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Keith Morrison
Manager, Project Monitoring
Nunavut Impact Review Board
P.O Box 1360
Cambridge Bay, NU X0B 0C0

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Sent VIA Email: info@nirb.ca

NIRB File #: 03MN107, 16MN056

Re: <u>Comment Request for Agnico Eagle's Meadowbank Complex Project 2025 Annual Report</u>

Hello Keith,

The Government of Nunavut (GN) thanks the Nunavut Impact Review Board (NIRB) for the opportunity to review Agnico Eagle Mines Ltd.'s 2025 Annual Report for the Meadowbank Complex Project, NIRB File #: 03MN107, and 16MN056.

The Government of Nunavut (GN) has reviewed Agnico Eagle Mines' 2025 Annual Report materials for the Meadowbank Complex and provides comments focused on wildlife monitoring, caribou protection, and implementation of related Project Certificate terms, conditions, and commitments. The GN recommends continued monitoring of the apparent increase in the duration of spring caribou migration across Project roads, with separate analysis for the Whale Tail Haul Road and All-Weather Access Road. The GN also recommends extension of the snow study to include higher-snowfall years and, when applicable, assessment of snow-management effects on a widened Whale Tail Haul Road.

The GN requests a review of helicopter flight-data methods and air traffic procedures to minimize low-altitude flying. The GN also recommends that the Proponent assess whether Project roads may be contributing to increased wolf predation on caribou, using all available information including Inuit Qaujimajatuqangit. The GN further notes that commitments related to caribou collaring and evaluation of caribou protection measures remain outstanding and expects the 2027 Annual Report to include a comprehensive evaluation of caribou protection measures using collar data from 2019 to 2026 and input from the Terrestrial Advisory Group. Lastly, the GN would appreciate continued engagement on financial or in-kind support for caribou collaring and mapping work.

The GN appreciates participating in the review of this project through NIRB's monitoring process. Should there be any concerns or need for follow-up, please feel free to contact me at jfbuller@gov.nu.ca.

Thank you,

Justin Buller
Interim Avatiliriniq Coordinator
Government of Nunavut

GN AR # 01	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Project Certificate 008 (Amendment No. 001), Term and Condition 28
Responsible Party	No
References	• Agnico Eagle Mines. Meadowbank Complex – 2025 Annual Report: Appendix 36 Meadowbank and Whale Tail 2025 Wildlife Monitoring Summary Report, Part 6. (March 2026)

IDENTIFICATION OF ISSUE

Agnico Eagle Mines' (AEM, Agnico, Proponent) 2025 Wildlife Monitoring Summary Report (Wildlife Report) presents an analysis of the timing and duration of caribou spring migrations through the Meadowbank and Whale Tail Project (Project) site using road survey data. The Government of Nunavut (GN) notes that this analysis suggests a potential increase in the duration of the spring migration across the Project's roads, though it remains uncertain whether this pattern will persist or is linked to Project effects.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

As part of the ongoing implementation of the Project's Terrestrial Ecosystem Management Plan (TEMP), Figure 5 of Appendix K of the Wildlife Report presents data on the number of days between the first caribou group observation and the date at which 95% of road-surveyed caribou were observed during the spring migration each year (2018–2025).

The GN notes that data for 2018 is not directly comparable to other years since (a) the Whale Tail Haul Road (WTHR) did not come into full operation until late 2018, after the spring caribou migration, and (b) as illustrated in Figure 4 of Appendix K of the Wildlife Report, there were significantly fewer road surveys done in 2018 compared to other years.

Excluding 2018 data from Figure 5, there appears to be an emerging trend towards a lengthening of the spring migration period across the Project's roads. The cause of this apparent trend is unknown.

The GN wishes to highlight the potential significance of this pattern and emphasizes the need for continued monitoring, reporting, and further investigation should the trend persist.

REQUEST(S)/RECOMMENDATION(S)

The GN recommends that the Proponent:

1) Continue to monitor and report, in future annual reports, the duration of the spring caribou migration across Project roads as presented in Figure 5. Should the apparent trend persist, additional studies should be undertaken to investigate its underlying causes.

2) In future annual reports, present the analysis (in Figure 5) separately for the WTHR and All-Weather-Access-Road (AWAR), given that these roads are managed independently and likely differ substantially in traffic composition (i.e., traffic frequency and vehicle types).

