling Predictions**

**References:** 2024 Annual Report: All sections; Appendix 13; Appendix 14

**Background/Rationale:** 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.

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 postclosure phase.

**Recommendation 5:** 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.

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

### 3.6 Waterline to Vault

**References:** 2024 Annual Report; Appendix 13 Meadowbank Water Management Plan, V14; NWB Letter to AEM, dated March 25, 2025, RE: Water Licence No: 2AM-MEA1530; Meadowbank Mine Vault Distribution Line. Available at: [https://public.nwb-oen.ca/registry/2 MINING MILLING/2A/2AM - Mining/2AM-MEA1530 Agnico/3 TECH/D CONSTRUCTION/2025/](https://public.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20Mining/2AM-MEA1530%20Agnico/3%20TECH/D%20CONSTRUCTION/2025/)

**Background/Rationale:** 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.

CIRNAC has the following concerns regarding the transfer of contact water to the Vault Pit using a new pipeline:

1. **Closure Activity:** 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.

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 approve or implement the transfer of contact water to the Vault Pit using a new pipeline.

2. **Impact Assessment:** 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.

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:

*“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.”*

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:

*“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.”*

CIRNAC notes the following for consideration:

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 sufficiently protect valued ecosystemic components.
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.

**Recommendation 6:** CIRNAC recommends that:

- a) AEM defer from implementing any newly proposed closure related activities until the full CRP has been finalized, assessed and approved.
- 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.

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

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

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

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

- *The key component of the strategy remains the same: flooding the open pit mines at closure.*
- *Water is being treated, whether via active treatment, in-situ/aeration method, or some combination.*
- *Treated water would be discharged to the environment, albeit much lower volumes and loadings.*

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

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

*It is inappropriate to make a comparison to the Meliadine Waterline file and associated NIRB process. While the objectives are the same, to move water, the undertakings and technical details are not. The Meliadine waterline application was to convey treated saline effluent for discharge*

*directly to the marine environment. The Vault distribution line is moving water around site between exhausted pits.*

### **3.7 Meromixis Stability in Vault Pit**

**References:** 2024 Annual Report; Appendix 13

**Background/Rationale:** 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.

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:

- a) A detailed rationale for rejecting the previously proposed water management strategy for the Meadowbank pits.
- b) Hydrodynamic and geochemical modelling to assess stratification stability, contaminant migration, and the long-term maintenance of meromixis within the Vault Pit.
- c) Hydrogeological and permafrost studies to evaluate groundwater seepage risks within the Vault Pit.
- d) An assessment of potential failure modes that could destabilize meromixis (e.g., extreme storm events, thermal extremes, subaqueous pit wall failures).
- e) Demonstrate that the proposed 15 m depth of freshwater cover in the flooded Vault Pit is sufficient to protect aquatic life.
- f) Confirmation that the flooded Vault Pit Lake will become an aquatic habitat that protects aquatic life after connection to Wally Lake.

- 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).

**Recommendation 7:** 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.

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

### **3.8 Water Treatment of Reclaim Water**

**References:** 2024 Annual Report: Section 4.4.3.1; Appendix 13: Section 3.2

**Background/Rationale:** 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 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.

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.

**Recommendation 8:** CIRNAC recommends that AEM:

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

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

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

### **3.9 Recontamination of Goose and Portage Pit Lakes**

**References:** 2024 Annual Report: Section 4.4.2, 4.4.3; Appendix 13; Appendix 14

**Background/Rationale:** 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.

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.

**Recommendation 9:** CIRNAC recommends that AEM:

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

**Agnico Eagle's Response:** *A Human Health and Ecological Risk Assessment (HHERA) was prepared to support the CRP. The objective of the HHERA was to evaluate the potential risks to human health and the environment from the historical operation and remediation of the Site. The HHERA included evaluation of ecological risks (including aquatic life) to future water quality in the pits. There were no parameters of potential concern (POPCs) identified in Vault Pit. Thus a 15 m depth of freshwater is sufficient to protect aquatic life.*

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

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

### **3.10 Meadowbank TSF Cover Design**

**References:** 2024 Annual Report: Section 9.1.1; Appendix 13: Appendix C

**Background/Rationale:** 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.

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.

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.

**Recommendation 10:** CIRNAC recommends that AEM:

- 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
- 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.

***Agnico Eagle's Response:*** *The WBWQM is not based on the 2-meter thick cover but instead based on the hybrid isolation/thermal cover design (TSF cover) from Okane. Okane developed a contaminant transport model for the cover, which was incorporated into the WBWQM. This cover consists of varying cover thicknesses, from a minimum 1 meter to a maximum of 6 metres, which has been presented to CIRNAC in Ottawa on May 8-9, 2025. Progressive reclamation of the TSF is in progress as NPAG material becomes available. At this stage, progressive reclamation is indistinguishable whether the final design is a 2-meter cover or the hybrid isolation/thermal cover.*

### **3.11 Groundwater Migration of TSF Reclaim Water**

**References:** 2024 Annual Report: Section 8.7.1; Appendix 35

**Background/Rationale:** 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 to samples collected from TSF surface water and dike seepage.

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 minedout 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.

**Recommendation 11:** CIRNAC recommends that AEM:

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

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

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

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

- c) *At closure thermal modelling undertaken by SNC indicates that the groundwater pathway from the TSF through the overburden is frozen and the groundwater pathway needs to flow down and beneath a 300 m deep permafrost bulb to TPL. Darcy's law was used to estimate the potential*

*inflow of reclaim water into the groundwater system. The hydraulic conductivity of the bedrock was conservatively estimated to range between  $1.8 \times 10^{-8}$  m/s and  $2.7 \times 10^{-8}$  m/s. The estimated groundwater flux from the approximate 1,000 m by 900 m area of the TSF along an approximately 1,500 m flow path ranges between 1,500 to 2,250 m<sup>3</sup>/year. Thermal modelling predicts that after closure the overburden between the TSF and the pit lake will become unfrozen, resulting in a shorter groundwater flow path for the reclaim water. At the Central Dike (CD) a liner is tied into the grout curtain through the weathered bedrock. This results in the groundwater flowing beneath the liner and grout curtain to discharge through the pit lake. In addition, as discussed above, the water level in the TSF and the gradual freezing of the TSF will reduce the water level difference between the TSF and the pit lake. The area of groundwater flow through the overburden is smaller than these area of flow at closure (i.e., approximate thickness of the overburden 30 m by 900 m width of the tailings). The combination of these factors (even if the water level in the TSF is assumed to remain the same) is predicted to result in a discharge of reclaimed water to less than predicted at closure (ranging from about 350 m<sup>3</sup>/year to 500 m<sup>3</sup>/year).*

*It is noted the available groundwater quality at CD monitoring well MW-16-01, located west and downgradient of the TSF currently meets the Third Portage Effluent Discharge Limits of the Meadowbank Water Licence No. 2AM-MEA1530. Hydrogeologic model results (SNCL 2018) indicate the freshwater runoff input to Pit A is 900,000 m<sup>3</sup>/year. The amount of TSF reclaim water input to the groundwater system that will eventually be discharged to SPL is estimated to be small (less than 0.25% contribution right after closure and 0.06% contribution once the overburden becomes thawed between the CD and the pit lake, which is equivalent to a dilution factor of 400 to 1,800, respectively) compared to surface water runoff and are deemed acceptable; therefore, TSF mitigation is not considered required.*

*In addition, hydrogeologic model results (SNLC 2018) indicate groundwater seepage volume to Pit A is 43 m<sup>3</sup>/year, while the freshwater runoff input to the lake 900,000 m<sup>3</sup>/year. The estimated TSF reclaim water input to the groundwater system that will eventually be discharged to SPL is negligible (0.05% contribution or a dilution factor of 21,000) compared to surface water runoff and are deemed acceptable; therefore, TSF mitigation is not considered required.*

**Reference:**

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

### 3.12 Workforce Data

**References:** 2024 Annual Report, Section 11.10.3.1; Appendix 47. Kivalliq Projects 2024 Socio-Economic Monitoring Program Report, Section 1

**Background/Rationale:** 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.

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.” 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.”

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 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.

**Recommendation 12:** 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.

**Agnico Eagle’s Response:** *Agnico Eagle agrees with CIRNAC’s recommendation and acknowledges that the workforce data presentation in Section 11.10.3.1 of our 2024 Annual Report could be clearer and may cause confusion regarding the breakdown of Inuit and non-Inuit Full-Time Equivalents (FTEs). Moving forward, Agnico Eagle will ensure that future Annual Report submissions clearly present workforce data with distinct categories showing:*

- **Agnico Eagle Employees:** Total FTEs, Inuit FTEs, and Non-Inuit FTEs
- **Contractors:** Total FTEs, Inuit FTEs, and Non-Inuit FTEs

*Section 1 (page 9) of Appendix 47 - Kivalliq Projects 2024 Socio-Economic Monitoring Program Report, presents this workforce data in a more succinct and clearer format, which we will use as a model for improving the clarity of future Annual Report presentations.*

### **3.13 Cultural Awareness Training**

**References:** NIRB Project Certificate No. 008 Amendment 1, T&C 59; 2024 Annual Report, Section 11.10.3.2.3

**Background/Rationale:** T&C 59 of NIRB Project Certificate No. 008, Amendment 1 for the Whale Tail Project states:

*“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:*

- *Descriptions of the goals of each program offered;*
- *Language of instruction;*
- *Schedules and location(s) of when each program was offered;*
- *Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and*
- *Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates.”*

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&C 59 of the Whale Tail Project Certificate. An effort should be made to address these points in future Annual Monitoring Report submissions.

**Recommendation 13:** CIRNAC recommends that Agnico Eagle ensure future Annual Monitoring report submissions include details on how it is addressing the specific items identified in T&C 59 of NIRB Project Certificate No. 008, Amendment 2, which concern cross-cultural training initiatives. These are:

- a) Descriptions of the goals of each program offered;
- b) Language of instruction;
- c) Schedules and location(s) of when each program was offered;
- d) Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and

- e) Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates.

***Agnico Eagle's Response:*** *Agnico Eagle agrees with CIRNAC's recommendation and acknowledges that the Meadowbank Complex 2024 Annual Report, while providing an overview of Cultural Awareness course activities, did not include the specific details required under T&C 59 of NIRB Project Certificate No. 008, Amendment 1 for the Whale Tail Project. Agnico Eagle recognizes the importance of comprehensive reporting on our cross-cultural training initiatives developed in collaboration with the Kivalliq Inuit Association, as these programs are essential for promoting respect and consideration for Inuit Qaujimagatuqangit among all project personnel. Moving forward, Agnico Eagle will ensure that future Annual Monitoring Report submissions include detailed reporting on all specific items identified in T&C 59.*

## **4 Kivalliq Inuit Association (KivIA)**

### **4.1 Tailings and Waste Management Alternatives**

**Term & Condition #:** 18, 62, 63, 65, 78, 80

**Terms and Conditions Project Certificate 004 Amendment 3:** Review tailings and waste management alternatives including climate change, conduct gap analysis to determine deficiencies required for engineering and construction of dikes, and other Terms and Conditions related to Tailings management at closure

**Compliance with the Project:** In Progress

**Additional Comments:** The KivIA is currently reviewing and discussing with AEM, AEM's consultants, CIRNAC and NRCAN potential changes to the design of the Tailings Storage Facilities originally documented in Project Certificate 004 in light of changes to impacts of climate variability and mine operations. The KivIA recommends that these discussions continue and that any changes to the TSF design incorporates KivIA feedback and addresses KivIA concerns.

