July 29th, 2021

Emily Koide
Technical Advisor I
Nunavut Impact Review Board

Re: Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2020 Annual Report comments

Dear Ms. Koide,

The following information are intended to address regulator's comments regarding the Meadowbank (03MN107) and Whale Tail (16MN056) 2020 Annual Report:

- Government of Nunavut – June 25, 2021: Comment Request for Agnico Eagle Mine's Meadowbank and Whale Tail Project 2020 Annual Report

- Fisheries and Oceans Canada – June 24, 2021: Whale Tail and Meadowbank Project- 2020 Annual Report

- Crown-Indigenous Relations and Northern Affairs Canada – June 7, 2021: Comment Request for Agnico Eagle Mines Limited's Meadowbank Gold Mine Project and Whale Tail Pit Project's 2020 Annual Report

- Kivalliq Inuit Association – June 25, 2021: Kivalliq Inuit Association Technical Comments for the Whale Tail/Meadowbank Annual report 2020 produce by Agnico Eagle Mine

- Environment and Climate Change Canada – June 25, 2021: 03MN107 - 16MN056 / 2AM-MEA1526 - 2AM-WTP1826 – Agnico Eagle Mines Ltd. – Meadowbank Gold Mine and Whale Tail Pit Projects – 2020 Annual Report

- Transport Canada – May 26, 2021: Transport Canada comments on 2020 Annual Report for Meadowbank Gold Mine and Whale Tail Pit Project - revised

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

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Environment & Critical Infrastructures Superintendent

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MEADOWBANK

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1 Government of Nunavut (GN)

1.1 Helicopter Traffic Monitoring and Reporting

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Limited. (2020a). Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2019 Annual Report comments; Agnico Eagle Mines (AEM) Ltd. (2020b). Meadowbank Mine 2019 Wildlife Monitoring Summary Report. Final. Appendix 52 of the Meadowbank Mine Annual Report; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Government of Nunavut (GN). (2017). Final written submission for Agnico Eagle Mines' environmental impact statement for the proposed Whale Tail Pit project; Government of Nunavut (GN). (2017). Final written submission for Agnico Eagle Mines' environmental impact statement for the proposed Whale Tail Pit project; Government of Nunavut (GN). (2020). Comments on Agnico Eagle Mines Limited's Meadowbank Gold Mine Project and Whale Tail Pit Project 2019 Annual Report (03MN107 & 16MN056); Nunavut Impact Review Board (NIRB). (2017) Final hearing report, Agnico Eagle Mines Ltd. Whale Tail project. NIRB File No.16MN056; Nunavut Impact Review Board (NIRB). (2020). 2019-2020 Annual Monitoring Report Meadowbank Gold Mine and Whale Tail Pit Projects

Identification of issue: During the NIRB's review of the Whale Tail Project, the Proponent made a commitment to the Government of Nunavut (GN) that helicopter traffic would be monitored and reported. This commitment was not fulfilled during 2018 and 2019, as evidenced by the absence of relevant revisions to the Terrestrial Ecosystem Management Plan (TEMP) and lack of information regarding helicopter traffic in the Proponent's 2018 and 2019 Annual Reports. In 2020, the NIRB directed the Proponent to work with the GN and Terrestrial Advisory Group (TAG) to revise the TEMP to incorporate the requirements of this commitment (NIRB 2020).

In the Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report (AEM 2021), the Proponent has provided information on helicopter traffic. The GN appreciates the Proponent's efforts to fulfill this outstanding commitment. However, the limited scope and format of this information is not consistent with the commitment made to the GN and does not reflect input provided by the GN or other members of the TAG. Given the limitations of the information provided, the GN is unable to determine whether there are potential impacts to wildlife from Project-related helicopter traffic; a concern expressed by local community members during NIRB hearings on the Project.

Helicopters are a potential source of disturbance for caribou and other wildlife. The intensity and distribution of helicopter traffic should be monitored and properly reported in-order for reviewers to understand the disturbance footprint of the Project and associated exploration activities.

Importance to review and supporting rationale: During the NIRB's review of the Whale Tail Project, the GN noted concerns about the potential for helicopters to disturb wildlife such as caribou (GN 2017, Comment GN-10). Similar concerns were expressed by community members from Baker Lake (e.g. Whale Tail Final Hearing Transcripts, 2019, page 561)

In response to these concerns, one of the commitments made by the Proponent to the GN during the NIRB's review of the Project was:

> "The Proponent shall revise the Project's TEMP to include a program to monitor and report helicopter traffic associated with the Whale Tail project (including existing Meadowbank infrastructure) and all associated exploration activities so that the spatial scale and intensity of this activity can be documented. This should include the collection and analysis of GPS track logs for all helicopter flights contracted by the Proponent." (NIRB 2017, Appendix B, Commitment #20)

In its reviews of the 2018 and 2019 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Reports, the GN expressed concerns that the TEMP had not been revised to include a helicopter monitoring program and that helicopter traffic was not being reported as per commitment #20 (e.g. GN 2020). In response to the GN's concerns, and pursuant to terms and conditions 27 and 28 of the Project Certificate (008), the NIRB provided the following direction to the Proponent:

> "The Board recommends the Proponent work with the Government of Nunavut and the Terrestrial Advisory Group, as per Term and Condition 27 and 28, of the Project Certificate No. 008 to revise its Terrestrial Ecosystem Management Plan to incorporate the requirements of Commitment #20. The Board expects that the revisions will include the program to monitor and report helicopter traffic associated with the Whale Tail Pit Project, and that this information will be reported as part of future Wildlife Monitoring Summary Reports." (NIRB 2020)

In the 2020, Wildlife Monitoring Summary Report, the Proponent has provided information on helicopter traffic including the number of helicopter flights that occurred in 2020, mean duration and altitudes of flights, total flight hours and total distances flown (AEM 2021, Section 3.5.7). While this summary information is useful, it does not fully address the commitment made to the GN and does not allow reviewers to fully understand the potential impacts of helicopter traffic on wildlife. Four concerns are noted:

1. **Frequency of Helicopter Traffic** - As a rationale for not monitoring and reporting helicopter traffic, the Proponent has previously asserted that helicopter traffic is "infrequent, sporadic and on an as-needed basis" (AEM 2020a). It is the GN's opinion that the level of helicopter traffic reported for 2020 is neither infrequent nor sporadic. During the summer of 2020, helicopters were operating daily for a period of 3 months with average total daily flying hours of 5.4 hours. Similarly, during the fall caribou migration period, helicopters were operating daily for 22 days (up to October 19th) with average total daily flying hours of

5.4 hours (AEM 2021, Table 21). Dependent on the altitude and distribution of this traffic, the GN is concerned there are potential effects on wildlife but cannot make this determination without further information. The GN also notes that the report does not indicate whether the COVID-19 pandemic influenced helicopter traffic levels; specifically whether levels were lower or higher in 2020 than in previous years.

In the 2019 Wildlife Monitoring Summary Report, the Proponent suggested that 3 days of helicopter traffic associated with the deployment of caribou satellite collars in the spring of 2018 may have affected the migration of caribou through the Project's regional study area (AEM 2020b, Section 17). Although the report does not provide any evidence to substantiate this assertion, it seems to suggest that the Proponent is of the view that helicopter traffic is potentially a significant source of disturbance to wildlife. In light of the Proponent's view in the 2019 report, the GN would have expected more rigorous monitoring in the following year.

2. **Flight Altitude** – The reported average daily flight altitude was 247.2 metres above ground level (AEM 2021, Section 3.5.7). This means that for most of the 5.4 hours of total daily flying time helicopters were operating well below the minimum flight altitude of 300m set in the TEMP to avoid disturbance of wildlife.

2. **Spatial Distribution of Flights** - The commitment made to the GN was for monitoring and reporting of helicopter traffic in such a manner that the "spatial scale and intensity of this activity can be document" (NIRB 2017, Appendix B, Commitment #20). The information provided in the 2020 Wildlife Monitoring Summary Report, does not contain any spatial information (e.g. flight routes) and therefore does not document the spatial scale and intensity of helicopter traffic.

4. **Consultation with GN and the TAG** - The Proponent has not worked with the GN and the TAG, as per Term and Condition 27 and 28, of the Project Certificate No. 008 to revise its TEMP to incorporate the requirements of Commitment #20. To date, there has been no consultation with the GN or TAG regarding the helicopter monitoring program's design, the data being collected and the format in which it should be analysed and reported.

Conclusion:

Based on the limited information provided in the 2020 Wildlife Monitoring Summary Report, the GN characterizes the Project's helicopter traffic as frequent, low-level and potentially disturbing to wildlife. Dependent on spatial distribution, this traffic may pose a significant source of disturbance to wildlife. More comprehensive monitoring and reporting is warranted. Commitment #20 has not been fulfilled by the Proponent due to a lack of consultation with the TAG regarding revision of the TEMP (to include a helicopter traffic program) as well as failure to report information on the spatial distribution of helicopter flights. In the GN's view, the Proponent is not in compliance with minimum flight altitudes set in the TEMP

for avoiding disturbance of wildlife. Failure to do address these deficiencies constitutes non-compliance with term and condition 28 of the Project certificate (008).

Recommendation 1: The GN offers the following recommendations with respect to this issue:

1. That the Board direct the Proponent to immediately revise the TEMP to include the helicopter traffic monitoring and reporting program per commitment #20. This revision should be based on consultation with the TAG and should include details of the type of information collected and the manner in which it will be analysed and presented in annual reports.

Agnico Eagle's Response:

Agnico Eagle will consult the TAG on helicopter traffic monitoring. Conclusion of this discussion will be incorporated into the next iteration of the TEMP expected to be finalized in 2021.

2. That the Proponent clarify whether 2020 was a normal year for helicopter operations or whether traffic levels were reduced as a result of COVID-related restrictions or logistical constraints.

Agnico Eagle's Response:

Traffic levels in 2020 were similar to 2019. Helicopter flights occurred at Meadowbank complex operations and explorations.

3. That the Proponent provide a comparison of 2020 helicopter traffic (levels and distribution) with that of the previous 5 years of Project operations.

Agnico Eagle's Response:

Helicopter traffic data available is not consistent enough through the last 5 years to make such comparison. Agnico Eagle will continue to improve on data acquisition/tracking to satisfy the future TEMP version.

4. That the Board direct the Proponent to include, in future annual reports, maps showing the GPS tracks of all helicopter flights. Maps to be presented according to the seasons defined for caribou in the TEMP v. 7.

Agnico Eagle's Response:

Agnico Eagle acknowledges GN's recommendation and will continue to work with the TAG members to have this issue resolved in 2021.

5. That the Board direct the Proponent to include, in future annual reports, tables and maps showing the seasonal frequency and distribution of all flights with cruising altitudes under 300 m; the mandatory minimum specified in the TEMP for avoidance of caribou (AEM 2019, Table 6).

Agnico Eagle's Response:

According to TEMP V7 (AEM 2019), pilots are instructed to avoid caribou and other wildlife, applying a vertical distance buffer of 300 m, and horizontal buffer of 1000 m in proximity to caribou, subject to exception for safety considerations or the fulfillment of regulatory compliance activities only. Average altitudes presented in the 2020 report includes take off and landing altitudes, and may not represent a cruising altitude below 300 m. The pilots have been instructed to avoid caribou with a vertical distance buffer of 300 m, and horizontal buffer of 1000 m. Agnico Eagle will discuss inclusion of tables of helicopter flights with cruising altitudes below 300 m in proximity to caribou in future annual reports. Agnico Eagle also acknowledges GN's recommendation regarding maps and will continue to work with the TAG members to have this issue resolved in 2021.