GN AR # 02	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Project Certificate 008 (Amendment No. 001), Terms and Conditions 28 and 68
Responsible Party	No
References	• Agnico Eagle Mines. Summary of Final Agnico Eagle Commitments for the Whale Tail Expansion Project. (February 2020) • Agnico Eagle Mines. Meadowbank Complex – 2024 Annual Report: Appendix 38 Meadowbank Complex Terrestrial Ecosystem Management Plan, Version 9.0. Parts 1-3. (March 2025) • Agnico Eagle Mines. Meadowbank Complex – 2025 Annual Report: Appendix 36 Meadowbank and Whale Tail 2025 Wildlife Monitoring Summary Report, Part 6. (March 2026) • Government of Nunavut. NIRB 190314/16MN056: Technical Review Comments on the Whale Tail Pit Expansion Project Proposal. (May 2019)

IDENTIFICATION OF ISSUE

Appendix I of the 2025 Wildlife Report presents the results of a snow study looking at snow-managed (ploughed) and unmanaged (not ploughed) areas adjacent to the Project's roads. The purpose of this study was to characterize and compare the snow conditions in these areas and to examine whether caribou respond to snow conditions in selecting road crossing points.

The Proponent has stated that sufficient data were collected between 2020 and 2025 to warrant ending the study and maintains that the commitment to undertake this study has been fulfilled. The GN appreciated the data the Proponent has collected so far, but notes that the original objective of the study, to capture the natural range of annual variability in snow conditions, has not yet been met. Additionally, given that the commitment was made in order to understand snow conditions from a widened Whale-Tail Haul Road (which has not been widened), the commitment is not yet complete, from the GN's perspective.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

The snow study originated from a commitment made during the Nunavut Impact Review Board's (NIRB) review of the Final Environmental Impact Statement (FEIS) for the Whale Tail expansion proposal. During this review, GN noted the following in a technical review comment (TRC):

> "Snowbanks and drifts that form along the Haul Road via natural processes or road management practices may pose a barrier to the movements of wildlife, in particular

caribou. Widening of the Haul Road as part of the Expansion Project may increase the potential for this effect to occur" (GN, 2019, p. 21)

In this TRC, the GN also requested:

> "The [snow] study should be conducted over multiple years to capture annual variability in conditions." (GN, 2019, p. 23)

In response to this concern, the Proponent provided the following commitment:

> "Agnico Eagle will conduct a study designed to monitor snow berm height and depth of snow along the sides of the haul road in representative areas. The purpose of the study is to determine how snow accumulation influences road permeability for caribou and other wildlife along the proposed widened Haul Road. Study design will be consistent with advice provided by the TAG. The study will be conducted over three years in an attempt to capture annual variability in conditions." (Agnico Eagle, 2020, p.14)

Adequate Data

The Proponent states in Appendix I of the 2025 Wildlife Report that sufficient data for the snow study were collected between 2020 and 2025 to conclude the snow study. However, as indicated above, one of the original objectives of the study was to collect data across enough years to capture the natural range of annual variability in snow conditions. The GN maintains that this objective has not yet been met.

Appendix I of the 2025 Wildlife Report states that "Years 2013 – 2020 were colder on average than the baseline temperature, and 2022 – 2025 were warmer on average." (Agnico Eagle, 2026, p. 22) and that "Total Precipitation during the snow season was lower during the years of the snow study (2020 to 2025), compared to previous years (2014 to 2019; Table 7; Figure 14)." (Agnico Eagle, 2026, p. 25)

Further, Table 7 shows that average annual snowfall (November 1 to May 25) from 2020–2025 was less than half that of 2014–2019 (44.7 mm versus 100.5 mm). As a result, the current dataset is heavily biased toward low-snowfall years and does not represent the broader range of snow conditions expected over time. This bias may substantially underestimate the influence of snowfall and snow-management practices along Project roads on caribou crossing behaviour.

Commitment Fulfilled

The original commitment to the snow study (Commitment #9) was to examine the effects of snow management along the widened WTHR (widened from 9.5 to 15 m). However, it is GN's understanding that the WTHR has not yet been widened. Thus, the commitment remains unfulfilled.

REQUEST(S)/RECOMMENDATION(S)

The GN recommends that the Proponent undertake the following:

1) Extend the study to capture years with higher snowfall.

2) Once recommendation 1 is completed, the Proponent may pause the study until the Proponent is contemplating widening the WTHR. In this event, the Proponent should resume or extend the study to understand the effects of snow management on the widened roads.