***Agnico Eagle's Response:*** *Agnico Eagle appreciates the continued discussion with the KivIA on the key components of the site and look forward to the ongoing dialog and collaboration as the CRP for the Meadowbank Complex is advanced.*

### **4.2 Tailings Cover**

**Term & Condition #:** 19

**Terms and Conditions Project Certificate 004 Amendment 3:** Cumberland shall provide a minimum of two (2) meters cover of tailings at closure, and shall install thermistor cables, temperature loggers, and core sampling technology as required to monitor tailings freezeback efficiency. Cumberland shall report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.

**Compliance with the Project:** In Progress

**Additional Comments:** The KivIA recommends that the 2m cover required in the Project Certificate be incorporated into any amended TSF design. The KivIA also recommends that any alterations to the TSF design be supported by adequate monitoring data to ensure the tailings are preserved and the receiving environment is protected in perpetuity.

The KivIA would like to ensure Agnico Eagle provides all monitoring data to the relevant intervenors such that an informed decision-making process can take place.

***Agnico Eagle's Response:*** *Agnico Eagle appreciates the continued discussion with the KivIA on the key components of the site, particularly the TSF cover. Ongoing discussions on the TSF cover will continue through meetings with KivIA and CIRNAC, which includes details on monitoring. Annual monitoring of the TSF is provided through the Thermal Monitoring Report in the annual reports.*

#### **4.3 Terrestrial Ecosystem Management Plan**

**Term & Condition #:** 54

**Terms and Conditions Project Certificate 004 Amendment 3:** Cumberland shall provide an updated Terrestrial Ecosystem Management Plan, to the GN, EC and INAC, within three (3) months of the issuance of the Project Certificate including [seven specific provisions (a) to (g)]:

**Compliance with the Project:** Yes

**Additional Comments:** The TEMP has been periodically updated and while TEMP 7 was applied for 2024 monitoring, the KivIA appreciates Agnico Eagle's collaboration with the TAG in 2024 to complete TEMP version 9 (provided to NIRB in 2025).

***Agnico Eagle's Response:*** *Agnico Eagle acknowledges and appreciates the KivIA's comment regarding collaboration with the TAG in 2024 to complete the TEMP version 9.*

#### **4.4 Caribou Observations**

**Term & Condition #:** 54d

**Terms and Conditions Project Certificate 004 Amendment 3:** (d) A detailed analysis of the method of distinguishing between cow/calf groups from other caribou group observations;

**Compliance with the Project:** In Progress

**Additional Comments:** The 2024 Annual Report (Section 8.18.2) does not mention T&C 54 (d) but it is relevant to distinguish cow/calf groups. Cow/calf groups are not distinguished from other groups in the reporting of for example road surveys, caribou behavior and the remote cameras (Appendix 39; Sections 3.8, and 17). Cow/calf groups are usually more responsive and also are likely to lead migrations.

**Recommendation:** The KivIA requests that Agnico Eagle summarize distinguishing cow/calf groups from other groups for all seasons and to apply it to recording caribou observations.

**Agnico Eagle's Response:** *Agnico Eagle will look into improving observations for distinguishing cow/calf groups from other groups in future caribou observations.*

#### **4.5 Hunter Harvest Survey**

**Term & Condition #:** 54e

**Terms and Conditions Project Certificate 004 Amendment 3:** Details of a comprehensive hunter harvest survey to determine the effect on ungulate populations resulting from increased human access caused by the all-weather private access road, including establishing preconstruction baseline harvesting data, to be developed in consultation with local HTOs, the GN-DOE and the Nunavut Wildlife Management Board.

**Compliance with the Project:** In Progress

**Additional Comments:** Agnico Eagle (Section 8.18.2) updated information (Appendix 39; Section 19). The Harvest study's impact prediction is that the AWAR will not significantly change the spatial distribution, seasonal pattern, or harvest levels of caribou. The 2024 results confirm a change in the spatial distribution as the caribou harvest increased along the AWAR compared to before construction (Appendix 39; Section 10.0 Hunter Harvest Study Table 10.1; Appendix F. Part 2, p. 4.32). Prior to construction, between 1996 and 2001, 18% of caribou harvested were within 5 km of the AWAR's future route compared to the 2024 harvest (48%). Appendix F does not have descriptive statistics but the increase can be calculated as 39% (1.4 Standard Error). The stated only threshold is for the RSA: that changes will not exceed 20% of historical harvest activities within the RSA. The 2024 Annual Report states that the RSA threshold was not exceeded although it does not provide any details about how the threshold is calculated. Although Table 10.1 specifies that the RSA threshold was not exceeded, the table does specify "Future discussion with HTO and GN representatives required to identify management options".

**Recommendation:** The KivIA requests that Agnico Eagle describe how the 20% threshold for the RSA is calculated and how a threshold for the harvest within 5km of the AWAR will be determined.

***Agnico Eagle's Response:*** *When the Caribou harvest threshold was established during the permitting process, the primary concern was potential Caribou population-level effects. Harvest levels within 5 km of the AWAR were expected to increase due to improved harvest access for hunters; however, these local effects were of lesser concern than the regional effects, which could best be monitored within the Regional Study Area (RSA). It was for this reason that a 20% threshold in the RSA was chosen.*

*Prior to the Meadowbank development (i.e., 1996 to 2001); NWMB 2004, percent harvest by Baker Lake hunters within the RSA was 67% (Table 5.1 of Appendix F in Appendix 39 of the 2024 Annual Report); therefore, a 20% threshold ranged of 87% was established (Figure 5.2 of Appendix F in Appendix 39 of the 2024 Annual Report). To date, this 87% harvest level within the RSA has not been exceeded indicating that many Baker Lake hunters still consistently hunt well away from the Meadowbank AWAR and mine.*

*A threshold for harvest within the 5 km of the AWAR was not required under the Meadowbank permit and is not warranted given the primary concern being population-level effects on Caribou.*

## 4.6 Wildlife Summary Monitoring Report

**Term & Condition #:** 55

**Terms and Conditions Project Certificate 004 Amendment 3:** Annual Wildlife Summary Monitoring Report

**Compliance with the Project:** Yes

**Additional Comments:** 2024 is the 19<sup>th</sup> annual report for the Meadowbank Project.

**Recommendation:** For the 20th Annual Report, the KivIA recommends that it would be useful to summarize how Agnico Eagle and TAG have adapted monitoring to changing knowledge of caribou responses, mine operations and environmental conditions. The summary would be useful for future environmental assessments to minimize 're-inventing the wheel'; it would be useful for considering on-going monitoring programs at other mines and it would be in keeping with Project Certificate 008 T&C 11.

***Agnico Eagle's Response:*** *Agnico Eagle is open to looking into ways to summarize how Agnico Eagle and the TAG have adapted monitoring to changing knowledge of caribou responses, mine operations and environmental conditions and would like to discuss this recommendation further with the KivIA.*

## 4.7 Caribou Migration Corridors

**Term & Condition #:** 56

**Terms and Conditions Project Certificate 004 Amendment 3:** Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KIA and NIRB's Monitoring Officer annually

**Compliance with the Project:** In Progress

**Additional Comments:** Agnico Eagle (Section 18.8.3) updated information (Appendix 39) notes, "to initiate migratory corridor consultation discussions in 2025."

**Recommendation:** The KiviA requests that Agnico Eagle ensures that draft maps of migration corridors from the collared caribou should be discussed with the Elders especially in the context of changing patterns over time. The Elders' knowledge should be included on the mapped migration corridors.

**Agnico Eagle's Response:** *Discussions with the Kivalliq Elders Advisory Committee are planned in 2025 to discuss typical caribou migration routes and corridors, including a review of recent year collared data. Outcomes of the discussion will be added in the 2025 Wildlife Monitoring Summary Report, included in the 2025 Meadowbank Complex Annual Report.*

## 4.8 Lighting

**Term & Condition #:** 58

**Terms and Conditions Project Certificate 004 Amendment 3:** In consultation with Elders and the HTOs and subject to safety requirements, design the lighting and use of lights at the mine site to minimize the disturbance of lights on sensitive wildlife and birds.

**Compliance with the Project:** No

**Additional Comments:** Agnico Eagle (Section 18.8.3) does not specifically mention whether and how consultations contributed to mitigating impact of lights. Meadowbank and Whale Tail sites are visible from space at night which raises questions about the disturbance of lights.

**Recommendation:** The KiviA requests that Agnico Eagle summarize the discussions with the Elders about lighting to minimize disturbance to sensitive wildlife.

***Agnico Eagle's Response:*** As per Agnico Eagle's response to KivIA's comment on the 2023 Annual Report, Lighting and use of lights are required for human safety. Light mitigation includes directing lighting downward where it does not affect human safety. Agnico Eagle continues to use motion activated light controls at the Mine site so that light is not emitted when rooms are empty of people. It should be noted that most bird species are present during spring and summer when nighttime is minimized and the need for lighting is less. Monitoring of lighting and light use is not a requirement of T&C 58.

#### **4.9 Caribou Deterrence at the TSF**

**Term & Condition #:** 59

**Terms and Conditions Project Certificate 004 Amendment 3:** In consultation with Elders and the HTOs, design and implement means of deterring caribou from the tailing ponds, such as temporary ribbon placement or Inukshuks, with such designs not to include the use of fencing

**Compliance with the Project:** No

**Additional Comments:** In 2024, construction activity in the vicinity of the tailings storage was thought to have deterred caribou (Annual Report Section 8.18.11) and there is no mention of ribbons or inukshuks or reference to an earlier report. In 2024, the TAG has been involved with discussions about the roadside flags disturbing migrating caribou which may be relevant to T&C 60.

**Recommendation:** The KivIA requests that Agnico Eagle confirm whether discussions were held about the use of ribbons or inukshuks and whether a summary report is available and whether the ribbons or inukshuks were tested.

***Agnico Eagle's Response:*** Agnico Eagle can confirm that discussions regarding the use of ribbons or inukshuks for caribou deterrence were had in the past, but a summary report is not available. Agnico Eagle would like to work with the KivIA and Baker Lake HTO to ensure compliance with the Term and Condition.

#### **4.10 Stop Work Policy**

**Term & Condition #:** 60

**Terms and Conditions Project Certificate 004 Amendment 3:** Whenever practical, Cumberland shall implement a stop work policy when wildlife in the area may be endangered by the work being carried out.