Of note in 2020, is relative to the 22 days when helicopters were used during the fall season that caribou were observed (based on the wildlife log (Appendix A) or incidentally on 13 (59%) of these days). It is possible that caribou could have been present and undetected, particularly at further distances. Agnico Eagle assumes that helicopter pilots and passengers acted in good faith when caribou were observed and applied the appropriate distance buffers to minimize disturbance to caribou.

1.2 Snow Study

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Limited. (2019). Commitments from the NIRB technical meeting for the Whale Tale expansion project; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Government of Nunavut (GN). (2019). Technical review comments on the FEIS Addendum for the Whale Tail Expansion Project; Nunavut Impact Review Board (NIRB). (2019). Reconsideration Report and Recommendations Whale Tail Pit Expansion Project Proposal; Golder. (2019). Technical Memorandum re: Whale Tail Expansion Project Commitment 9: Proposed Haul Road Snow Study, October, 2019.

Identification of issue: During the NIRB's review of the Whale Tail expansion project, the GN expressed concern for the potential for snow accumulation alongside, and the management of snow along, a widened Whale Tail haul road. This snow accumulation has the potential to act as a barrier to the movement of wildlife, in particular migrating caribou (GN 2019, GN-TRC-02). In response, the Proponent made 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 Terrestrial Advisory Group. The study will be conducted over three years in an attempt to capture annual variability in conditions." (AEM 2019)

After reviewing the 2020 Wildlife Monitoring Summary Report for the Project (AEM 2021, section 17), the GN is concerned that the Proponent is not implementing the snow study as originally agreed to by the members of the TAG including AEM. The GN appreciates that the first year of the study was conducted during the COVID pandemic and sampling may have been limited as a result. However, future years of sampling should adhere to the study design agreed to; consistent with advice provided by the TAG in 2019.

Importance to review and supporting rationale: Based on the information reported in the 2020 Wildlife Monitoring Summary Report, the GN has identified the following concerns with the snow study:

1) **Study objectives** – The purpose, goal and/or objectives of the snow study appear to have deviated from the original commitment which states that:

> "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." (AEM 2019)

Snow accumulation may occur either naturally during snow falls, and drifting of snow, on or against the road or during snow management activities such as plowing that occur during road management. In contrast, the annual report indicates that the study is focused on the effects of snow removal activities stating that:

> "The goal of the snow monitoring is to determine whether changes to snow resulting from snow removal along the WTHR result in conditions that potentially inhibit caribou movements." (AEM 2021, Section 17.1.1)

2) **Sample size**– The number of sites along the haul road at which snow sampling has, or will, occur is less than the number reviewed by the TAG in 2019. The design for the snow study, developed by the Proponent and reviewed by the TAG in 2019, involved monitoring at 15 sites along the haul road divided equally across 3 road elevation categories (< 1.5 m, 1.5m to 3 m, > 3m) (Golder, 2019). In contrast the Proponent only collected data at five survey locations along the road in 2020 with no indication of how these were allocated amongst road elevation categories (AEM 2021, Section 17.1.2). Additionally, the Proponent indicates that in 2021 sampling will occur from at least 10 sites along the road.

3) **Sampling schedule** – The Proponent is employing a reduced sampling schedule relative to that agreed with the TAG in 2019. The design for the snow study, developed by the Proponent and reviewed by the TAG in 2019, involved two rounds of sampling at each site along the road. Sampling was to occur on April 15 and again on May 10 in-order to capture changes in snow conditions as the caribou migration proceeds

(Golder 2019). Sampling in 2020 occurred only once (May 27-28) and this was outside the established (and observed) spring migratory period for caribou. In addition, plans for future snow monitoring outlined in the 2020 Wildlife Monitoring Report indicate that sampling will only occur once at each site along the road in 2021.

4) **Measured parameters** – The snow study as implemented in 2020 measured a smaller set of snow parameters relative to that agreed with the TAG in 2019. The design of the snow study, developed by the Proponent and reviewed by the TAG in 2019, stated the following:

> "Fifteen sites on the lee side of the Haul Road will be surveyed by two staff to collect height, width and slope of snow berms, snow depth of deposited snow and snow density measurements (Figure 3)." (Golder 2019)

The snow study conducted in 2020 did not distinguish between the berms of piled snow created by snow management versus the naturally accumulated snow at the roadside. The study in 2020, did not measure the height or width of snow berms above the road surface and the slope of these snow berms. The study in 2020 did not measure the depth of naturally accumulated snow on the road's embankment nor did it measure snow depth at sites away from the road (i.e. "the unmanaged control sites"). Stated plans for 2021 suggest that the Proponent will not be collecting full suite of parameters agreed to with the TAG.

5) **Duration of study** - The snow study was intended to be conducted over a 3-year period to capture some of the variability in snow fall conditions. However, it was assumed that this 3-year period would involve 3 years of complete data collection as per the study design developed by the Proponent and reviewed by the TAG in 2019. It is unclear from the 2020 Wildlife Monitoring Report whether the Proponent intends to complete 3 full years of data collection as per the original study design.

Conclusion:

The Proponent has not implemented the snow as committed to during the review of the Project and as agreed to with the TAG. The GN is concerned that Proponent has implemented a study with altered objectives, smaller sample sizes, unspecified allocation of sampling effort across road height classes, measurement of fewer parameters, and a more limited sampling schedule. This altered study may not provide the data necessary to complete the study to "determine how snow accumulation influences road permeability for caribou and other wildlife along the proposed widened Haul Road" as committed to during the NIRB review of the Project (AEM 2019).

