

GN AR # 01	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Snowbank Monitoring
Terms and Conditions	<ul style="list-style-type: none"> • 25, 27, 29 (Project Certificate No. 003, Amendment No. 002). • 20 (Project Certificate No. 009).
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Hope Bay. Appendix D.2: Hope Bay Project – 2023 Wildlife Mitigation and Monitoring Program Compliance Report (April 2024). • Agnico Eagle Mines Limited: Hope Bay. Wildlife Mitigation and Monitoring Plan (January 2023).
IDENTIFICATION OF ISSUE	
<p>The Government of Nunavut (GN) recognizes that Agnico Eagle Mines Limited (Agnico Eagle, AEM or the Proponent) wishes to cease punctuated (i.e., regularly scheduled) snowbank height monitoring in favour of passive incidental monitoring as a result of the collection and subsequent characterization of snowbank height data for several years. However, the GN notes that long-term climate variability could have resulted in drier winters with less precipitation during monitoring.</p> <p>Additionally, as outlined in the Project’s Wildlife Mitigation and Monitoring Plan (WMMP) snow track studies are to be coupled with snowbank height monitoring (AEM, 2023). However, the GN notes that no snow track surveys were reported in Appendix D.2: Hope Bay Project – 2023 Wildlife Mitigation and Monitoring Program Compliance Report (Appendix D.2). As such, the GN is concerned that the transition to passive incidental monitoring of snowbank height monitoring will reduce opportunities for the Proponent to undertake snow track surveys unless these activities are decoupled.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>Under the Nunavut Impact Review Board (NIRB) Project Certificate No. 009, Agnico Eagle Mines Limited (Agnico Eagle, AEM or the Proponent) committed to undertaking snowbank height monitoring until operational snow management is characterized (GN-49; NIRB, 2018).</p> <p>As indicated in Appendix D.2, the Proponent has implemented the snowbank height monitoring program for four years (2020–2023). Per Table 10, the mean snowbank height was 9.6 cm with</p>	

a standard deviation of 22.5 for all monitoring years 2020–2023 (Pages 21 and 22; AEM, 2024). The Proponent posits that variability in snowbank heights is primarily attributed to roadside signage and poles, which create small areas (i.e., a few meters long) of banks where the bladders cannot access.

As a result of several years of data collection and analysis, Agnico Eagle has proposed to discontinue the formal monthly snowbank height monitoring program in favour of passive incidental monitoring (Page 23; AEM, 2024). The Proponent describes passive monitoring as:

...incidental reporting from site employees if snowbanks are seen higher than 20 cm and longer than 3 m. Incidental reporting would go to the Environment department for follow-up management. Incidental reports of snowbank heights and follow-up management actions will be recorded and reported in the annual WMMP compliance report. This update in the WMMP program will be included in an updated 2024 WMMP Plan, and discussed at the first IEAC meeting in 2024 prior to changes being implemented. (Page 23; AEM, 2024).

While monitoring suggests snowbank height has been sufficiently characterized, the GN notes it is important to consider long-term climate variability (e.g. Pacific Decadal Oscillations, El Niño-Southern Oscillation, and/or climate change) which could have resulted in drier winters with less precipitation during monitoring.

Additionally, the Project's WMMP states:

Snow track surveys will be conducted along Project roads during winter months in conjunction with snowbank height monitoring (Section 3.1.5.2). Surveys will be conducted twice per month (SOP: Snow Track and Snowbank Height Monitoring) ... Results from [height of land surveys; and the snow track surveys will be combined with collar data and analyzed periodically with the objective of evaluating caribou behaviour in relation to roads and wildlife crossing structures. (Pages 22 and 23; AEM, 2023)

The GN notes that no snow track surveys were reported in Appendix D.2, this suggests that no snow track surveys occurred in 2023. The GN is concerned that the transition to passive incidental monitoring of snowbank height monitoring will reduce opportunities for the Proponent to undertake snow track surveys unless these activities are decoupled.

RECOMMENDATION(S)

The GN recommends the following regarding the above concerns:

- Prior to discontinuing snowbank height monitoring, the GN recommends that the Proponent undertake a review to confirm that snowfall during the monitoring program (2020–2023) was within climate norms and averages.
- If punctuated snowbank height monitoring is discontinued, snowbank height should be incidentally inspected and recorded.
- The Proponent should provide an explanation for the absence of snow track surveys

reported in the 2023 annual report materials. If punctuated snowbank height monitoring is discontinued, the Proponent should continue punctuated (i.e., not incidental) snow track surveys.