**Compliance with the Project:** In Progress

**Additional Comments:** Agnico Eagle (Section 8.18.9) includes road closures and road monitoring in response to this T&C. The scale of caribou exposure in 2024 to the AWAR and WTHR is high: a total of 56,168 caribou sightings (Appendix 39, Section 3.6). Implementing this T&C for an operational mine is taxing as the AWAR was closed for 40 days (24 hours) and WTHR for 22 days (Appendix 39; Section 3.6.6.). The KivIA appreciates Agnico Eagle's work with the TAG for enhanced protocols for the spring and fall migration (2024 Annual Report Section 2.1).

**Agnico Eagle's Response:** *Agnico Eagle acknowledges and appreciated the KivIA comment regarding work done with the TAG for enhanced protocols for the 2024 spring and fall caribou migration.*

#### **4.11 Helicopter Flight Altitudes**

**Term & Condition #:** 61

**Terms and Conditions Project Certificate 004 Amendment 3:** In consultation with EC, Cumberland shall incorporate into the Terrestrial Ecosystem Management Plan and the Air Traffic Management Plan a commitment for aircraft to maintain (whenever possible) a cruising altitude of at least 610 metres during point to point travel when in areas likely to have migratory birds, and 1000 metres vertical and 1500 metres horizontal distance from observed concentrations of migratory birds, and use flight corridors to avoid areas of significant wildlife importance

**Compliance with the Project:** In Progress

**Additional Comments:** Agnico Eagle monitors helicopter flight paths and their altitudes in detail (Appendix 39 Section 4.5.9). In 2024, helicopter flight paths below 562m altitude and within 2000m co-occurred on 14 occasions for muskoxen and 11 for caribou during summer and late spring. Behavioral responses were not described.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges KivIA's comment.*

#### **4.12 Blasting Program**

**Term & Condition #:** 85

**Terms and Conditions Project Certificate 004 Amendment 3:** Develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs.

**Compliance with the Project:** In Progress

**Additional Comments:** In 2024, 41 small groups of caribou were recorded during 203 preblast surveys over 176 days at Whale Tail mine (Appendix 39; Section 9.5.2.2; Figure 9.1). Although there were 224 blasts at Whale Tail and IVR pits, the behavior of only three caribou groups was recorded.

**Recommendation:** The KivIA does not agree with Agnico Eagle's recommendation to either conclude that the blasting does not impact caribou or that the threshold for suspending blasting should be reduced from 3 km. Although the opportunities to record the behavioral responses appear to be rare, sample size is inadequate to modify efforts given the strength of Inuit concerns over blasting and caribou.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges this recommendation and will continue with behaviour monitoring during pre-blast surveys in an attempt to collect additional data and increase sample size.*

#### **4.13 Impact Predictions**

##### **Term & Condition #: 11**

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall maintain the Environmental Impact Statement and the environmental monitoring programs developed for the Project, with predictions updated as new baseline data is collected. If the results of monitoring programs necessitate updates to effects predictions, the Proponent shall update the associated management programs and plans as required to address or reflect the updated assessment of effects.

**Compliance with the Project:** In Progress

**Additional Comments:** T&C 11 and Project Certificate No. 004's Appendix D (the Post-Environmental Assessment Monitoring Program (PEAMP) both require assessing and updating predicted effects and adaptive management based on monitoring data. The 2024 Annual Report (Section 12) describes PEAMP, but PEAMP is not referenced in Appendix 39 which has the detailed monitoring data to describe and interpret observed effects relative to predicted effects including the effectiveness of monitoring and mitigation. The Annual Report summarizes the effects predicted in 2005 and 2018 (Meadowbank and Whale Tail assessments). Sensory disturbance from mine activities was added as a primary pathway in 2018 (Annual Report Section 12; Table 12.2, 12.26). But in 2024, sensory disturbance and barriers to migration were removed as primary pathways (although monitoring will continue) because Agnico Eagle has not, itself, provided quantitative thresholds. The KivIA is concerned as now assessing the impacts of the Meadowbank Project are limited to habitat changes. The KivIA has previously and continues to request that behavior monitoring, movements monitoring and Inuit knowledge can provide quantitative thresholds which will allow assessment of project impacts.

**Recommendation:** The KivIA requests that Agnico Eagle draft options for quantitative thresholds for sensory disturbance and migration barriers for TAG review in 2025.

***Agnico Eagle's Response:*** *Agnico Eagle would like to clarify that sensory disturbance remains an identified primary effect pathway, and results of associated monitoring and management under the Caribou Management Decision Tree have been presented in the Wildlife Monitoring Summary Report since it came into practice in 2019. The line item was only removed from the PEAMP comparison in Table 12-9 in 2024, as further discussed below and to limit redundancy in reporting. Agnico Eagle will clarify this link in subsequent PEAMP reports.*

*More specifically, the intent of the PEAMP evaluation is to compare monitoring results with FEIS impact predictions. In the case of terrestrial wildlife, many impact predictions were qualitative only, so the PEAMP evaluation for terrestrial VCs (Table 12-9) compares monitoring results with TEMP thresholds. These thresholds are established triggers for management action that were originally developed at the project permitting stage, with updates since that time through approved TEMP revisions.*

*Prior to 2019, the TEMP threshold for sensory disturbance to wildlife was “no avoidance of habitat more than 500 m from site, or 1000 m from the AWAR”. This is the quantitative threshold at which implementation of supplemental mitigation measures (i.e. measures unspecified in the management plan, but beyond FEIS-assumed mitigation) would have been required to be assessed. A comparison of monitoring results to this TEMP threshold was provided PEAMP reports for each year through 2018.*

*In 2019, the Caribou Management Decision Tree replaced this monitoring threshold, as agreed in consultation with the TAG and an approved revision of the TEMP. Considered an improvement to the original single-value threshold, this decision tree in fact stipulates several layers of site-specific quantitative thresholds (numbers of caribou at various distances from the project, derived through GST calculation) and further, specifies the management action that will be implemented when each threshold is reached. Since the dataset is complex and the response to any given decision-tree threshold exceedance is established, the presentation of monitoring results in comparison to these thresholds has been restricted to the Wildlife Monitoring Summary Report since 2019, since it no longer fits the PEAMP intent.*

*Agnico Eagle will clarify text in the next PEAMP report to better explain this linkage.*

#### 4.14 Terrestrial Advisory Group Meeting Minutes

##### Term & Condition #: 27

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall participate in a Terrestrial Advisory Group with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization, the Kivalliq Inuit Association, and other parties as appropriate to continually review and refine mitigation and monitoring details within the Terrestrial Ecosystem Management Plan. Additional caribou collar data, results from associated studies, Inuit Qaujimagatuqangit shared by knowledge holders, and other monitoring data as available should be considered for incorporation as appropriate. Finalized Terms of Reference for the Terrestrial Advisory Group shall be provided to the NIRB within six (6) months of issuance of the Project Certificate. A summary of outcomes from Terrestrial Advisory Group meetings shall be provided to the NIRB on an annual basis in the Proponent's Annual Report....

**Compliance with the Project:** In Progress

**Additional Comments:** The KivIA appreciates Agnico Eagle's efforts to collaborate with the TAG in 2024 and especially appreciates the detailed minutes and the presentations that are circulated to TAG members. Agnico Eagle summarizes the TAG meetings in 2024 (Section 8.18.12.1) but does not include the presentations or minutes.

**Recommendation:** Agnico Eagle should specify where the complete minutes and presentations are archived and available as part of the public record for Meadowbank and Whale Tail. Project Certificate 008; Section 4.1; No. 12; p. 12/49 states: "The Proponent shall establish a publicly-accessible Project-specific web portal or web page to make available in a central location all significant non-confidential monitoring and reporting information submitted to regulatory authorities pursuant to the Project Certificate and other territorial or federal permits issued for the Project."

**Agnico Eagle's Response:** *Agnico Eagle acknowledges the KivIA's recommendation. Item 7.1 from the TAG Term of Reference, previously shared with the NIRB, indicates that:*

*7. Minutes of TAG Meetings*

*7.1. Agnico Eagle will provide a summary of activities and outcomes (of) official minutes of TAG meetings, as agreed to by all the Parties, to NIRB for release on the NIRB public registry.*

*Summaries of activities and outcomes of TAG meetings have been provided to the NIRB, however Agnico Eagle will discuss further with the TAG the best path forward for publicly sharing the minutes.*

#### **4.15 Terrestrial Ecosystem Management Plan**

**Term & Condition #:** 28

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall maintain a Terrestrial Ecosystem Management Plan (TEMP) throughout all phases of the Project. The Plan shall include detailed monitoring, mitigation, and adaptive management measures for wildlife, with consideration for each Project activity predicted to affect wildlife, and with inclusion of specific triggers for mitigation and adaptive management intervention. The TEMP shall demonstrate consideration for all relevant commitments made by the Proponent throughout the Nunavut Impact Review Board's review of the Project. Updates to the TEMP may be required when there are significant changes in project development plans, monitoring results indicating biologically-meaningful changes, significant updates to the scientific understanding of management methods relevant to wildlife at the project site, Inuit Qaujimagatunqangit, Traditional Knowledge, changes in climatic conditions that might subject wildlife to unexpected impacts, or as otherwise necessary.

**Compliance with the Project:** Yes

**Additional Comments:** See comments for Project Certificate 004, T&C 54. The KivIA notes that the TEMP 9.0 now includes detailed monitoring and innovative steps such as Let the Leaders Pass for spring migration and analyses to examine the timing of fall migration.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges and appreciates the KivIA's comment regarding inclusion of detailed monitoring and innovation steps within the TEMP version 9.*

#### **4.16 Caribou Collaring Data**

**Term & Condition #:** 29

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall, in collaboration with the Government of Nunavut, collect additional caribou collar data and conduct analyses of this data to quantify the zone of influence and associated effects of project components on caribou movement for a study area that includes the Whale Tail mine site, the haul road, the Meadowbank Gold Mine and its All-Weather Access Road. A summary of the analyses and associated effects shall be provided annually in the Proponent's annual report to the Nunavut Impact Review Board.

**Compliance with the Project:** In Progress

**Additional Comments:** The KivIA appreciates the maps showing seasonal movements by herd (Appendix 39; Section 6.2.1) as a step toward a more detailed analysis of the collared caribou relative quantifying the

Zone of Influence and caribou responses to project components. A previous GN-led study of caribou responses to WTHR was published in 2025 but is only for spring migration 2011-2019 and did not include traffic frequency (Boulanger et al. 2025).

**Recommendation:** Agnico Eagle should work with TAG to design an analysis to meet T&C 29.

***Agnico Eagle's Response:*** *Agnico Eagle believes that they are in compliance with T&C 29 as a result of previously completed studies. Agnico Eagle will work with the TAG to continue further analyses. Progress and results of any analyses related to this initiative will be provided in annual reports to NIRB.*

#### **4.17 Caribou Group Size Threshold**

**Term & Condition #:** 30

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall work with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization and the Kivalliq Inuit Association through the Terrestrial Advisory Group to develop and update thresholds to trigger implementation of mitigation measures on both the AWAR and Whale Tail Haul Road, up to and including temporary road closures. The Proponent shall consider how these thresholds and mitigation measures reflect caribou life cycle sensitivities as well as demonstrate how Inuit Qaujimajatuqangit was incorporated throughout the development of these criteria and procedures. The Proponent shall ensure the Terrestrial Ecosystem Management Plan is updated to reflect the thresholds agreed upon in accordance with the Terrestrial Advisory Group Terms of Reference, and that this Plan along with a summary of consultation with the Terrestrial Advisory Group are submitted on an annual basis or as thresholds are otherwise modified in the Proponent's annual report to the to the Nunavut Impact Review Board.