Recommendation 2: The GN offers the following recommendations with respect to this issue:

1. That the Proponent clarify whether the snow study will in all future years will be conducted as discussed above and agreed to with the TAG in 2019, including:

a. Data collection at 15 sites (6 plots per site) along the haul road, allocated equally across road elevation categories.

b. The collection of a full suite of parameters including height, width and slope of snow berms, snow depth of deposited snow and snow density measurements.

c. The collection of snow measurements during two sampling periods within the spring caribou migratory season; specifically around April 15 and again May 10.

Agnico Eagle's Response:

Agnico Eagle is committed to continue the snow study and understands that the objectives have not yet been met. Conducting this study present unexpected technical challenges that requires Agnico Eagle to adapt and improve the methodology each year. Current results and update on these challenges will happen with the TAG.

2. That the Proponent clarify whether, with 2020 acting as a pilot study year, 2021 will be considered year 1 of the 3-year study assuming the full study design is implemented, as developed by the Proponent and agreed to with the TAG in 2019.

Agnico Eagle's Response:

Agnico Eagle did not collect sufficient data in spring 2021 for the snow study according to the study design outlined above. Agnico Eagle will discuss future efforts towards the snow study at future TAG meetings.

1.3 Use of Deterrents on Wildlife

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Ltd. (2019). Meadowbank Division Terrestrial Ecosystem Management Plan, Version 7; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report.

Identification of issue: In 2020, incidents in which wildlife were actively deterred away from Project sites increased by 35 to 100% relative to the previous 3 years (AEM 2021, section 3.5.2). The Proponent suggests this increase is the result of more proactive deterrence actions or more thorough reporting of minor deterrence events in 2020 relative to previous years. However, the 2020 Wildlife Monitoring Summary Report does not contain copies of the Wildlife Incident Reports for these deterrence events; reports that are supposed to be filed for each event, as per the Project's Wildlife Protection and Response Plan (AEM 2019, Appendix C). Consequently, reviewers are unable to evaluate the Proponent's suggestion. Additionally, wildlife deterrents are to be used only when habituated or problematic wildlife pose a threat to the wildlife or Mine personnel through human-wildlife conflict. Without access to copies of the Wildlife

Incident Reports, reviewers are unable to assess whether use of deterrents was justified or reflected poor project management practices requiring other remedies.

Importance to review and supporting rationale: In 2020, incidents of wildlife deterrent use were substantially higher relative to previous years. Wolverine and caribou accounted for 72% of deterrence events (AEM 2020, tables 16 to 18). Wolverine incidents remained relatively high and seemed to be largely associated with waste management sites (e.g. incinerator and landfills). The number of caribou incidents was the highest in 4 years.

The Proponent states that:

> "A total of 43 deterrence activities were reported from interactions with four species: Arctic fox, caribou, wolf, and wolverine (Table 16). The total number of deterrence actions was substantially higher in 2020 than in previous years (2019 – 31, 2018 – 32, 2017 – 21); however, this is the result of more proactive deterrence actions or more thorough reporting of minor deterrence events (e.g., honking a truck horn). The increase in deterrence actions reported does not indicate of an increase in problematic or habituated wildlife at the Project." (AEM 2021, section 3.5.2)

The GN notes that the Proponent does not provide evidence in the 2020 Wildlife Monitoring Summary Report to support the claim that the increase in wildlife deterrence events is due to more proactive use of deterrents and improved reporting of incidents as opposed to increased levels of humans-wildlife conflict around the Project.

The Project's Wildlife Protection and Response Plan Wildlife indicates that deterrents are implemented when habituated or problematic wildlife pose a threat to the wildlife or mine personnel through human-wildlife conflict (AEM 2019, Appendix C). Following the use of deterrents, a Wildlife Incident Report is filed which must be responsive to the following questions:

> "Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it? Describe any use of deterrent. What measures are recommended to prevent future occurrences?" (AEM 2019, Appendix D)

This information is important in determining whether use of deterrents was justified and whether other management/mitigation measures were required in-order to avoid similar human-wildlife conflicts. Copies of the Wildlife Incident Report forms have not been provided in the 2020 Wildlife Monitoring Summary Report. This prevents the GN from assessing the Proponent's conclusion regarding wildlife deterrence events in 2020 and whether further mitigation actions are required to reduce future human-wildlife conflicts.

Given this information gap, the GN is concerned about on-going conflicts resulting from potentially poor Project management practices that could be remedied. For example, the GN wishes to receive more information regarding the continued use of deterrents on wolverine and wolf around landfills and incinerators. Additionally, the GN notes an incident on April 29th during which 5 caribou grazing 150m west of the Whale Tail Haul Road were deterred. It is unclear why or how these caribou were deterred (AEM 2021, Table 16).

Recommendation 3: The GN offers the following recommendations with respect to this issue:

1. That the Board direct the Proponent to append copies of all Wildlife Incident Reports to the annual Wildlife Monitoring Summary Report.

> ***Agnico Eagle's Response:***
> *Wildlife Incident Reports for wildlife deterrence events were not completed in 2020. Agnico Eagle has notified environmental staff to document deterrence events using Wildlife Incident Reports in the future according to the TEMP V7 (AEM 2019). Wildlife Incident Reports related to deterrence events will be included in future annual reports.*

2. That the Proponent explain why and how caribou near the haul road on April 29th, 2020, were deterred. What was the threat to human or wildlife safety?

> ***Agnico Eagle's Response:***
> *This record is likely attributed to a data collection error and selection of the incorrect action using the Wildlife Log. No deterrents were used on caribou on the AWAR in 2020. The record from April 29, 2020 in the site database will be updated from "Deterred. Successful" to "Monitored the area".*

3. That the Proponent provide copies of Wildlife Incident Report forms for the deterrence events reported in the 2020 Wildlife Monitoring Summary Report.

> ***Agnico Eagle's Response:***
> *Please refer to response to GN Recommendation 3, Item 1 above.*

1.4 Pits and Mine Site Ground Surveys for Wildlife

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Ltd. (2019a). Meadowbank Division Terrestrial Ecosystem Management Plan, Version 7; Agnico Eagle Mines (AEM) Ltd. (2019b). Commitment list from NIRB technical meetings on the Whale Tail Expansion proposal, Baker Lake, June 11-13, 2019; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report.