GN AR # 03	
Department	Environment
Organization	Government of Nunavut

Subject/Topic	• Project Certificate No. 004 (Amendment No. 003),
	  ○ Terms and Conditions No. 33, 61 and 62 (f);
	• Project Certificate No. 008 (Amendment No. 001),
	  ○ Terms and Conditions 28

Responsible Party	No
References	• Agnico Eagle Mines. Summary of Final Agnico Eagle Commitments for the Whale Tail Expansion Project. (February 2020) • Agnico Eagle Mines. Meadowbank Complex – 2024 Annual Report: Appendix 38 Meadowbank Complex Terrestrial Ecosystem Management Plan, Version 9.0. Parts 1-3. (March 2025) • Agnico Eagle Mines. Meadowbank Complex – 2024 Annual Report: Appendix 39: Meadowbank and Whale Tail 2024 Wildlife Monitoring Summary Report. (March 2025) • Agnico Eagle Mines. Meadowbank Complex – 2025 Annual Report: Appendix 36 Meadowbank and Whale Tail 2025 Wildlife Monitoring Summary Report. (March 2026)

IDENTIFICATION OF ISSUE

The 2025 Wildlife Report indicates that most long-range flying hours were classified as periods of take-off or landing when mandatory flight altitude minimums do not apply. The GN is concerned that either (a) the methods used to analyze flight data are misclassifying periods of flight cruising as take-offs or landings, or (b) pilots may be taking longer than necessary to ascend to, and descend from, minimum flight altitudes and are flying at low altitudes, potentially disturbing to wildlife.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

The Project's TEMP contains mitigation measures for the operation of aircraft to reduce disturbance of wildlife. For example, the following applies to helicopters:

> "• Long-range flights (25 km or greater) are a minimum of 650 m above ground level, except for take-off and landings (Agnico Eagle 2024a, b).
> • Short-range flights (less than 25 km) are a minimum of 300 m above ground level, except for take-off and landings (Fall 2024 TAG meeting; Agnico Eagle 2024a, b)." (Agnico Eagle, 2025, p. 29)

The TEMP provides exceptions for activities that necessitate flying below the minimums for safety, weather and project monitoring purposes (Agnico Eagle, 2025, p. 29).

Table 4.12 of the 2025 Wildlife Report indicates that 61% of long-range helicopter flight hours in 2025 were classified as take-off/landing time (Agnico Eagle, 2026, p. 4-20). Meanwhile, in 2024, 49% of long-range hours were classified as take-off/landing (Agnico Eagle, 2025b, p. 4-22). Since long-range flights are defined as thought exceeding 25 km, it seems unusual that take-off/landing accounts for half or more of the total flight time.

In addition, Figure 4.4 of the Wildlife Report appears to show several flight segments classified as take-off/landing time (grey lines) that are 30km or more. Furthermore, some of these take-off/landing segments are located in the middle of a flight leg rather than at its beginning or end (see example marked below).

As a result, the GN is concerned that the method used to analyze flight data may be misclassifying some helicopter cruising time as take-off or landing time. Alternatively, in some situations, pilots in some cases may take unnecessarily long times to ascend to, or descend from, flight altitude minimums. Consequently, significant, unnecessary low-level flying may be occurring outside the Project's footprint that could disturb wildlife.