**Compliance with the Project:** In Progress

**Additional Comments:** In 2024, 82% (7,595 of 9,243 caribou) of observed crossing events occurred on dates with an AWAR closure. For WTHR, 96% (2,376 of 2,468 caribou) of observed crossing events were during 24-hour closure or partial closures. The trigger for road closures (Group Size Threshold) is the group size at, or above which, 75% of caribou observed interacting with road are expected to occur and is based on caribou groups between 250 and 1000m of the road (Appendix 39, Section 3.6.3.1) using the road monitoring to examine the relationship between group size and distance from the road during the different caribou seasons.

**Recommendation:** The KivIA requests that Agnico Eagle undertake analyses to describe group sizes relative to distance from the roads as an assessment of the group size threshold for road closure.

**Agnico Eagle's Response:** *The requirements identified in T&C #30 include working with the GN, BLHTO, KivIA, through the TAG to development update thresholds to trigger mitigation for the AWAR and Whale Tail Haul Road (WHTR) and include these updates in the TEMP. The caribou group size threshold (GST) was developed and recommended by the GN. Agnico Eagle has been using GSTs to implement road related mitigation since at least 2018 (Agnico Eagle 2018). The TAG subsequently agreed that GST should be updated annually since monitoring data supports that caribou group sizes vary annually, which was incorporated into site operations. The GN subsequently modified calculations to consider the spatial distribution of caribou group sizes relative to Mine roads. The GST values are updated annually, included in the annual report, and reviewed by the TAG. The objective of the GST mitigation is to achieve 75% of caribou are exposed to a closed road. The results relative to the objective are reported annually and to date have exceeded this threshold. Agnico Eagle will continue review and update road-related mitigation strategies with the TAG. There is no need to complete additional analysis as requested by the KivIA.*

*Additional Inuit Qaujimagatuqangit (IQ) mitigation for lead caribou protection was recommended by the TAG and piloted in spring 2024, which includes further closes roads for an additional 10 days to Mine-related traffic beyond that triggered by the GST. Lead caribou are determined by local Inuit monitors. Agnico Eagle believes that T&C #30 is in compliance.*

**Reference:**

*Agnico Eagle (Agnico Eagle Mining Limited). 2018. Meadowbank Division: Terrestrial Ecosystem Management Plan. Version 5. June 2018.*

#### **4.18 Traffic Monitoring**

**Term & Condition #: 31**

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures. The Road Access Management Plan shall be provided to the Nunavut Impact Review Board (NIRB) 90 days prior to operations commencing. An annual summary of the monthly maximum, minimum and average traffic levels shall be provided to the NIRB in the Proponent's annual report.

**Compliance with the Project:** In Progress

**Additional Comments:** Traffic frequencies are high when set in the context of caribou responses; for example, in 2024, the WHTR traffic log recorded an annual total of return trips involving 143,764 vehicle passages (2024 Annual Report; Section 11.7.1.2.). T&C 31 requires monthly traffic which is met in the 2024 Annual Report. But the KivIA notes that hourly or daily traffic frequencies are essential to describe the effectiveness of mitigation and caribou responses. In 2024, an objective for the remote camera project included traffic monitoring but no results are reported (Appendix 39; Section 8.2). Instead, at the fall 2024 TAG meeting, Agnico Eagle announced a new study design will be developed to quantify daily traffic rates on the AWAR and WTHR, to estimate duration of convoys, and to examine caribou crossings in relation to vehicle traffic.

**Recommendation:** The KivIA is keenly supportive of a study design to measure responses to convoys, including daily and hourly traffic for implementation in time for 2025 fall migration.

***Agnico Eagle's Response:*** *Agnico Eagle is currently exploring a study design to measure responses to convoys. A meeting will be held with the TAG to incorporate comments for implementation in an upcoming migration.*

#### **4.19 Berms on Whale Tail Haul Road**

**Term & Condition #:** 32

**Terms and Conditions Project Certificate 008 Amendment 1:** The Proponent shall engage with the Baker Lake Hunters and Trappers Organization and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife. Summaries of engagement with the Baker Lake Hunters and Trappers Organization regarding implementation of this condition shall be provided to the Nunavut Impact Review Board along with details of the selected crossings in the Proponent's annual report to the Nunavut Impact Review Board.

**Compliance with the Project:** In Progress

**Additional Comments:** The 2024 Annual Report (Section 8.18.13) refers to the berms at Km127 on the WTHR as being modified after advice from Baker Lake HTO but there is no report referenced or description. The importance of the details is that they may be helpful in designing and building roads elsewhere. TEMP version 9.0 in reference to T&C 32 refers to the TEMP annual report without specifying which section.

**Recommendation:** The KivIA requests that Agnico Eagle provide more detail of how the slopes at Km127 were modified; how it relates to the rest of WTHR; whether there was a change in caribou use and whether there is a report with the details.

**Agnico Eagle's Response:** Section 8.18.3 of the 2019 Annual Report includes mention of resloping at KM 127 to facilitate caribou crossing and that the Baker Lake HTO inspected the area upon completion and did not express any concerns with the work that was done.

## 5 Environment and Climate Change Canada (ECCC)

### 5.1 External contact information – incorrect attribution of telephone number

**References:** Meadowbank Complex 2024 Annual Report - Appendix 46. Emergency Response Plan (v.20a) - Section 3. Process – External Emergency Contact Information (p. 57)

**Comment:** One of the rows in this table is for “Environment Canada: 24-hour emergency pager monitored by Emergency and Enforcement”. One of the listed telephone numbers (867-920-8130) and the fax number (867-873-6924) are for the NT-NU 24-hour Spill Report Line.

**Recommendation:** ECCC recommends the Proponent verify whether it was intentional to report telephone and fax numbers for the NT-NU 24-Hour Spill Report Line in the row for “Environment Canada: 24-hour emergency pager monitored by Emergency and Enforcement”.

**Agnico Eagle's Response:** Agnico Eagle did not intend to include the telephone and fax numbers for the NT-NU 24-hour Spill Report Line in the row for Environment Canada: 24-hour emergency pager row. Agnico Eagle acknowledges that this was an unintentional addition and will be amended in the next version of the Emergency Response Plan.

### 5.2 Leaks and drips from equipment and vehicles

**References:** Meadowbank Complex 2024 Annual Report - Appendix 22. Spill Contingency Plan (v.22) - Section 5. Action Plan (p. 26)

**Comment:** Section 5 provides a list of potential spill events that could occur as part of the project. One potential event that was not included is: “Leaks or drips of hazardous substances or fuels due to malfunction of equipment and vehicles”. It is noted that spills have occurred at the Project site over the last year due to this scenario taking place.

**Recommendation:** ECCC recommends the Proponent consider including leaks or drips of hazardous substances or fuels due to malfunction of equipment and vehicles in the list of potential spill events.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges ECCC's recommendation and will update the list in Section 5 of the Spill Contingency Plan to include reference to "Leaks or drips of hazardous substances or fuels due to malfunction of equipment and vehicles" in the next version of the Plan.*

### 5.3 Quantity of hazardous substances

**References:** Meadowbank Complex 2024 Annual Report - Appendix 22. Spill Contingency Plan (v.22) - Section 6. Hazardous Materials Stored on Site, Table 7. Materials stored at site during operations (pp. 35-36)

**Comment:** Table 7 in the Spill Contingency Plan lists the maximum amount of each hazardous substance per unit (e.g., per sea can, per truck, per bag, etc.); however, it does not list how many units of each substance would likely be stored on site, nor the total quantity of the substance that would be expected by weight or volume. A knowledge of total volume on the site is relevant when preparing for and responding to spills, and it is therefore recommended that this information be provided in an additional column. Furthermore, it is recommended that a column be added to this table listing any mitigation measures that will be used for storage of each hazardous substance (as appropriate) to prevent leaks or

**Recommendation:** ECCC recommends the Proponent include the following information in the table:

- Maximum amount of each substance anticipated to be on-site (by total weight or volume)
- Mitigation measures that will be used for each substance to prevent leaks or spills

**Agnico Eagle's Response:** *Agnico Eagle acknowledges ECCC's recommendations and will commit to updating Table 7 to include the maximum amount of each substance anticipated to be on site in the next version of the Spill Contingency Plan. Information regarding hazardous materials and fuel storage locations is well-detailed in the Hazardous Materials Management Plan and a reference to this Plan will be added to Section 6 of the Spill Contingency Plan.*

### 5.4 Maps in Spill Contingency Plan

**References:** Meadowbank Complex 2024 Annual Report - Appendix 22. Spill Contingency Plan (v.22) - Section 2.1. Prevention and Inspections, Figures 1-5. Site Maps (pp. 5-9)

**Comment:** The Spill Contingency Plan has several site maps indicating fuel storage locations, landfarm locations, etc.; however, the maps do not list the locations of other hazardous substances that are stored on site. Inclusion of these locations on the map is recommended, as the Spill Contingency Plan will be relied on in emergency situations, and a general awareness of all potential sites where spills of hazardous substances could occur (and the types of substances that could spill) can support preparedness and situational awareness during response.

**Recommendation:** ECCC recommends the Proponent include storage locations for other hazardous substances (in addition to hydrocarbons / fuels) on the site maps within the Spill Contingency Plan.

***Agnico Eagle's Response:*** *Agnico Eagle acknowledges ECCC's recommendation and will include storage locations for other hazardous substances on the site maps in the next version of the Spill Contingency Plan.*

## 5.5 General mitigation measures

**References:** Meadowbank Complex 2024 Annual Report - Appendix 22. Spill Contingency Plan (v.22) - Section 2.1. Prevention and Inspections (p. 4) - Appendix 43. Hazardous Materials Management Plan (v.8) - Section 2.3. General Hazardous Materials Storage Guidelines (pp. 8-9)

**Comment:** There are several additional mitigation measures / storage best practices that contribute to spill prevention, included within the Hazardous Materials Management Plan (Section 2.3 General Hazardous Materials Storage Guidelines; pp. 8-9). It is recommended that a reference to the Hazardous Materials Management Plan be placed in Section 2.1 of the Spill Contingency Plan to ensure that the full range of mitigation measures and storage practices that will be used are communicated.

Additionally, it is recommended that the language on one suggested principle: *"Encourage workers to take reasonable measures to prevent spills"* be strengthened, as it would be an expectation that workers would take reasonable measures.