Identification of issue: In the 2020 Wildlife Monitoring Summary Report, the Proponent states that pit and mine site ground surveys took place in 2020 (AEM 2021, Section 3.4). However, the report does not indicate how many of these surveys occurred, when they occurred, what was observed during each and what actions, if any, were initiated in response to sightings of caribou or muskox above the Group Size Thresholds (GST) and within the distance thresholds specified in the Terrestrial Environment Management Plan (TEMP). Instead, the report provides an appendix of wildlife observations that appears to be a consolidation of formal pit and mine site surveys plus incidental observations made by mine employees while performing activities other than wildlife surveying (AEM 2021 – Appendix A).

From the information provided, the GN cannot determine if pit and mine site surveys were conducted with the required frequency in 2020 and whether the observations made during these surveys were used consistently to trigger the automatic measures prescribed in the Project's TEMP for the protection of caribou and muskox. A previous commitment by the Proponent to revise the format for reporting caribou observations and the mitigation/adaptive management actions taken in response to those observations has not been fulfilled.

Importance to review and supporting rationale: As part of the Project's caribou protection measures, the Proponent is supposed to conduct wildlife surveys of pits and mine sites at least once weekly but increasing to as much as twice daily during caribou migration periods (AEM 2019a, Table 12 and Figure 6). As stated in the 2020 Wildlife Monitoring Summary Report, one of the primary objectives of these surveys is to:

> "Use Decisions Trees when caribou are seen near Project facilities to determine the level of adaptive management (e.g., suspending activities) required." (AEM 2021, Section 3.2)

When caribou are seen in groups above the specified GST and within a specified distance of mining operations, decision trees in the TEMP indicate that certain mitigation actions are supposed to be automatically implemented including the suspension of operation of all nonessential vehicles and cessation of blasting activities (AEM 2019a, Figures 6 and 9). Similar measures are also specified for muskox (AEM 2019a, Figure 10).

Non-essential vehicles and heavy equipment are defined in the TEMP as:

> "[A]ll vehicles or heavy equipment except those operated for the purpose of maintaining the safety of personnel. For clarity, non-essential vehicles shall include vehicles and equipment used to continue mining operations or hauling of ore." (AEM 2019a)

The 2020 Wildlife Monitoring Summary Report states that pit and mine site surveys were conducted in 2020 but does not provide any further information on these surveys (AEM 2021, Section 3.4). In particular, the report contains no information on the number of surveys conducted, the timing of surveys, the wildlife observed, or the mitigation measures taken (if any) in response to observations of caribou and muskox.

Instead, the report provides a summary of the total number of caribou observed during pit and mine site surveys, combined with incidental observations made by mine employees engaged in other activities besides formal surveys (AEM 2021, Section 3.5.1). The report refers the reader to Appendix A that contains a table of wildlife observations made in 2020. This table is a consolidation of wildlife observations from formal surveys and incidental observations.

Several concerns are noted with respect to this part of the Annual Wildlife Summary Report, as follows:

- Neither the main body of the report nor Appendix A provides information on the number of pit and mine surveys conducted in 2020 and their timing.
- From the observation records in Appendix A, it is not possible to distinguish between observations made during formal surveys versus incidental observations.
- From the observation records in Appendix A, it is not possible to determine how far from pits or mine sites these observations occurred. This is important for determining whether mitigation measures in the TEMPs decision trees should have been triggered.
- Neither the report nor Appendix A links individual observations of caribou or muskox to the automatic mitigation actions, such as cessation of mine operations, that are specified in the Project's TEMP. The GN has previously raised concerns about AEM's reporting on the implementation of caribou decisions trees (GN 2019, GN-10). During the NIRB's review of the Whale Tail Project expansion proposal, AEM committed to the following:

  > "All observations of caribou will be reported in future Meadowbank and Whale Tail Wildlife Monitoring Summary Reports using the format presented in Table GN-TRC- #4-1 of AEM's response to technical comments on the Expansion Project." (AEM 2019b, Commitment 11)

  Tables 9 and 10 of the 2020 Annual Wildlife Summary Report uses the format for reporting that was committed to by the Proponent but these tables only account for observations resulting in closures of the AWAR and haul road, not cessation of mine operations. Additionally, as discussed elsewhere in the submission (see GN Comment 07 Road Closures for Migrating Caribou), these tables are incomplete because they do not contain information on all the caribou observations in 2020 that should have triggered road closures.

Due to these information gaps, the GN cannot determine if pit and mine site surveys were conducted with the required frequency in 2020 and whether the observations made during these surveys were used appropriately and consistently to trigger the automatic measures prescribed in the Project's TEMP for the protection of caribou and muskox. The Proponent provides that the decision trees were followed when caribou were seen near mine facilities in 2020 (AEM 2021, Table 22). However, no evidence to support this claim is provided in the 2020 report. Further, the GN notes that despite recording more than 48,000 caribou and 2,500 muskoxen, either incidentally or during formal surveys, including observations at the

Whale Tail mine site, the Proponent does not report having taken any mitigation actions to reduce mining operations, such as the cessation of non-essential vehicles and heavy equipment at the Whale Tail site, as per Figure 6 of the TEMP. The GN feels that with so many observations of caribou and muskoxen around mining operations in 2020, there should have been instances when the TEMP's automatic measures, such as suspension of non-essential vehicles, should have been triggered.

In summary, the GN is concerned that the Proponent is not reporting all caribou (and muskox) observations alongside the corresponding mitigation actions (if any) that were taken in response to each observation; the format previously committed to. The GN reiterates its position that this commitment must be fulfilled in-order for the GN and other reviewers to assess whether the caribou and muskox protection measures in the Proponent's TEMP are being fully and consistently implemented.