GN AR # 02	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Noise Monitoring
Terms and Conditions	<ul style="list-style-type: none"> • 24, 29 (Project Certificate No. 003, Amendment No. 002). 4, 21 and 22 (Project Certificate No. 009).
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Hope Bay. Appendix D.2: Hope Bay Project – 2023 Wildlife Mitigation and Monitoring Program Compliance Report (April 2024). • Nunavut Impact Review Board. List of Commitments Generated in the Proponent’s Response to Technical Comments on the Madrid-Boston Final Environmental Impact Statement (May 2018).

IDENTIFICATION OF ISSUE

In Appendix D.2, the Proponent states that noise monitoring testing was conducted in 2023 to refine setback distances required for when caribou are present near the blasting site. Results from these noise monitoring tests indicate that the thresholds, as committed to the GN in the Final Environmental Impact Statement (FEIS) for the Phase 2 Hope Bay Belt Project, were exceeded. AEM posits that exceedances may have been a product of prevailing ambient noise conditions.

IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE

As described in section 2.5 Noise Monitoring of Appendix D.2, the Proponent undertakes noise monitoring to refine setback distances required for when caribou are present near blasting to avoid disturbance. The current setback distance for this activity is 2.8 km (Page 23; AEM, 2024). At this distance, modelling estimates that blasting noise will not exceed 96 dB Lpeak (NIRB, 2018).

In Appendix D.2, the Proponent states that noise monitoring testing was conducted for three quarry blasts in October 2023. The Proponent indicates 96 dB Lpeak was exceeded for each the noise monitoring tests (i.e., 111 dB, 117 dB, and 120 dB) (Page 23; AEM, 2024). However, the Proponent suggests that exceedances may have been a result of prevailing ambient noise conditions such as “talking, footsteps, vehicle movement, doors closing, noise from the workshop, backup alarms, ravens and wind gusting,” as opposed to the blasting events (Page 23; AEM, 2024).

The Proponent concludes that, “[the] 2023 results indicate that equipment is functional but additional work is required to obtain results sufficient for testing the sound level at the exact time of the blasts” (Page 23; AEM, 2024). The GN concurs that further efforts should be made by the Proponent to distinguish between noise generated from blasting activities and ambient background noise. This differentiation is essential for verifying modelling predictions to ensure that appropriate setback distances are used by the Project to protect caribou during blasting activities.

RECOMMENDATION(S)

The GN recommends the following regarding the above concerns:

- Take the necessary steps to address confounding ambient noise (e.g., vehicles, workshop, alarms) during noise monitoring to provide an accurate representation of Project effects.

GN AR # 03	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Statistical Analysis
Terms and Conditions	<ul style="list-style-type: none"> • 22, 25 (Project Certificate No. 003, Amendment No. 002). • 19 (Project Certificate No. 009).
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Hope Bay. Appendix D.2: Hope Bay Project – 2023 Wildlife Mitigation and Monitoring Program Compliance Report (April 2024).
IDENTIFICATION OF ISSUE	
<p>In sections 3.4.2.2 and 6.1.2 of Appendix D.2, the Proponent analyzed wildlife camera data on caribou from June 2016 to September 2023 to assess caribou occupancy and the potential zone of influence (ZOI) between treatment and control locations. The GN notes that these models do not include important temporal variables such as ‘Year’ or the Project’s phase (i.e., baseline, construction, operations) as fixed effects.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>In sections 3.4.2.2 and 6.1.2 of Appendix D.2, the Proponent describes two analyses conducted of wildlife camera data (specifically on caribou events) from June 2016 to September 2023. The Proponent’s first analysis attempted to determine whether cameras in treatment locations had a different probability of caribou occupancy than cameras in the control location. The Proponent’s second analysis attempted to evaluate the potential ZOI (i.e., distance at which an effect on caribou occupancy may be occurring) between treatment and control locations.</p> <p>The Proponent indicates that, ‘Year’ was included in models as a random effect to improve model fit (Page 23; AEM, 2024). However, the GN notes that while determining spatial effects (i.e., difference between Treatment and Control areas) is an important analysis, it is also important to identify any temporal changes during the development of the Project. For this reason, these analyses should consider ‘Year’ as a fixed effect or should include a categorical variable based on the ‘Project Phase’ (i.e., baseline, construction, operations). Additionally, an interaction term between ‘Year’ and ‘Treatment’ should be included where possible.</p>	
RECOMMENDATION(S)	

The GN recommends the following regarding the above concerns:

- In analyses presented in future annual reports the Proponent should include 'Year' (or a similar factor variable such as 'Project Phase') as a fixed effect to examine temporal trends.
- In analyses presented in future annual reports the Proponent should include an interaction term between 'Year' and 'Treatment' where possible.