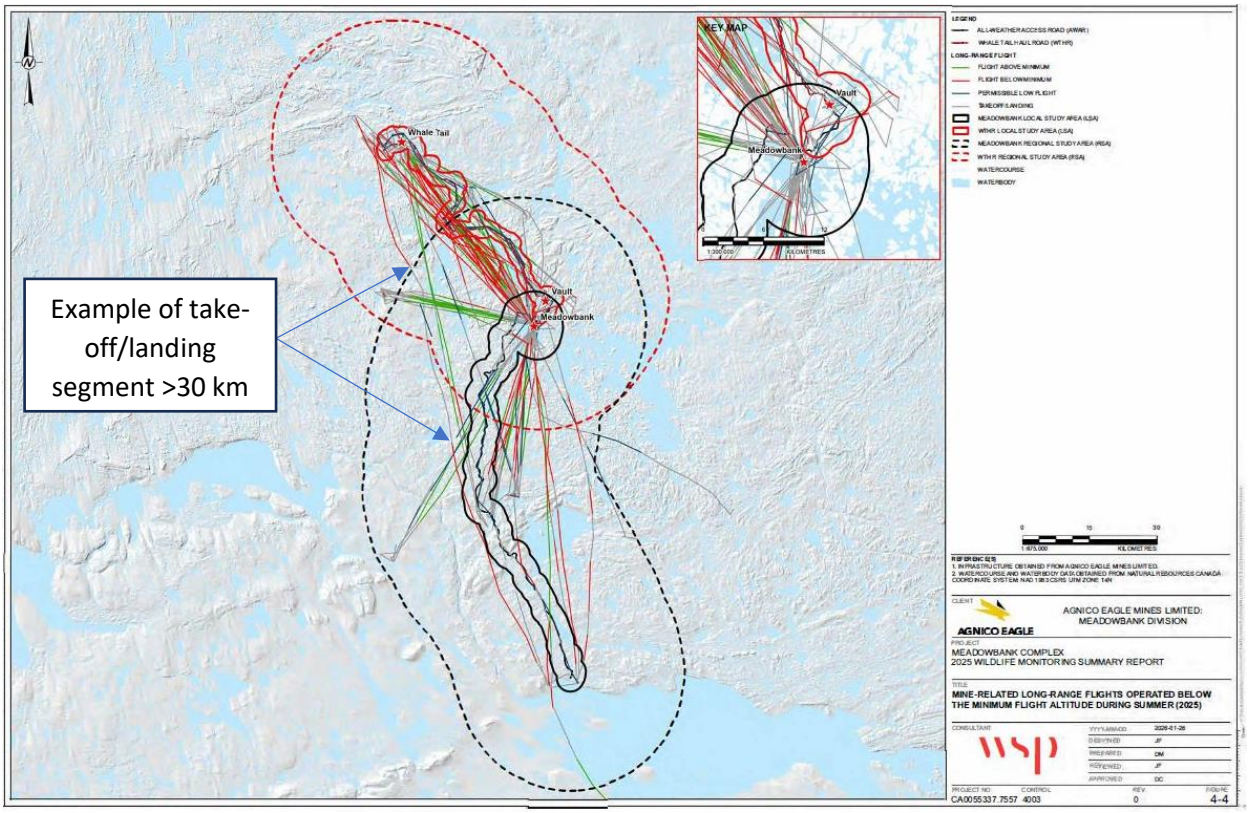

Figure 4-4: Agnico Eagle, 2026, p. 4-17

REQUEST(S)/RECOMMENDATION(S)

The GN recommends that the Proponent undertake the following:

1) Review the methodology used in the analysis of helicopter flight data to verify that take-off and landing periods are correctly classified. For flights with the longest periods of landing or take-off, the GN requests further assessment to be provided to clarify if a prolonged take-off or landing was justified.

2) Revise the Project's air traffic management and noise abatement plans requiring helicopter pilots to: (a) expedite ascent to and descent from flight altitude minimums, subject to safety considerations, and (b) accomplish as much ascent or descent (i.e., flight time below altitude minimums) as possible while within the Project's local study area.

GN AR # 04	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Project Certificate No. 008 (Amendment No. 001), Term and Condition 28
Responsible Party	No
References	• Agnico Eagle Mines. Meadowbank Complex – 2025 Annual Report: Appendix 36 Meadowbank and Whale Tail 2025 Wildlife Monitoring Summary Report. (March 2026) • Agnico Eagle Mines. Meadowbank Complex – 2024 Annual Report: Appendix 39: Meadowbank and Whale Tail 2024 Wildlife Monitoring Summary Report. (March 2025) • Agnico Eagle Mines. Meadowbank Complex – 2023 Annual Report: Appendix 39: Meadowbank and Whale Tail 2023 Wildlife Monitoring Summary Report. (March 2024) • Agnico Eagle Mines. Meadowbank Complex – 2022 Annual Report: Appendix 47: Meadowbank and Whale Tail 2022 Wildlife Monitoring Summary Report. (March 2023) • Agnico Eagle Mines. Meadowbank Complex – 2021 Annual Report: Appendix 47: Meadowbank and Whale Tail 2021 Wildlife Monitoring Summary Report. (April 2022) • Boulanger, J., et al. (2024). Estimating the effects of roads on migration: A barren-ground caribou case study. *Canadian Journal of Zoology, 102*, 1–18. https://doi.org/10.1139/cjz-2023-0121 • DeMars, C. A., & Boutin, S. A. (2017). Nowhere to hide: Effects of linear features on predator–prey dynamics in a large mammal system. *Journal of Animal Ecology, 86*(6), 1098–1107. https://doi.org/10.1111/1365-2656.12760 • Frame, P. F., et al. (2004). Long foraging movement of a denning tundra wolf. *Arctic, 57*(2), 196–203. http://www.jstor.org/stable/40512619 • Fullman, T. J., et al. (2025). Behavioral responses of migratory caribou to semi-permeable roads in Arctic Alaska. *Scientific Reports, 15*, 24712. https://doi.org/10.1038/s41598-025-10216-6 • Joly, K., et al. (2026). Barrier impermeability is associated with migratory ungulate survival rates. *Scientific Reports, 16*, 152. https://doi.org/10.1038/s41598-025-31911-4 • Lessard, R. B., et al. (2026). Northern development and Rangifer risks: A review of the impacts of resource extraction for caribou and reindeer. *Environmental Reviews, 34*, 1–13. https://doi.org/10.1139/er-2025-0182