**Recommendation:** ECCC recommends the Proponent:

- Add within the Spill Contingency Plan a reference to the Hazardous Materials Management Plan to indicate that additional mitigation measures and storage practices may be found in that document.
- Consider changing the language of the bullet: *"Encourage workers to take reasonable measures to prevent spills"* to strengthen the mitigation measure, e.g., *"Require workers to take all reasonable measures to prevent spills"*

***Agnico Eagle's Response:*** *Agnico Eagle acknowledges ECCC's recommendations and will include both the reference to the Hazardous Materials Management Plan and updated wording in the bullet point indicated to strengthen the mitigation measure in the next version of the Spill Contingency Plan.*

## 5.6 Vehicle, equipment, and refueling mitigation measures

**References:** Meadowbank Complex 2024 Annual Report - Appendix 22. Spill Contingency Plan (v.22) - Section 5. Mitigation of Risks (pdf pp. 188-190) - Appendix 43. Hazardous Materials Management Plan (v.8)

**Comment:** The Spill Contingency Plan contains a section detailing the procedures and safeguards that will be in place for fuel transfer to and from the Baker Lake Oil Handling Facility (Section 5 Mitigation of Risks; pdf pp. 188-190). What is currently not reflected in the Spill Contingency Plan (or the Hazardous Materials Management Plan) is a section on refueling of equipment and vehicles (i.e., focusing on smaller scale refueling procedures located closer to the point of use, rather than bulk fuel transfer). Refueling of vehicles and equipment can present a risk of leaks or spills. Additionally, the use of vehicles and equipment themselves can pose risk of leaks and spills of fuels and hydrocarbons to the environment. Neither the Spill Contingency Plan nor Hazardous Materials Management Plan currently contain information related to mitigation measures for vehicle and equipment leaks and spills. It is recommended that a section be added to the Spill Contingency Plan or Hazardous Materials Management Plan to highlight the best practices and mitigation measures that will be in place related to refueling and use of vehicles and equipment.

**Recommendation:** ECCC recommends the Proponent include a section on mitigation measures within the Spill Contingency Plan or Hazardous Materials Management Plan related to refueling and use of equipment and vehicles. Measures that form standard best practices in similar projects and could be considered for this section include (but are not limited to):

- Use of drip trays or absorbent mats at refueling locations to prevent drips;
- Fuel nozzles equipped with automatic shutoffs;
- Operators stationed at both ends of hoses during refueling operations, unless both ends of the hose are visible and accessible by one operator;
- Fuel remaining in hoses is discharged into equipment or returned to the storage container;
- Refuel at least 31 m from the normal high-water mark of any water body;
- Provide adequate lighting at refueling areas;
- Use of secondary containment for any equipment with a built-in fuel tank;
- Regular inspection of vehicles and equipment for drips or leaks, as well as regular maintenance;
- Use of biodegradable hydraulic oil (when appropriate) for equipment that is working near or in water;
- Park vehicles and equipment over a drip tray or absorbent mat overnight, and at a location that is at least 31 m from the normal high-water mark of any water body.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges ECCC's recommendation would like to mention that both the Spill Contingency Plan and Hazardous Materials Management Plan do contain references to mitigation measures related to the refueling.*

*Table 2: Product Transfer Risk Assessment - refueling station to fuel truck, located in Section 5 of Appendix L of the Spill Contingency Plan contains a column with mitigation measures associated with potential incidents that could occur during refueling.*

*Section 5.3 Fuel Truck Transfer Procedures, located in the Hazardous Materials Management Plan does contain a list of mitigation measures in place prior to fuel transfer.*

*Agnico Eagle agrees that more detail could be added regarding smaller scale refueling procedures and will take ECCC's recommendation into consideration during the next review of the Spill Contingency Plan and Hazardous Materials Management Plan.*

## **5.7 Storage of hazardous substances**

**References:** Meadowbank Complex 2024 Annual Report - Appendix 43. Hazardous Materials Management Plan (v.8) - Section 2.3.2. General Guidelines for Storage Areas (pp. 8-9)

**Comment:** This section contains several guidelines where edits or clarifications are recommended:

- For the guideline: *"Where necessary secondary containment is installed to allow for the containment of at least 110% of the largest container or tank volume within the contained area"*, the plan should specify what criteria the Proponent would use to determine when secondary containment is necessary. It is recommended that secondary containment be employed as much as possible for storage of hazardous materials to prevent their release to the environment in the event of a leak or spill.
- For the guideline: *"Storage areas are located at least 30 metres from surface water and on a low permeability area"*, it is recommended that this be changed to 31 m to align with the setback distance specified in the annual report.
- For the guideline: *"Storage areas are adequately signed indicating that hazardous materials/wastes are stored therein"*, it is recommended that additional information be added to the signs to indicate that smoking should not take place within 15 m of the storage areas. Smoking near these areas poses a risk of igniting flammable vapours.
- For the guideline: *"Adequate spill and emergency response equipment has been installed at large volume storage areas – i.e., bulk fuel tank facilities (i.e. spill control, fire protection, etc.). A list of spill control equipment is provided in the Spill Contingency Plan"*, it is recommended that appropriate spill and emergency response equipment (e.g., a spill kit at minimum) be

located near all locations where hazardous materials are being used, not exclusively large volume storage areas.

**Recommendation:** ECCC recommends the Proponent:

- Specify when secondary containment would be employed for the storage of hazardous materials (i.e., for what type of materials, or in what situations);
- Change the setback distance to water to 31 m to align with that specified in the annual report;
- Add additional information to the signs demarcating hazardous materials storage areas to specify no smoking within 15 m of the storage area;
- Place appropriate spill response equipment (e.g., a spill kit) at all sites where hazardous materials are stored (i.e., not only at large volume storage areas).

**Agnico Eagle's Response:** *Agnico Eagle appreciates the above recommendations provided by ECCC.*

*Agnico Eagle follows the CCME Code of Practice Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products. Regarding the comment on secondary containment, the guideline requiring tanks, where necessary, to be stored within secondary containments to allow for the containment of at least 110% of the largest container or tank volume within the contained area, is in reference to single-walled fuel tanks.*

*Agnico Eagle agrees to change the setback distance to water to 31 metres within the next update of the Hazardous Materials Management Plan.*

*As indicated in Appendix A of the Spill Contingency Plan, signage specifying no smoking is present and inspected at all fuel farms on a weekly basis. It is Agnico Eagle's policy that smoking is prohibited on site outside of designated smoking areas.*

*Agnico Eagle would like to advise ECCC that spill kits are not only available at large volume storage areas. Spill kits are present at the Hazardous Materials Storage Area and are checked on a weekly basis as part of the Hazardous Material Storage Area Inspection Report (Appendix C of the Hazardous Materials Management Plan). Additionally, as detailed in Section 5.2 of the Hazardous Materials Management Plan, all pick-up trucks are equipped with a spill kit. Agnico Eagle believes that there is adequate spill response equipment available.*

## 5.8 Vehicle maintenance and safety

**References:** Meadowbank Complex 2024 Annual Report Meadowbank Complex 2022 Annual Report - Appendix 46. Whale Tail Haul Road Management Plan (v.4) - Section 9.1. Accidents and Malfunctions (p. 27)

**Comment:** A list of potential causes for vehicle accidents is listed in this section. One type listed is: “*Risk of people getting stuck on the road in bad weather such as in heavy snow or whiteout conditions, or due to mechanical breakdown*”.

Mechanical breakdown could also result in spillage of potentially harmful materials to the environment, either because it caused an accident where a subsequent spill occurred, or the mechanical breakdown itself resulted in the release (e.g., loss of vehicle fluids).

In the list of non-reportable spills for 2024, there are instances where mechanical breakdown / failure led to loss of hazardous substances, including hydraulic oil, diesel, coolant, and engine oil to the environment.

A potential mitigation measure for this scenario is the regular inspection of vehicles for drips / leaks.

**Recommendation:** ECCC recommends the Proponent add the possibility for spills or leaks of potentially harmful materials in the event of a vehicle accident caused by a mechanical breakdown.

**Agnico Eagle’s Response:** *Agnico Eagle acknowledges ECCC’s comment and will take this recommendation into consideration for the next update of the Whale Tail Haul Road Management Plan.*

## 5.9 Sensory Disturbance on Birds - Lighting

**References:** Meadowbank Complex 2024 Annual Report - Appendix 38. Terrestrial Ecosystem Management Plan (TEMP) (v.9)

**Comment:** Term & Condition 58 of NIRB Project Certificate 004 requires the Proponent to design the lighting and use of lights at the mine site to minimize the disturbance of lights on sensitive wildlife and birds.

Lighting at the mine site was not mentioned in the Meadowbank Complex 2024 Annual Report.

This issue was raised previously in comments on the Meadowbank Complex 2023 Annual Report and is not addressed in the current report.

**Recommendation:** ECCC recommends the Proponent clarify how light disturbance on sensitive wildlife and birds was monitored and/or mitigated at the mine site(s) in 2023 and 2024.

Light disturbance monitoring should be included in the updated TEMP and be made available for review.

**Agnico Eagle's Response:** *As per Agnico Eagle's response to KivIA's comment on the 2023 Annual Report and indicated in Section 4.8 above, lighting and use of lights are required for human safety. Light mitigation includes directing lighting downward where it does not affect human safety. Agnico Eagle continues to use motion activated light controls at the Mine site so that light is not emitted when rooms are empty of people. It should be noted that most bird species are present during spring and summer when nighttime is minimized and the need for lighting is less. Monitoring of lighting and light use is not a requirement of T&C 58.*

## 5.10 Mortality Threshold for Waterbirds

**References:** Meadowbank Complex 2024 Annual Report - Appendix 38. Terrestrial Ecosystem Management Plan (TEMP) (v.9) - Section 3.7.3.3. Project-Related Mortality, Table 17. Monitoring Approach for Waterbirds at the Meadowbank, Whale Tail Mine and Haul Road

**Comment:** The 2024 TEMP reports six long-tailed duck mortalities in 2024. Long-tailed ducks are a waterbird, specifically a species of migratory waterfowl.

According to Section 3.7.2.2 of the TEMP, "The threshold level of mortality beyond which further mitigation will be required is one Waterbird per year".

Section 3.7.3.3 Project-Related Mortality indicates the Proponent will discuss and implement further mitigation in consultation with ECCC to minimize effects.

**Recommendation:** ECCC recommends the Proponent consult with ECCC about how further mitigation measures could be implemented at the mine site(s) to help prevent further waterbird mortalities going forward. Updated, clear waterbird mortality mitigation measures should be included in the updated TEMP and be made available for review.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges this recommendation and is open to further discussion with ECCC on this topic. Waterbird mortalities are not common at site and Agnico Eagle believes that the current mitigation measures regarding the prevention of waterbird mortalities are effective.*

## 5.11 ECCC Contact Information

**References:** Meadowbank Complex 2024 Annual Report - Appendix 39. 2024 Wildlife Monitoring Summary Report - Section 4.5.8. Wildlife Mortality – Meadowbank and Whale Tail Sites, Table 4-8. Wildlife Mortalities at Meadowbank and Whale Tail Sites in 2024

**Comment:** ECCC has management responsibilities for migratory birds under the Migratory Birds Convention Act (MBCA). ECCC should be contacted in instances involving:

- Interactions and incidents involving the potential disturbance of individuals or nests and any mortality events of these species;
- Updates to wildlife management and monitoring plans, or their equivalents, in relation to these species.