GN AR # 04	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Aircraft – Wildlife Protection
Terms and Conditions	<ul style="list-style-type: none"> • 29 (Project Certificate No. 003, Amendment No. 002). • 4, 22 (Project Certificate No. 009).
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Hope Bay. 2023 Annual Report (April 2024). • Agnico Eagle Mines Limited: Hope Bay. Appendix D.2: Hope Bay Project – 2023 Wildlife Mitigation and Monitoring Program Compliance Report (April 2024). • TMAC Resources. Madrid-Boston Project Final Environmental Impact Statement (December 2017).
IDENTIFICATION OF ISSUE	
<p>The GN has several concerns regarding aircraft activity associated with the Project. These concerns involve the presentation or absence of important aircraft activity information in Appendix D.2, and the potential exceedance of FEIS predictions for helicopter activity.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>Aircraft activity for the Project entails both helicopters and fixed-wing aircraft. Helicopters transit between Doris, Boston, and remote areas to supply gear/equipment (e.g., drilling gear) and Project personnel (Page 13; AEM, 2024). Fixed-wing aircraft facilitate the movement of supplies and Project personnel in and out of the regional area (Page 13; AEM, 2024).</p> <p><u>Helicopters</u></p> <p>The Project’s WMMP provides several requirements regarding the management and reporting of helicopter activity. Examples include:</p> <p style="padding-left: 40px;"><i>[During all seasons] [h]elicopter flights avoid animals by as large a margin as possible, with a minimum of 300 m vertically and 600 m horizontally when safe to do so (Table 2.2-1, Page 7; AEM, 2023),</i></p>	

and,

[During caribou calving season from June 5-20] [h]elicopters will avoid caribou to the extent possible, and by a minimum of 610 m vertically and 600 m horizontally when safe to do so (Table 2.2-2; Page 8; AEM, 2023)

and,

Helicopter flight paths will be recorded by on-board Global Positioning System (GPS) devices including date, time, location, and elevation. Results will be summarized in the annual compliance report. (Page 22; AEM, 2023)

In Appendix D.2, Agnico Eagle indicates that 1,049 one-way helicopter trips were “logged” around the Hope Bay Project (Page 14; AEM, 2024). However, the GN notes that summary information of helicopter elevation or pilot observations of wildlife was not provided in reporting materials. In the absence of summary or long-form data concerning helicopter flight elevations and pilot observations of wildlife, the GN finds it difficult to evaluate the Proponent’s compliance with this component of the WMMP.

As detailed in Appendix D.2, the Madrid-Boston FEIS predicted a maximum of 8 daily one-way trips (TMAC, 2017). In Appendix D.2, the Proponent does not report the maximum number of daily one-way trips. Instead, Agnico Eagle reports the average number of daily one-way trips (Page 15; AEM, 2024). The GN notes that the absence of the maximum number of daily one-way trips in Appendix D.2 makes it challenging to determine if Project activities stayed within the predicted values outlined in the FEIS.

In 2023, the average daily one-way trips for helicopters near Doris was 8.4 one-way trips per day (Page 15; AEM, 2024). This value would suggest that the above FEIS value was exceeded, however, the Proponent states that:

Since the Project is in care and maintenance, aircraft activity is lower than predicted in the FEIS, which was based on active construction and operations years. Helicopter activity around the Doris/Madrid area is difficult to distinguish between site maintenance and monitoring activities compared to exploration activities, which are not included in Project compliance. Therefore, reported helicopter activity levels are likely higher than the specific activity for care and maintenance (Page 15; AEM, 2024).

The GN is concerned with the Proponent’s failure to maintain records distinguishing between helicopter flights for site maintenance and monitoring activities versus helicopter flights for exploration activities. The failure to present this information hinders the GN’s ability to determine the Project’s ability to stay within FEIS predictions.

Fixed-wing Aircraft

The Project’s WMMP indicates that “fixed-wing aircraft will maintain at least 610 m elevation except for take-offs and landing and at the discretion of the pilot for safety concerns” (Page 15; AEM, 2024).

However, the GN notes that summary information of fixed-wing aircraft flight elevation was not provided in 2023 reporting materials. In the absence of summary or long-form data concerning fixed-wing aircraft flight elevation, the GN finds it difficult to ensure the Proponent's compliance with this component of the WMMP.

Additionally, commitment GN-59 states:

...Fixed-wing landings/take-offs at Project airstrips will be recorded. These data will be reported in the annual WMMP compliance report. The reported information will be used to verify EIS predictions regarding flight frequency (NIRB, 2018).