Despite the noted gaps in information provided in the 2020 Wildlife Monitoring Summary Report, the GN concludes that the Proponent is not fully and consistently implementing the caribou protection measures in the TEMP, as detailed in the decision trees in Figures 6 to 9 (AEM 2019a). A review of the information provided in the report regarding mine site ground surveys and incidental wildlife observations (AEM 2021 - Appendix A), tolerant caribou observations (AEM, 2021 - Appendix B; see also GN Comment 06 Project Tolerant Caribou), and road survey data (GN Comment 07 Road Closures for Migrating Caribou), show that there were numerous instances in 2020 when caribou and muskoxen above the GSTs and within distance thresholds specified in the TEMP were observed near the Project but the automatic mitigation actions prescribed in the TEMPs decision trees (Figure 6 to 10) were not implemented. This leads the GN to conclude that the Proponent is not compliant with Term and Condition 28 of the Project Certificate (008).

This is the third consecutive annual report for which the GN has expressed concern about noncompliance with the Project Certificate due to incomplete reporting and incomplete/inconsistent application of the TEMP's caribou and muskox protection measures; measures that were submitted by the Proponent during NIRB's review of the Project and which were integral to intervenors' reviews of the Project's FEIS. The GN urges the NIRB to take immediate action to enforce term and condition 28 of the Project Certificate with respect to these matters.

Recommendation 4: The GN offers the following recommendations with respect to this issue:

1. That the Board direct the Proponent to immediately implement the Project's caribou and muskox protection measures fully and consistently, in accordance with the approved TEMP's Group Size Thresholds, Distance Thresholds and decision trees; including the automatic measures specified in these decision trees (AEM 2019a, Figures 6 to 10).

Agnico Eagle's Response:

Agnico Eagle implemented decision trees in 2020 for road surveys as demonstrated in Tables 9 and 10. Moving forward, mitigations implemented due to individual observations will be documented

for each monitoring component, and presented in the format used in Tables 9 and 10 to clearly identify use of decision trees.

2. That the Board direct the Proponent to report, in its annual reports, **all** observations of caribou and muskox, alongside any corresponding mitigation actions that were taken in response to each of these observations, in the format previously committed to by the Proponent and as used in Tables 9 and 10 of the 2020 Annual Wildlife Summary Report.

Agnico Eagle's Response:

Agnico Eagle has provided all recorded observations of caribou and muskox in 2020. Discrepancy may be related to observations from formal pits and mine site ground surveys that were recorded as incidental observations in 2020. Moving forward, Agnico will provide the type of survey associated with each wildlife observation and will distinguish observations from pits and mine site ground surveys from incidental observations (Appendix A). Mitigations implemented due to individual observations will be documented and presented in the format used in Tables 9 and 10 to clearly identify use of decision trees.

3. That in reporting wildlife observations in its annual reports to the Board, the Proponent distinguish between observations made by different methods including incidentally, during formal road surveys, viewshed surveys or pit and mine site ground surveys.

Agnico Eagle's Response:

Observations from different monitoring components are summarized under their respective sections (e.g., Section 2.0, Section 6.0). Incidental observations and observations from formal pit and mine site ground surveys will be distinguished in future annual reports. Moving forward, Agnico Eagle will distinguish between survey types for the individual observations presented in the wildlife observations (Appendix A).

4. That in reporting wildlife observations in its annual reports to the Board, the Proponent provide tables summarizing the number of each type of wildlife survey conducted and the date of each of these surveys.

Agnico Eagle's Response:

Moving forward, Agnico Eagle will document completion of surveys for all survey types with survey dates, including surveys where no wildlife were observed, and present in a table similar to Table 2 (Details of All-Weather Access Road Wildlife Surveys from 2007 to 2020) and Table 4 (Whale Tail Haul Road Surveys from 2017 to 2020) of the annual report.

5. The GN requests that the Proponent provide information on the number of pit and mine site surveys conducted in 2020 including the date of each survey.

Agnico Eagle's Response:

The annual report indicates that formal pits and mine site ground surveys were completed on an 'at least weekly' basis (Section 3.4). Moving forward, Agnico Eagle will provide the number of pit and mine site ground surveys completed with dates in future annual reports.

6. The GN requests that the Proponent provide a detailed explanation, with supporting evidence, as to why observations of caribou and muskox made near the Whale Tail (Amaruq) mine site in 2020 (AEM 2021 – Appendix A) did not trigger mitigation measures such as speed restrictions or cessation of non-essential vehicles.

Agnico Eagle's Response:

Agnico Eagle is committed to operate as per the TEMP and recognize that improvements are needed in our database to clarify the link between the observations and the implemented mitigations measures. Agnico Eagle is open to discuss this subject further with the TAG.

1.5 Viewshed Surveys for Wildlife

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Ltd. (2019). Meadowbank Division Terrestrial Ecosystem Management Plan, Version 7; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Nunavut Impact Review Board (NIRB). (2017) Final hearing report, Agnico Eagle Mines Ltd. Whale Tail project. NIRB File No. 16MN056; TAG (2018). Terms of Reference for the Terrestrial Advisory Group. NIRB Exhibit 51, Whale Tail Expansion Project Review, Final Hearing.

Identification of issue: In 2020, the Proponent began to evaluate the use of viewshed surveys as a replacement for Height-of-Land (HOL) surveys for the purpose of detecting caribou approaching the Project. A small number of viewshed surveys were conducted. Based on the results of these surveys, the Proponent concludes that viewshed surveys improve long-distance monitoring of caribou.

In its management recommendations in the 2020 Wildlife Monitoring Summary Report, the Proponent recommends that future road surveys along the Whale Tail Haul Road should be scaled back in favour of increased frequencies of viewshed surveys (AEM 2021, Sections 2.8 and 6.7).