The Proponent’s 2024 Wildlife Monitoring Summary Report states “A small group of ducks flew into the side of the Mill building in between Mill Door B and Mill Door C. One of the seven birds survived. These were originally believed to be black scoters but have since been identified as long-tailed ducks.”

ECCC’s Canadian Wildlife Service does not have a record of notification for this incident, despite the Proponent’s TEMP stating “reporting for migratory bird mortalities and incidents need to be directed to ECCC (reports are to be sent to: [cwsnorth-scfjord@ec.gc.ca](mailto:cwsnorth-scfjord@ec.gc.ca))”.

**Recommendation 11:** ECCC recommends the Proponent notify ECCC’s Canadian Wildlife Service ([cwsnorth-scfjord@ec.gc.ca](mailto:cwsnorth-scfjord@ec.gc.ca)) for instances involving:

- a) Interactions and incidents involving the potential disturbance of individuals or nests and any mortality events of these species;
- b) Updates to wildlife management and monitoring plans, or their equivalents, in relation to these species.

***Agnico Eagle’s Response:*** *Agnico Eagle advised ECCC regarding the migratory bird mortalities on September 10<sup>th</sup>, 2024, using the email address provided above ([cwsnorth-scfjord@ec.gc.ca](mailto:cwsnorth-scfjord@ec.gc.ca)). ECCC acknowledged receipt of the notification and indicated that “(t)he report you [Agnico Eagle] submitted included all the information we are seeking within a bird mortality incident report. CWS considers your [Agnico Eagle] reporting obligation to have been met for this incident.”*

*Furthermore, ECCC’s Bridget Campbell reached out to Agnico Eagle on September 12<sup>th</sup>, 2024, requesting that the carcasses be sent to ECCC for further sampling and advised Agnico Eagle to coordinate with ECCC’s Jennifer Provencher to arrange shipment to the National Wildlife Research Centre (NWRC) at Carleton University. The frozen carcasses were shipped to the address provided by*

*Jennifer Provencher on October 21<sup>s</sup>, 2024, and proof of delivery indicated that the shipment was received at the NWRC on October 23<sup>rd</sup>, 2024.*

## **5.12 Timing of heavy rainfall**

**References:** Meadowbank Complex 2024 Annual Report - Section 2.1. 2024 Activities - Section 8.21. Climate Monitoring, Table 8-83. Meadowbank 2024 Monthly Climate Data

**Comment:** In Section 2.1, the text mentions challenging conditions with heavy rainfall in October for the Meadowbank Complex. However, in Section 8.21, Table 8-83 shows precipitation totals of 130.05 mm for September compared to 26.1 mm for October. Maximum daily precipitation values were 20.0 mm in September compared to 5.6 mm for October. Thus, based on Table 8- 83, it appears that September would have been potentially more problematic for heavy rainfall.

**Recommendation:** ECCC recommends that the statement regarding heavy rainfall in Section 2.1 be reconciled with the rainfall values presented in Table 8-83.

**Agnico Eagle's Response:** *Section 2.1 states that "(o)re tonnes from both open pit and underground operations were in line with forecast despite challenging conditions with heavy rainfall in October, which affected haulage productivity." The haulage activities mentioned in this statement are associated with operations at the Whale Tail Site, not Meadowbank, therefore Agnico Eagle would like to direct ECCC to Table 8-84 for the 2024 Whale Tail climate data.*

*Table 8-84 shows that total precipitation in September and October of 2024 was 87.60 mm and 86.20 mm respectively. Compared to the historical data shown in Table 8-85 for Whale Tail, these values are higher than the 2019-2024 precipitation averages of 54.78 mm for September and 39.71 mm for October. The amount of precipitation in October 2024 was unseasonably high, more than double the historical average, and did in fact cause challenges to the operations.*

## **6 Transport Canada (TC)**

### **6.1 Marine Safety and Security**

#### **6.1.1 Inspections - Marine Transportation; Oil Handling Facility**

**References:** 2024 Annual Report, Section 11.8: Shipping Management 2024 Annual Report, Appendix 25: Oil Pollution Emergency Plan

**Comment:** The oil handling facility is in compliance with regulatory requirements as per part 8 of the *Canada Shipping Act, 2001*. No inspection was carried out in 2024.

The Meadowbank facility meets the requirements of the Marine Transportation Security Regulations and remains in compliance. The certificate for Occasional-use Marine Facility is current and valid. No inspection was completed in 2024.

No enforcement activity was undertaken or required last year by Transport Canada.

**Recommendation:** None

***Agnico Eagle's Response:*** *Agnico Eagle acknowledges Transport Canada's comment on the Oil Handling Facility 2024 Compliance.*

### 6.1.2 Marine Transportation – 2025 Annual Notice to Mariners

**References:** 2023 Annual Report, Section 11.8: Shipping Management

**Comment:** Transport Canada recommends the Proponent make vessel operators serving the Project aware of the 2025 Annual Notice to Mariners, and in particular section A2 Marine Mammal Guidelines and Marine Protected Areas and section 7A Voyage Planning for Vessels Intending to Navigate in Canada's Northern Waters and section 7C Vessels Intending to Navigate in Kitikmeot Region in Canada's Northern Waters (see: Annual Notice to Mariners at:

[https://publications.gc.ca/collections/collection\\_2025/mpo-dfo/Fs151-4-2025-eng.pdf](https://publications.gc.ca/collections/collection_2025/mpo-dfo/Fs151-4-2025-eng.pdf)).

**Recommendation:** Transport Canada requests that the above information be brought to AEM's attention.

***Agnico Eagle's Response:*** *Agnico Eagle thanks Transport Canada for bringing this information to Agnico Eagle's attention, and confirms it has been shared with the currently contracted shipping companies.*

### 6.1.3 Shipping Management - Biofouling

**References:** 2024 Annual Report, Appendix 59: Shipping Management Plan Version 5 (March 2025)

**Comment:** The following is for the information of AEM, NIRB, and reviewers of the 2024 Annual Report on the subject of biofouling:

- In Fall 2022, Transport Canada published its Voluntary Guidance for Relevant Authorities on In-Water Cleaning of Vessels (canada.ca), which includes a biofouling management plan and biofouling record book templates that have been well regarded internationally. The guidance provides clarity to stakeholders (competent authorities, vessel owners and operators, and in-water clean-up service providers) on recommended best practices that can be used to manage the biosecurity and water quality risks associated with cleaning vessels underwater.
- The International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC) adopted the revised "Guidelines for the Control and Management of Ship's Biofouling to Minimize the Transfer of Invasive Aquatic Species"  
<https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/MEPCDocuments/MEPC.378%2880%29.pdf>

These guidelines provide recommendations on in-water inspections with a focus on the quantitative assessment of biofouling using a biofouling rating number, as well as on observations of the anti-fouling system condition, which will assist vessel owners and operators in minimizing the transfer of potentially harmful aquatic species, following globally agreed guidance.

**Recommendation:** Transport Canada requests that the above information be brought to AEM's attention.

**Agnico Eagle's Response:** *Agnico Eagle thanks Transport Canada for bringing this information to Agnico Eagle's attention, and confirms it has been shared with the currently contracted shipping companies.*

## 6.2 Transportation of Dangerous Goods

### 6.2.1 Transportation of Dangerous Goods /Hazardous Materials

**References:** 2024 Annual Report, Section 6.1.1.3 – Hazardous and non-hazardous waste

**Comment:** No TDG monitoring was carried out at the Meadowbank Complex by Transport Canada in 2024. No complaints/concerns regarding TDG were received by Transport Canada the Department did not undertake any enforcement actions.

**Recommendation:** None.

**Agnico Eagle's Response:** *Agnico Eagle acknowledges this comment.*

## 6.2.2 Transportation of Dangerous Goods /Hazardous Materials

**References:** 2024 Annual Report, Section 6.1.1.3 – Hazardous and non-hazardous waste 2024 Annual Report, Appendix 21 - Meadowbank 2023 Hazardous and Non-Hazardous Waste Transport Manifest

**Comment:** Appendix 21 provides a list/summary of hazardous (dangerous) goods that were shipped from the site. It would assist future reviews of the Annual Report if copies of the dangerous goods shipping documents were included with the annual report rather than simply a summary.

**Recommendation:** Transport Canada requests that NIRB bring this to AEM’s attention.

**Agnico Eagle’s Response:** *Agnico Eagle appreciates Transport Canada’s recommendation and will take this into consideration for the next annual report.*

## 6.2.3 Transportation of Dangerous Goods / Hazardous Materials

**References:** 2024 Annual Report, Section 11.5.8 Inspections and Compliance Reports – Transport Canada Marine Safety and Security

**Comment:** At p. 396 of the 2024 Annual Report, AEM reported:

“Transport Canada conducted an inspection focusing on the Transportation of Dangerous Goods (TDG) on November 19th, 2024, of the QSL International Ltd terminal in Bécancour, for dangerous goods shipped by Agnico Eagle from the Meadowbank Mine. The inspection report, received on December 19th, 2024, contained action items pertaining to TDG corrective measures required. All findings in the inspection report were corrected.

An official document describing the corrective actions taken by Agnico Eagle to ensure future compliance and the safe transportation of dangerous goods will be submitted to Transport Canada in 2025.”

Transport Canada confirms that AEM provided the Department with the required information and that the non-compliance issues noted in the inspection report were addressed.

**Recommendation:** None.

**Agnico Eagle’s Response:** *Agnico Eagle acknowledges this comment.*

## 7 Health Canada (HC)

### 7.1 Baseline Characterization of Arsenic (As) in Soil – HHRA problem formulation

**References:** 1. Meadowbank Complex 2024 Annual Report: a. Appendix 38 – Meadowbank Complex Terrestrial Ecosystem Management Plan; b. Appendix 40 – Meadowbank and Whale Tail 2024 Wildlife and Country Foods Screening Level Risk Assessment Report: i. Appendix B – Soil, Water and TSF Sediment Screening Tables – Page 48; PDF pg. 43; 2. Azimuth (Azimuth Consulting Group Inc.) 2006. Wildlife Screening Level Risk Assessment for the Meadowbank Site. (NIRB: 060303-03MN107-Azimuth Rpt CRL Re MB Wildlife Screening Level Risk Assessment-ITAE.pdf) a. Appendix C - ALS Laboratory Reports: Tissues and Soil Analyses (2006) (NIRB: 060303- 03MN107-Tissue Soil Analyses Rpt-App C-ITAE.pdf) - PDF pg. 34-43;3. Golder (Golder Associates Ltd.) 2019. Human Health and Ecological Risk Assessment – Whale Tail Pit – Expansion Project. a. Attachment B – Screening Tables i. Annex B-2: Soil Quality - PDF pg. 132-134

**Comment:** Characterized baseline As soil conditions may not be representative of natural variability across the broader Meadowbank Complex, and may be ineffective in defining project-related impacts.