Emphasis added

The Madrid-Boston FEIS predicted a maximum of 4 daily one-way trips (i.e., take-offs and landings) (TMAC, 2017). In Appendix D.2, the Proponent does not report the maximum number of daily one-way trips. Instead, Agnico Eagle reports the average number of daily one-way trips (Page 15; AEM, 2024). The GN notes that the absence of the maximum number of daily one-way trips in Appendix D.2 makes it challenging to determine if Project activities stayed within the predicted values outlined in the FEIS.

RECOMMENDATION(S)

Regarding the above concerns, the GN recommends that the Proponent make substantial improvements to record and report the following information in future annual reports:

- Where applicable, the Proponent should include the minimum, maximum and mean of all numerical aircrafts data, including but not limited to the number of daily one-way trips and aircraft flight elevations.
- The Proponent should endeavor to include long-form tabular data of flight logs. These tables should include information such as: date, flight purpose, flight distance, flight's mean height above ground level (m), justification for low-level flights, wildlife observations made by the pilot and any course corrections made as a result.
- The Proponent should differentiate between helicopter flights which occur for the purpose of site maintenance and monitoring activities versus exploration activities.

GN AR # 05	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Spills
Terms and Conditions	32, 33, 52, Project Certificate No. 003, Amendment No. 02
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Hope Bay. 2023 Annual Report (April 2024) • Government of Nunavut, Department of Environment, Environmental Protection Division. Environmental Guideline: General Management of Special and Hazardous Waste. (March 2023) https://www.gov.nu.ca/sites/default/files/publications/2024-05/Hazardous%20Waste%202023-03.pdf
IDENTIFICATION OF ISSUE	
The GN notes that a spill involving “1 L of glycol” that occurred on May 1, 2023 does not specify the specific type of glycol involved (Page 6-6; AEM, 2024).	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
In the Annual Report, Agnico Eagle indicates that twelve spills occurred in 2023 which met the regulatory reporting threshold outlined in the <i>Nunavut Spill Contingency Planning and Reporting Regulation</i> (Page 6-1; AEM, 2024). One of these reportable spills, which occurred on May 1, 2023, involved “1 L of glycol” (Page 6-6; AEM, 2024). The GN notes that the Proponent does not indicate in the Annual Report the specific type of glycol involved in the spill. The GN wishes to emphasize that spills involving ethylene glycol are particularly hazardous to wildlife, as even small quantities of this substance are highly toxic (GN, 2023).	
RECOMMENDATION(S)	
The GN recommends the following regarding the above concerns: <ul style="list-style-type: none"> • In this and future annual reports, the Proponent should specify the type of glycol involved in Project activities and spills. 	

- If and where applicable to this Project, the GN recommends using less toxic propylene glycol instead of ethylene glycol.

GN AR # 06	
Department	Economic Development and Transportations
Organization	Government of Nunavut
Subject/Topic	Employment, Turnover
References	<p>Agnico Eagle, Hope Bay 2023 Annual Report</p> <p>Agnico Eagle Mines, 2024, <i>Hope Bay Project</i>, Reference 0714716</p> <p>Hope Bay Project, 2023 Socio-economic Monitoring Program Report</p> <p>181109-12MN001-NIRB Project Certificate No 009-OT1E, November 2018</p>
SUMMARY OF COMPLIANCE	
<p>Data related to employment shows employment is decreasing on this site. The turnover rate among the Inuit employees at the mine is higher than all other employees. However, a closer look to this number shows an interesting development when it is trend when we considered it since 2019.</p>	
REVIEWER'S COMMENTS AND SUPPORTING RATIONALE	
<p>According to the <i>Hope Bay Project, 2023 Socio-economic Monitoring Program Report</i>, Agnico Eagle announced its decision to place the Doris Mine into care and Maintenance on February 18, 2022. The report mentions that during that period, from 2022 to 2023, the number of employees decreased. This number went from 518 in 2022 to 350 workers in 2023. Additionally, the trend in turnover rate, from 2017 to 2023, was decreasing at fluctuation rate.</p> <p>In 2017 the turnover rates for Inuit employees were 105%, while the turnover rates for all permanent employees was 35%. In 2023 these numbers fall respectively to 33% for Inuit employees and 31% for all permanent employees.</p> <p>The objective of Term and Condition 41 is “to prepare for, monitor and mitigate the potential socio-economic effects of temporary or permanent mine closure on the affected communities of Nunavut”. At the current stage of care and maintenance, K-SEMC are more important than ever. In this context, can the mine tell us how many households are not receiving a revenue from the mine anymore in Kitikmeot communities? Throughout its participation to K-SEMC what other cumulative effects has identify, from social and economic perspectives in the communities?</p>	

Can the mine share with us the methodology it has developed to trace social or economic impacts of the current situation in the Kitikmeot communities?