While the GN supports the use of viewshed surveys as a monitoring tool, there several concerns with the recommendation to increase the use of this survey method whilst scaling back road surveys along the Whale Tail Haul Road, as follows.

- The number and distribution of viewshed surveys conducted in 2020 did not yield sufficient data to draw definitive conclusions regarding the effectiveness of this monitoring method.

- The 2020 Annual Monitoring Report does not present a statistical analysis demonstrating that this method detects caribou with greater effectiveness at long-range than road surveys.
- Use of viewshed surveys was discussed with the Terrestrial Advisory Group (TAG), and is introduced in the 2020 Wildlife Monitoring Summary Report, as a replacement for HOL surveys and not a replacement for road surveys.
- In accordance with the Project's approved TEMP (AEM 2019), viewshed surveys and their predecessor, HOL surveys, are intended to be a supplementary monitoring method the frequency of which is specified in decision trees and unrelated to the frequency of road surveys (AEM 2019, Figure 6 to 10).
- During the final hearing for NIRB's review of the Project, the Proponent committed to revise the TEMP to adjust the frequencies of HOL and road surveys and in so doing adhere to the advice of the TAG, as per the TAG's terms-of-reference (TOR). With respect to this matter, the Terms of Reference (TOR) specifically indicate that the TAG shall render advice by consensus or by a majority vote of its members. To date, the TAG has not received the recommendation from the Proponent to increase use of viewshed surveys and reduce the frequency of road surveys. Consequently, the TAG has not rendered advice on this matter.

The GN supports increasing the frequency of viewshed surveys to match the frequency of HOL surveys specified in the approved TEMP (AEM 2019) and further evaluation of this method of monitoring. The GN does not support a reduction in the frequency of road surveys below the levels specified in the TEMP.

Importance to review and supporting rationale: Concerns regarding the Proponent's reporting of viewshed surveying conducted in 2020 centre on two topics; (1) Evaluation of this survey method; (2) the proposal to increase use of this method whilst reducing the frequency of road survey along the Whale Tail Haul Road.

1) Evaluation of Viewshed Survey Method for Detecting Caribou

In 2020, 19 days of viewshed survey efforts occurred at the 12 identified survey points along the Whale Tail Haul Road (the Haul Road) (AEM 2021, Figure 10). Based on the results of this survey effort the Proponent concludes that:

> "[V]iewshed surveys were also implemented to improve long-distance monitoring of caribou, which was also accomplished." (Section 6.7)

It is premature to draw this conclusion for several reasons including:

- The Proponent does not provide quantitative evidence to support this claim in the form of viewshed data analyses.

- Survey effort during key caribou migration periods was limited. Of the 19 days of viewshed survey effort in 2020, only 5 days occurred during the spring caribou migration period (AEM 2021, Table 26), the main period when use of viewshed surveying is most important for supporting road management measures in the TEMP (AEM 2019).
- The distribution of surveys along the road were limited (AEM 2021, Table 27). Of these 5 survey days in the spring, only 1 day involved surveys at all 12 locations along the road. A further 2 involved survey at only 1 of the 12 locations. The remaining 2 days of survey effort involved survey at 6 of the 12 locations.
- Noting the limited number of days and limited distribution of survey effort during the spring migration, it is further noted that there were only 10 groups of caribou observed via viewshed surveys in 2020, eight of which were observed during the spring (AEM 2021, Table 28).

Overall, the limited data set obtained from viewshed surveys in 2020 is insufficient for statistical analysis and a thorough evaluation of this survey method (including the effectiveness of the survey locations selected as viewshed monitoring points). Further data collection is required in-order to evaluate this method.

2) Increased Use of Viewshed Surveys and Reduced Frequency of Road Surveys

As noted in the 2020 Wildlife Monitoring Summary Report:

> "In 2019, Agnico Eagle advanced the idea of using viewshed survey points instead of HOL locations because of safety and logistical concerns." (AEM 2021, Section 6.1)

However, elsewhere in the report the Proponent states that:

> "Road surveys should continue to be used along the AWAR and the WTHR, but increasing the frequency of viewshed surveys in 2021 should be a primary objective, particularly during spring migration." (AEM 2021, Section 6.7)

> "It is recommended that road surveys along the WTHR are scaled back in favour of increased frequency of viewshed surveys (Section 6.7)." (AEM 2021, Section 2.8) [Emphasis added by reviewer]

Considering the limited viewshed survey effort and distribution achieved in 2020 (as discussed above), increasing the frequency of viewshed survey in 2021 is a logical next step that will allow more thorough evaluation of this method. However, scaling back the frequency of road surveys is not an appropriate step for the following reasons:

• As noted by the Proponent:

> "[R]oad surveys are important for documenting sensitive periods when the area near the road is utilized by various wildlife species and for evaluating the need, if any, to adaptively manage mitigation (e.g., temporary road closures and radio announcements)." (AEM 2021, Section 2.8)
>
> As an important and proven monitoring tool for triggering road mitigation measures such as closures when migrating caribou are nearby, it is not appropriate to scale back this method of monitoring in favour of a method that has not been properly evaluated.

• As noted by the Proponent in the 2020 Wildlife Monitoring Summary Report, and as discussed with the TAG in 2019, viewshed surveys were being evaluated as a replacement for HOL surveys, **not** as a replacement for road surveys.

• In the Project's approved TEMP, the minimum frequency of road surveys is specified and is independent of the frequency of other survey methods (AEM 2019, Figures 6-10). Reducing the frequency of road surveys along the haul road in favour of increased viewshed surveys is inconsistent with the approved TEMP.

• During the NIRB public hearing for the approved Project, the Proponent made the following commitment:

> "Within 1 year of Project certification, the Proponent shall revise the TEMP to increase the frequencies of height-of-land, road and ground surveys for caribou compared to the current levels in the TEMP (v.4.0). Thereafter, further revisions may be made annually within the TEMP, taking into account ongoing project monitoring. The revisions shall adhere to advice provided by the TAG, as per the terms of reference." (NIRB 2017 – Appendix B, Commitment 5).