A reliable description of baseline conditions is integral to problem formulation<sup>1</sup>, a key step in human health risk assessments. When characterized effectively, establishing baseline conditions (i.e., pre-development/pre-project) within a development area allow potential impacts from project activities to be distinguished from natural variability in the environment. This distinction can be used to confirm modelled predictions and focus health risk assessments on a project’s incremental impacts.

The current Meadowbank Complex covers a large geographic area that includes the Meadowbank mine site and the satellite Whale Tail mine site connected by a 65km haul road, and is described by a Local Study Area for the Meadowbank mine site (LSA(MB)) and the Whale Tail Pit (LSA(WT)) respectively.<sup>2</sup>

Baseline soil conditions within the LSA(MB) were derived from the 2006 Wildlife Screening Level Risk Assessment (Azimuth, 2006) using 10 sampling sites (n=50), while conditions within the LSA(WT) were provided in the Human Health and Ecological Risk Assessment for the Whale Tail Pit Expansion Project (Golder, 2019) using 11 sampling locations (n=16).

Baseline characterization would benefit from additional practical and statistical consideration of the baseline data (see also: HC-02 and HC-03) due to the following inconsistencies:

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<sup>1</sup> [Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Human Health Risk Assessment](#)

<sup>2</sup> The LSA(MB) includes the 5 km area surrounding the Meadowbank mine site; and, the 3 km area along the 110 km all-weather access road (AWAR) between the mine site and the community of Baker Lake. The LSA(WT) includes the 1.5 km area surrounding the Whale Tail Expansion and 65 km Haul Road.

1. The maximum LSA(MB) baseline concentration appears to be a statistical outlier, which limits its ability to differentiate between natural variability and project-related impacts.
2. The maximum LSA(MB) baseline concentration, derived from a single sample, cannot adequately characterize the natural variability across the extensive Meadowbank Complex.
3. The use of baseline soil concentration data from the Meadowbank site to describe variability in soil concentrations at the Whale Tail site when baseline data specific to that site exists (i.e., Golder 2019).
4. The use of the maximum baseline concentration from the Meadowbank site (Appendix 40, Appendix B: Table B-14) when screening for pollutants of potential concern (POPCs) at the Whale Tail site.

Without proper baseline characterization, HC was unable to comment on factors that contributed to the elevated arsenic measurements reported at the Whale Tail location (Table B14; Site T10, samples 1 & 2) and Meadowbank mine site (Table B-16; Site T7, samples 1, 2, & 5). HC noted that elevated concentrations of As in soil samples from the *Wildlife and Country Foods Screening Level Risk Assessment Report* (Appendix 40) were located north of the respective Waste Rock Storage Facility at each project site. It was unclear if the elevated concentrations and locations correlate with observed baseline concentrations at the Meadowbank site; however, there was some indication of correlation in Golder (2019), where measurements from the Whale Tail site suggest they might benefit from further investigation.

**Conclusion/Request:** Further arsenic soil characterization before the 2027 country foods assessment to reliably differentiate natural background variability from project-related emissions. This could include:

- a) A review of existing pre-project concentration data of As in soil to identify and address:
  - i. limitations of existing data;
  - ii. statistical outliers;
  - iii. account for the vast geography of the Meadowbank Complex; and,
  - iv. describe the natural variability in baseline conditions, which could include data from other existing soil studies undertaken as part of the project.
- b) Further characterize background and current soil conditions within the entire LSA(MB) and LSA(WT) through additional studies.
- c) Additional site-specific sampling and characterization of As in soil north of the Meadowbank Tailings Storage Facility (Area T7) and Whale Tail Waste Rock Storage Facility (Area T10) where elevated measurements of As in soil were reported.

**Agnico Eagle's Response:** *Agnico Eagle has reviewed both baseline and external reference site soil arsenic data, and notes that measured concentrations of soil arsenic in 2024 at both locations mentioned by Health Canada as "elevated" (T7 and T10) were less than baseline concentrations for*

*that location (T7) and/or external reference measurements (T10), and based on site conditions, are unlikely to be elevated as a result of project activities (see Agnico Eagle responses 7.2 and 7.3).*

*However, Agnico Eagle appreciates this comment and will initiate further discussion with Health Canada to review soil arsenic screening criteria for the Meadowbank Complex ahead of the 2027 country foods assessment.*

## **7.2 Meadowbank Site HHRA<sub>(Country Foods)</sub>, Arsenic Assessment**

**References:** 1. Meadowbank Complex 2024 Annual Report a. Section 8.19 – Country Foods - PDF pg. 379-380 b. Appendix 40 – Meadowbank and Whale Tail 2024 Wildlife and Country Foods Screening Level Risk Assessment Report: i. Section 3.1.3 - Parameters of Potential Concern (POPCs) - Page 20; PDF pg. 15; ii. Section 4.2 - Human Health - Country Foods Assessment - Page 22; PDF pg.17; iii. Appendix B – Soil, Water and TSF Sediment Screening Tables - Page 48; PDF pg. 43; 2. Azimuth (Azimuth Consulting Group Inc.). 2006. Wildlife Screening Level Risk Assessment for the Meadowbank Site. (NIRB: 060303-03MN107-Azimuth Rpt CRL Re MB Wildlife Screening Level Risk Assessment-ITAE.pdf): a. Appendix C - ALS Laboratory Reports: Tissues and Soil Analyses (2006) (NIRB: 060303- 03MN107-Tissue Soil Analyses Rpt-App C-ITAE.pdf) (PDF pg. 34-43)

**Comment:** Conclusions of the Country Foods Health Risk Assessment were not supported by baseline screening criteria, therefore potential health risks should be assessed.

Consideration of screening criteria when defining POPCs is consistent with Health Canada (HC) guidance on Human Health Risk Assessment<sup>3</sup>. However, the specific maximum measured baseline concentration of As in soil from the 2006 *Wildlife Screening Level Risk Assessment Report* (Azimuth, 2006; 173 mg/kg) used for screening appears to be a statistical outlier (i.e., outside the 95% upper confidence limit of the mean [UCLM] of 18.4 mg/kg and therefore, not representative of baseline conditions). This value is not appropriate as a screening criteria because it could mask project-related impacts within Meadowbank's local study area (LSA<sub>(MB)</sub>). It is more appropriate to use regulatory guideline values that are protective of human health (i.e., CCME's Soil Quality Guidelines for the Protection of Human Health) as screening criteria for As (SQGHH – Residential Land Use; CCME - 12 mg/kg) without baseline.

Measured concentrations from samples collected as part of the current assessment (2024) exceed the health-based guidelines at location T7 north of the Meadowbank Tailings Storage Facility, with the following measured concentrations (Appendix 40, Table B-16):

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<sup>3</sup> [Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Human Health Risk Assessment](#)

Sample	Measured Soil [As] Concentration
T7-S1-SOIL	61.5 mg/kg
T7-S4-SOIL	34.5 mg/kg
T7-S5-SOIL	25.5 mg/kg

In the absence of a reliable baseline concentration, the reported As exceedances in soil do not support the current conclusion from Section 8.19 of Annual Report or the Human Health Risk Assessment (HHRA)<sub>(country foods)</sub> that risks from country food consumption are negligible. It is unclear if the reported concentrations represent any real risk to human health; this should be confirmed through further characterization as part of the current HHRA.

**Conclusion/Request:** HC recommends:

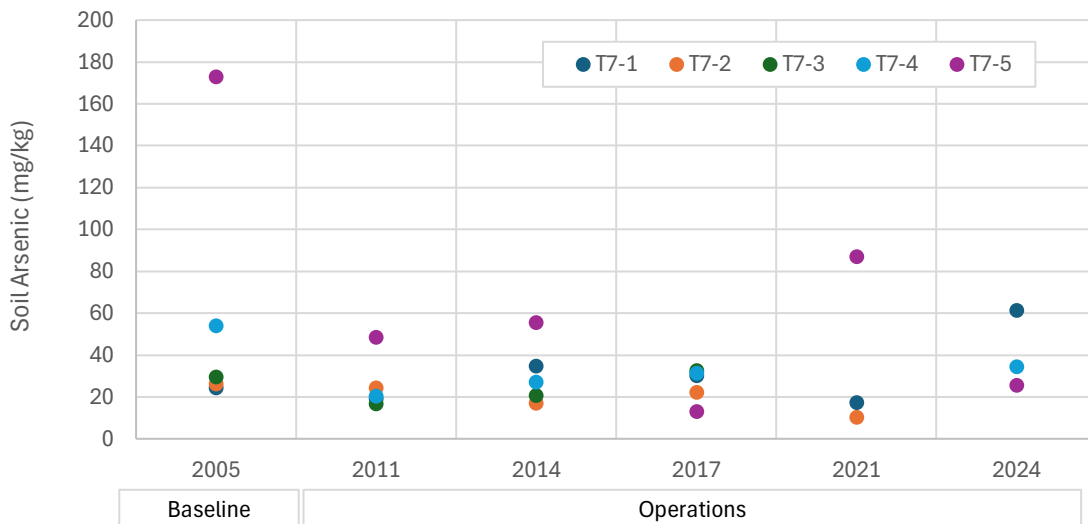
1. The current conclusion of the Human Health Risk Assessment be revised to include additional consideration of As in soil within the Meadowbank LSA<sub>(MB)</sub> as a POPC, and confirm whether risks associated with the consumption of country foods remain negligible. Those risks should be quantified.
2. Use appropriate regulatory guideline values that are protective of human health as screening criteria.

**Agnico Eagle's Response:** Concentrations of soil arsenic at location T7 in 2024 (24.5, 34.5, 61.5 mg/kg, as copied in by Health Canada, above) were all at or below the average baseline conditions for this location (61.5 mg/kg; average of 5 values: 24.4, 26.1, 29.6, 54.2, and 173.0 mg/kg, as shown in Table 1 below from Azimuth, 2006). Further, soil arsenic concentrations at T7 do not appear to be increasing over time (Figure 1). These data indicate a mineralized location rather than project-related effects, despite the proximity of this sampling station to mine infrastructure. Based on this review, Agnico Eagle suggests that arsenic should remain screened out as a POPC, and that further quantitative risk characterization is therefore not indicated at this time.

**Table 1. Measured baseline concentrations of arsenic in soil at location T7 (from Azimuth, 2006; Appendix B, Table B-2).**

**Appendix B-2: Baseline Soil Data for the Meadowbank Gold Project**

Sample ID		T/AREA7 SITE1 SOIL	T/AREA7 SITE2 SOIL	T/AREA7 SITE3 SOIL	T/AREA7 SITE4 SOIL	T/AREA7 SITE5 SOIL	C
Date Sampled		19-Aug-05	19-Aug-05	19-Aug-05	19-Aug-05	19-Aug-05	
Physical Tests	CCME						
	Guidelines						
pH	6 to 8	6.56	6.24	5.77	5.97	5.3	
<b>Total Metals (mg/kg dry weight)</b>							
Aluminum	NG	-	-	-	-	-	
Antimony	20	<10	<10	<10	<10	<10	
Arsenic	12	173.0	24.4	29.6	54.2	26.1	



**Figure 1. Measured concentrations of arsenic in soil at location T7 (baseline and operations phases).**

**Reference:**

Azimuth (Azimuth Consulting Group Inc.) 2006. Wildlife Screening Level Risk Assessment for the Meadowbank Gold Project. Project No. CBD-05-03. March, 2006. Prepared for Cumberland Resources.