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- Walton, L. R., et al. (2001). Movement patterns of barren-ground wolves in the central Canadian Arctic. *Journal of Mammalogy, 82*(3), 867–876. https://doi.org/10.1644/1545-1542(2001)082<0867:MPOBGW>2.0.CO;2
- Whittington, J., St. Clair, C. C., & Mercer, G. (2011). Caribou encounters with wolves increase near roads and trails: A time-to-event approach. *Journal of Applied Ecology, 48*(6), 1535–1542. https://doi.org/10.1111/j.1365-2664.2011.02043.x

IDENTIFICATION OF ISSUE

The GN notes that wolf observations during 2025 road surveys were marginally higher than in any of the previous five years. Further investigation is warranted into whether wolves are using the Project's roads to increase rates of predation on species such as caribou.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

Table 3-9 of the 2025 Wildlife Report indicates that 55 wolves were observed during surveys along the Project's AWAR and WTHR in 2025. The GN notes that these results were marginally higher than the past five years.

Table 1. Annual Wolf Observations per Project Road Surveys

Survey Year	Annual Total – Wolves Observed During Road Surveys	Reference
2025	55	Agnico Eagle, 2026
2024	38	Agnico Eagle, 2025
2023	51	Agnico Eagle, 2024
2022	40	Agnico Eagle, 2023
2021	34	Agnico Eagle, 2022

It is unclear whether the increase in wolf observations recorded in 2025 reflects a broader trend. The GN notes studies show that predators such as wolves and bears commonly use roads as efficient travel corridors, increasing encounter rates with prey. Higher road density is linked to

increased predation and strong avoidance for Woodland caribou (e.g., DeMars & Boutin, 2017; Newton et al., 2017; Whittington et al., 2011).

Similar patterns are likely in tundra ecosystems, as wolves and other predators are known to travel long distances while following migrating barren-ground caribou (Reynolds & Garner, 1988; Walton et al., 2001), including during the denning period when movements are normally constrained (Frame et al., 2004).

At the same time, migrating barren-ground caribou, including those near the Project's roads, reduce travel speed and delay crossing roads (e.g. Boulanger et al., 2024; Fullman et al., 2025; Joly et al., 2026; Lessard et al., 2026; Severson et al., 2024). These delayed movements in crossing may lead to the pooling of caribou into denser groups and increase their vulnerability to predation by wolves and other predators.

REQUEST(S)/RECOMMENDATION(S)

The GN recommends that the Proponent undertake the following:

1) Use all available information, including Inuit Qaujimajatuqangit (IQ), to assess whether Project roads are contributing to increased wolf predation on caribou. Progress on this assessment should be reported in the 2026 Annual Report.

GN AR # 05	
Department	Environment
Organization	Government of Nunavut

Subject/Topic	• Project Certificate No. 004 (Amendment No. 003),
	  ○ Terms and Conditions 57
	• Project Certificate No. 008 (Amendment No. 001),
	  ○ Terms and Conditions 29 and 68