Term and Condition 39 stipulates that the proponent should be reporting levels of Inuit employment as well as barriers and opportunities to achieving high levels of employment as described in the Madrid Boston Project FEIS. AEM has conducted a study on barrier elimination in the Kivalliq region. The GN suggest that in the Kitikmeot, AEM will conduct another study on barriers Inuit face that make it difficult to find work in the mining sector.

NIRB has also recommended the use of a standardized reporting template to ensure consistent data collection and tracking of data trends for socio-economic impacts. While acknowledging the mine has changed ownership recently and is in Care and Maintenance now, a standardized template would help a great deal towards measuring cumulative impact and clearly assessing changes in the socio-economic conditions from one year to the next and through different operative phases of the mine.

REVIEWER'S RECOMMENDATIONS

The GN recommends the following:

- That AEM explains the fall in turnover rate among Inuit employees at the Hope Bay mine, and offer explanation for how any AEM-run programs may be supporting this trend.
- That AEM provide details about how many Inuit workers, out of the 168 employees no longer working at this site, were redeployed by the company on other Agnico Eagle projects / sites?
- That AEM provide additional information about what incentives, including information, the proponent is using to recruit more Inuit employees once the mine reopens

GN AR # 07	
Department	Economic Development and Transportations
Organization	Government of Nunavut
Subject/Topic	Housing
References	<p>Agnico Eagle, Hope Bay 2023 Annual Report</p> <p>Hope Bay Project, 2023 Socio-economic Monitoring Program Report</p> <p>181109-12MN001-NIRB Project Certificate No 009-OT1E, November 2018</p>
SUMMARY OF COMPLIANCE	
<p>In section 8 of the <i>Hope Bay Project 2023 Socio-economic Monitoring Program Report</i>, the Proponent explains how the natural growing of population is affecting the housing market in the Kitikmeot region.</p>	
REVIEWER'S COMMENTS AND SUPPORTING RATIONALE	
<p>Under Term and Condition 49 regarding the voluntary housing survey. AEM stated that they could not comply with this condition because there was no housing survey available from GN or NHC to participate in. At the time of writing this review, it is unclear whether there ever was a Nunavut-wide voluntary housing survey conducted by GN or NHC, or if one had been planned.</p> <p>It should be noted that this condition is worded “IF the government of Nunavut and the Nunavut Housing Corporation develop an anonymous voluntary housing survey...”</p>	
REVIEWER'S RECOMMENDATIONS	
<p>In regard to Term and Condition 49, AEM could create it's own survey much like it has for workers at the Kivalliq mines, in order to inform the Housing VSEC and measure the predictions outlined in FEIS.</p>	
PROPOSED TERM AND CONDITION/COMMITMENT	
<p>Term and Condition 49: The Proponent shall create an anonymous, voluntary housing survey available to site personnel, and report those survey results to the Socio-Economic</p>	

Monitoring Committee and Working Group. The survey results will also be included in the annual Socio-Economic Monitoring Report.

GN AR # 08	
Department	Economic Development and Transportations
Organization	Government of Nunavut
Subject/Topic	Archeology
References	<p>Agnico Eagle, Hope Bay 2023 Annual Report</p> <p>Hope Bay Project, 2023 Socio-economic Monitoring Program Report</p> <p>181109-12MN001-NIRB Project Certificate No 009-OT1E, November 2018</p>
SUMMARY OF COMPLIANCE	
<p>Term and Condition 45 states that “The Proponent shall conduct archaeological and paleontological surveys prior to land disturbance related to the Project and report survey results to applicable parties, including the Government of Nunavut – Department of Culture and Heritage”.</p> <p>Term and Condition 46 states that the proponent should make sure that “any heritage resources encountered are reported to appropriate regulatory authorities”.</p>	
REVIEWER’S COMMENTS AND SUPPORTING RATIONALE	
<p>The Proponent has suggested in Appendix C-1, page C-5, the removal of commitment made in 2006 about Archeology.</p> <p>The GN does not support the idea of any relevant commitments made being “superseded by applicable regulatory requirements and the IIBA” as suggested by the Proponent.</p>	
REVIEWER’S RECOMMENDATIONS	
<p>The GN strongly recommend that those commitments be maintained in the Terms and Conditions and in the commitments from 2006.</p>	