### 7.3 Meadowbank Site HHRA<sub>(Country Foods)</sub>, Arsenic Assessment

**References:** 1. Meadowbank Complex 2024 Annual Report a. Section 8.19 – Country Foods - PDF pg. 379-380 b. Appendix 40 – Meadowbank and Whale Tail 2024 Wildlife and Country Foods Screening Level Risk Assessment Report (SLRAR) i. Section 3.1.3 - Parameters of Potential Concern (POPCs) - Page 20; PDF pg. 15 ii. 4.2 Section - Human Health - Country Foods Assessment - Page 22; PDF pg. 17 iii. Appendix B – Soil, Water and TSF Sediment Screening Tables – Page 48; PDF pg. 43; 2. Golder (Golder Associates Ltd.) 2019. Human Health and Ecological Risk Assessment – Whale Tail Pit – Expansion Project. a. Attachment A – Baseline Conditions for Soil and Vegetation i. Annex A-2: Results of the Soil and Sediment Program - PDF pg. 106-107 b. Attachment B – Screening Tables i. Annex B-2: Soil Quality - PDF pg. 132-134

**Comment:** Soil As concentrations north of the Whale Tail Waste Rock Storage Facility exceed screening criteria, therefore potential health risks should be assessed.

Health Canada does not agree that: *“All concentrations in soil met ... screening values”*, or its use as a rationale to conclude that: *“no changes to risk from consumption of country foods under the current operational scenario are predicted and the country foods ingestion pathways are not required to be assessed further.”*

Reported As concentrations in two soil samples within the Whale Tail Local Study Area (LSA<sub>(WT)</sub>), exceeded predicted concentrations from the Project’s Final Environmental Impact Statement and supporting documents (i.e., greater than maximum baseline concentration plus predicted project emissions – 13 mg/kg [Golder, 2019]). The assessment’s other screening criterion (SQG<sub>HH</sub> – Residential Land Use; CCME - 12 mg/kg) was also exceeded. The 2024 samples were taken from the same location (T10) north of the Whale Tail Waste Rock Storage Facility, with the following measured concentrations (Appendix 40, Table B-14):

Sample	Measured Soil [As] Concentrations
T10-1-SOIL	15.3 mg/kg
T10-2-SOIL	31.0 mg/kg

While the exceedances appear minor, they do not support the conclusion presented in Section 8.19 of the 2024 Annual Report or HHRA<sub>(country foods)</sub> Appendix 40. It is unclear if the observed changes represent any risk to human health, which should be confirmed through further characterization as part of the current HHRA.

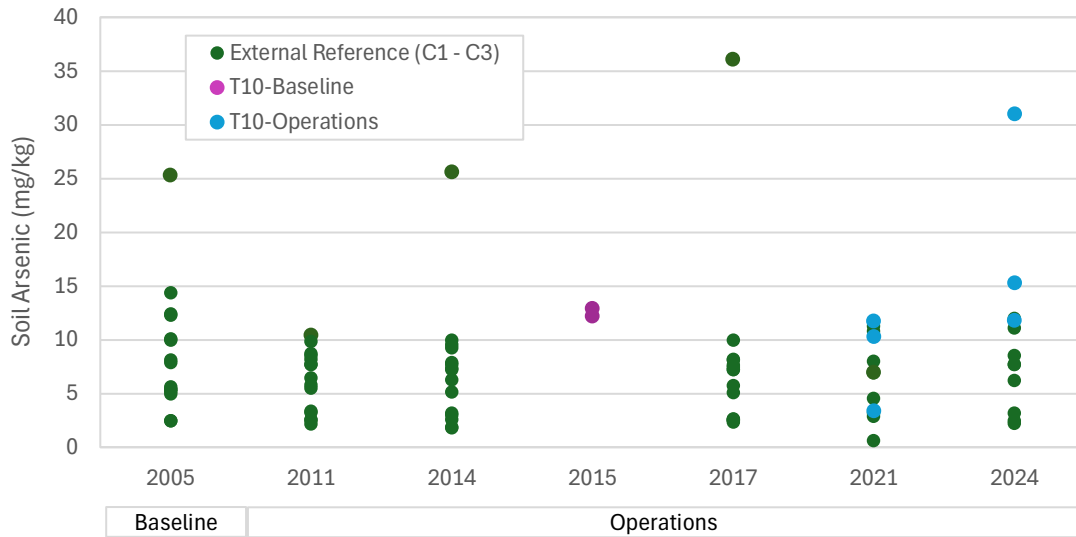
**Conclusion/Request:** HC recommends the current conclusion of the Human Health Risk Assessment be revisited and revised to include additional consideration of As in soil within the Whale Tail LSA<sub>(WT)</sub>, as a

POPC, and confirm that risks associated with the consumption of country foods remain negligible. Those risks should be quantified.

**Agnico Eagle's Response:** *In 2024, two of three soil arsenic concentrations at the T10 location in 2024 (11.8, 15.3, 31 mg/kg; as copied in above by HC) exceeded the two available baseline samples for this specific location (12.2, 12.9 mg/kg; AER08 in Golder, 2019). However, historical measurements at the external reference site were reviewed (Figure 2), and this range of both soil arsenic concentrations and sample variability are consistent with local reference conditions, outside of mine influence. This external reference area has been sampled since 2005 and is located at a distance of at least 7 km crosswind to upwind (west) of the closest current mine infrastructure, between the Meadowbank and Whale Tail sites (locations are described in the Wildlife and HHRA<sub>(Country Foods)</sub> Screening Level Risk Assessment Plan (Version 9) – March, 2024).*

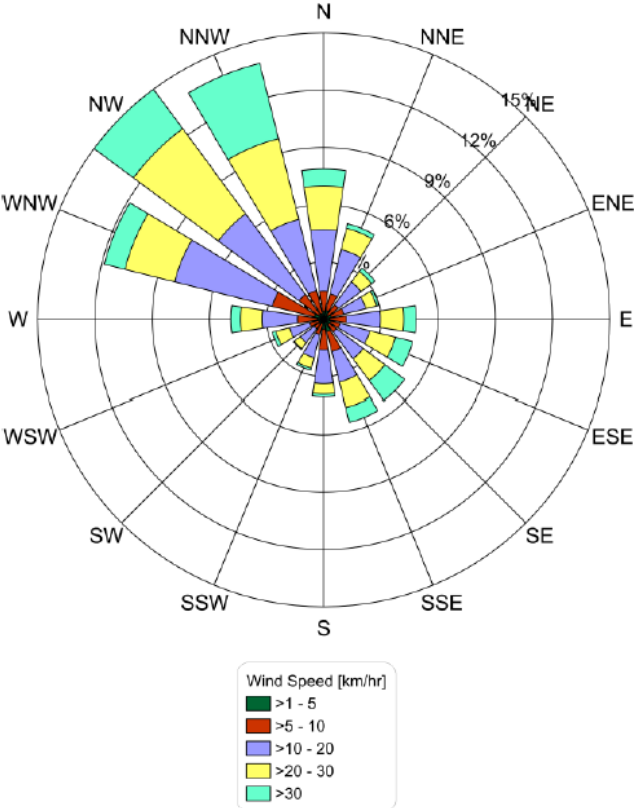
*In addition, it is noted that the T10 location is sited at a distance of approximately 1 km from site infrastructure in the predominantly upwind direction (Figure 3, Figure 4), and soil arsenic concentrations in the downwind direction in 2021 (T9; 3, 3, 3 mg/kg) and 2024 (T9; 3, 4, 6 mg/kg) remained below the CCME generic screening value and within the range of baseline at that location (one sample - 3 mg/kg). Since airborne dispersion is the only identified source of potential contaminant inputs for soil at the Whale Tail site, these data suggest that the measurement of 31 mg/kg at T10 in 2024 is much more likely due to natural variability in soil mineralization rather than mine-related contaminant inputs.*

*However, as discussed in 7.1, Agnico Eagle will further consult with HC on the established soil screening values for arsenic (see 7.1) and will review these data following that discussion to confirm that any new soil screening values continue to be met.*



**Figure 2. Measured concentrations of arsenic in soil at the designated external reference area (stations C1 – C3) and the T10 location within the Whale Tail LSA (baseline and operations phases).**

**Meadowbank Mine Observed Windrose (2013-2014)**



**Figure 3. Windrose showing predominant wind direction and speeds for the Meadowbank Mine (Golder, 2018; Appendix 4-A, Figure 4-A-2).**



**Figure 4. Figure 2 from the 2024 Wildlife and Human Health (Country Foods) Screening Level Risk Assessment, showing location of the T10 site in relation to project infrastructure.**

**References:**

*Golder (Golder Associates Ltd.) 2019. Human Health and Ecological Risk Assessment – Whale Tail Pit – Expansion Project.*

*Golder Associates Ltd. 2018 Final Environmental Impact Statement for the Whale Tail Pit - Expansion Project. Appendix 4-A: Air Quality Baseline. December, 2018.*

**7.4 Changes to the 2024 Wildlife and HHERA(Country Foods) Screening Level Risk Assessment Plan**

**References:** 1. Meadowbank Complex 2024 Annual Monitoring Report a. Appendix 38 – Terrestrial Ecosystem Management Plan (March 2025) i. Appendix E: Wildlife and HHERA(Country Foods) Screening Level Risk Assessment Plan (Version 9) – March, 2024 b. Appendix 40 – Meadowbank and Whale Tail 2024 Wildlife and Country Foods Screening Level Risk Assessment Report 2. NIRB Project Certificate No.004 Condition 67

**Comment:** Health Canada remains a potential resource to support the development and implementation of plans related to country foods monitoring and human health risk assessment.

The *Wildlife and HHRA<sub>(Country Foods)</sub> Screening Level Risk Assessment Plan (SLRAP)* was revised in March 2024, and introduced new screening criteria (i.e., maximum baseline concentration) to focus the assessment on specific POPCs. HC's comments (on the 2024 Annual Report) centre around changes made to the SLRAP and could have been addressed had the Department been engaged in its development.

Although HC is not a member of the Technical Advisory Group where proposed revisions are discussed, the Department has scientific knowledge in the areas of country foods and HHRA methodologies, and could be a potential resource for offering guidance on best practices.

**Conclusion/Request:** HC is available to review future proposed updates to the *Wildlife and HHRA<sub>(Country Foods)</sub> Screening Level Risk Assessment Plan* for areas related to its mandate (e.g., country foods, human health risk assessment methodologies).

**Agnico Eagle's Response:** *Agnico Eagle notes that in fact the 2024 Wildlife and HHRA<sub>(Country Foods)</sub> Screening Level Risk Assessment Plan (Version 9) was a revision to incorporate Health Canada's comments on the 2022 Annual Report (received via the NIRB process in July 2023), in which HC identified maximum baseline values plus 10% as inappropriate for soil screening criteria. Agnico Eagle appreciates their availability for future reviews however and will work with HC as discussed in response 7.1.*