Responsible Party	• 57, 29 – Yes • 68 – No
References	• Agnico Eagle Mines. Meadowbank Complex – 2025 Annual Report: Appendix 36 Meadowbank and Whale Tail 2025 Wildlife Monitoring Summary Report. (March 2026) • Agnico Eagle Mines. Summary of Final Agnico Eagle Commitments for the Whale Tail Expansion Project. (February 2020) • Government of Nunavut. Government of Nunavut Comments on 2023 Annual Report for Agnico Eagle's Meadowbank Complex Project. (June 2024) • Agnico Eagle Mines. Commitments as submitted by Agnico Eagle during the Whale Tail Pit Final Hearing and listed in the NIRB Final Hearing Report, NIRB File # 170921-16MN056-FH EX21-Agnico Eagle Terrestrial Commitments-IA2E. (September 2017)

IDENTIFICATION OF ISSUE

Section 6 of the 2025 Wildlife Report summarizes 2025 collaring activities and interactions between collared caribou and the Project's Regional Study Area (RSA); however, the Wildlife Report does not provide specific information on future collaboration, financial contributions, or in-kind support to the GN. These gaps mirror concerns previously raised by the GN in 2024.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

<u>TCs 57 (PC No. 004) and 29 (PC No. 008)</u>

The GN's caribou collaring program provides essential information for triggering Project mitigation measures, supporting effects monitoring, and informing adaptive management. The importance of this data is reflected in multiple Project terms, conditions, and commitments that require the Proponent to support in its collection and use.

For example, TC 57 of Project Certificate No. 004 states that:

> "Cumberland shall participate in a caribou collaring program as directed by the GN-DOE." (NIRB, 2009)

Meanwhile, TC 29 of Project Certificate No. 008 states that:

> "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."

[Emphasis added by reviewer]

And that the objective of this term and condition is to:

> "To reduce uncertainty associated with the potential impacts of the Project, including the haul road, as well as of the Meadowbank Gold Mine and its All-Weather Access Road on caribou and thereby improve caribou protection measures. (NIRB 2018, 2020)."

Since this term and condition came into effect (March 2018), the GN has:

- Funded and deployed collars on caribou in herds that interact with the Project;
- Provided mapping products to the Proponent and the Terrestrial Advisory Group to support the implementation of wildlife mitigation and monitoring for the Project; and,
- Entered into a data-sharing agreement in 2023, providing the Proponent with ongoing access to collar data from 2008 to the present for Project effects monitoring and reporting.

The GN notes that the Proponent last contributed to the collection of collar data in April 2018. At this time, the GN is not planning to deploy collars in the Project area but is open to engaging with the Proponent to understand how the Proponent can contribute to future GN caribou collaring programs.

The GN also has begun exploratory conversations with the Proponent regarding a possible contribution agreement to support mapping products provided for the Project monitoring and mitigations, but these talks are at an early stage.

TC 68 (PC 008, Amendment 001) and Commitment 1

TC 68 (PC 008, Amendment 001) requires the Proponent to track and report on all commitments to ensure they are fulfilled.

One commitment of relevance is GN-04 "Evaluation of Caribou Protection Measures", which was made during the Whale Tail Pit Project Proposal in 2017 (Agnico Eagle, 2017). This commitment requires the Proponent to undertake an evaluation of caribou protection measures at least every five years, should the Project extend beyond 2022. Accordingly, the next full evaluation is due in 2027. While relevant data needed to support this commitment has been collected by both the Proponent and the GN and summarized annually, the GN emphasizes that the 2027 annual report must include a complete assessment, including an analysis of caribou collar data.

REQUEST(S)/RECOMMENDATION(S)
At this time, TCs 29 and 57 are unfulfilled, but the GN is committed to further discussions with the Proponent in good faith and to work towards reaching agreement on a framework for ongoing support of the GN's caribou collaring program. The GN recommends that the Proponent undertake the following: 1) Continue to engage with the GN regarding future collaring programs for caribou herds that are potentially impacted by the Project. It is noted that the GN expects this collaboration will be separate from the existing data sampling and sharing agreement and would address financial and/or in-kind support only. 2) In the absence of the Proponent undertaking its own collaring program and related analyses to understand the zone of influence and associated effects of project components on caribou movement, the Proponent should bear the financial costs associated with creating or distributing mapping products representing GN collar data with respect to the Project. Additionally, in their 2027 annual report, in accordance with TC 68 and Commitment 1, the Proponent should provide a comprehensive evaluation of the Project's caribou protection measures. This evaluation should include an analysis of collar data for the period 2019 to 2026, during which both Project roads were operational, to assess avoidance and deflection associated with the Project roads, delays in road crossings, and the effectiveness of road closures. The evaluation should be developed with input from, and endorsed by, the Project's Terrestrial Advisory Group (TAG).