• On the matter of road survey frequency, the TAG's terms of reference specifically indicate that the TAG shall render advice by consensus or by a majority vote of its members (TAG 2018). To date, the TAG has not received the recommendation from the Proponent to increase use of viewshed surveys and reduce the frequency of road surveys. Consequently, the TAG has not rendered advice on this matter.

In summary scaling back the frequency of road surveys in favour of viewshed surveys, is inappropriate given the limited extent to which the viewshed method has been evaluated. Further, reducing the frequency of road surveys is inconsistent with the approved TEMP and commitments made by the Proponent thereby being non-compliant with term and condition 27 and 28 of the Project Certificate.

Recommendation 5: The GN offers the following recommendations with respect to this issue:

1. That the Proponent increase viewshed survey effort in 2021 at all 12 locations along the Haul Road, in particular during spring migration period April 1- May 25.

Agnico Eagle's Response:

Given that the majority of mitigations were triggered by road surveys rather than viewshed surveys on the Whale Tail Haul Road (Table 10; AEM 2021), viewshed surveys were not completed at all 12 locations during spring migration in 2021. Road surveys were completed regularly during spring migration in 2021 and used to inform mitigation measures according to decision trees. Efficacy and continuation of viewshed surveys will be discussed at future TAG meetings.

2. That the Proponent, in future annual reports, present quantitative analysis of the data collected via viewshed surveys to evaluate the effectiveness of this method in detecting migrating caribou near the Project and triggering mitigation actions specified in the approved TEMP.

Agnico Eagle's Response:

Please see response to GN Recommendation 5, Item 1 above. Efficacy and continuation of viewshed surveys and use of road surveys in place of viewshed surveys will be discussed at future TAG meetings.

3. That the NIRB direct the Proponent to comply with Project Certificate terms and conditions 27 and 28 by:

a. Continuing to conduct road surveys along all Project roads at frequencies specified in the approved TEMP.

b. Adhering to advice rendered by the TAG regarding changes in the frequency of road surveys, as per the TAG's TOR and commitment #5 made during the NIRB public hearing (NIRB 2017 – Appendix B)..

Agnico Eagle's Response:

Please see response to GN Recommendation 5, Item 1 above. Agnico Eagle will consult TAG for changes to road and viewshed survey frequency.

1.6 Project Tolerant Caribou

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Ltd. (2019). Meadowbank Division Terrestrial Ecosystem Management Plan, Version 7; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Nunavut Impact Review Board (NIRB). (2017) Final hearing report, Agnico Eagle Mines Ltd. Whale Tail project. NIRB File No. 16MN056.

Identification of issue: In 2020, the Proponent appears to have designated more than 22,000 caribou, most of them migrating, as being 'Project Tolerant'. The term 'Project Tolerant' has significance with

respect to the caribou protection measures specified in the Project's Terrestrial Environment Monitoring Plan (TEMP).

As a result of this designation, and through incorrect application of the TEMP, mitigation measures such as road closures, that are supposed to be automatically triggered in-order to reduce disruption of the spring and fall migrations, were not implemented. Instead, Project roads such as the heavily used Whale Tail Haul Road (WTHR) remained open during key periods of the migration when caribou interactions with the Project reached their annual peak.

The GN considers this to be a misuse and abuse of the provisions of the TEMP relating to Project Tolerant Caribou. The GN concludes for the 3rd consecutive year that the Proponent is not consistently and fully implementing the caribou decision trees in the Project's approved TEMP despite claiming to do so in its annual reports. It is the GN's position that the Proponent is non-compliant with term and condition 28 of the Project Certificate (008). The GN requests that the NIRB remedy this on-going problem.

Importance to review and supporting rationale: Project Tolerant caribou are defined in the TEMP as:

> "An animal or group of animals (i) observed within a mitigation distance buffer for greater than 72 hours during the winter or 48 hours during other season; and (ii) not visibility disturbed by the Project" (AEM 2019, Section 3.4.2)

As also noted in the TEMP, Project Tolerant caribou are defined in this way to:

> "[P]rovide additional clarity and support to the decision trees." (AEM 2019, Section 3.4.2)

The decision trees themselves specify, that during spring or fall migration periods, when caribou are present within 1.5km of the Whale Tail Haul road or All-Weather-Access Road (AWAR) in groups exceeding a specified Group Size Threshold (GST), the corresponding road will be automatically closed to all non-essential traffic (AEM 2019, Figures 8 and 9). This is referred to as level 3 of monitoring and mitigation. The decision trees also indicate that roads can be:

> "[R]eopened if Project tolerant caribou are grazing next to road and not migrating"

The process for designating caribou as Project Tolerant involves the following steps:

- Initially closing roads to observed caribou that are within distance thresholds and above GSTs.

- After subsequently, monitoring the observed groups for at least 48 hours, they can be designated a Project Tolerant if they have not moved outside the distance threshold, as migrating caribou would be expected to do, and they are not being visibly disturbed by the Project (thereby being prevented from migrating).

• Upon designation as Project Tolerant, mitigation measures for these groups can be relaxed. For example, roads can be reopened, when the only animals present within distance thresholds and above GSTs are Project Tolerant individuals.(AEM 2019, Section 3.4.2 and figures 8 and 9)

The provision for Project Tolerant caribou was originally added to the TEMP to account for the handful of caribou that sometimes become habituated to development projects and choose to reside near them over the long term. The intention was to ensure these animals did not unnecessarily restrict Project operations.

In the 2020 Wildlife Monitoring Summary Report, the Proponent states that:

> "Project tolerant animals are defined in the TEMP Version 7 as an animal or group of animals observed within a mitigation distance buffer for greater than 72 hours during the winter or 48 hours during other seasons; and not visibly disturbed by the Project… A total of 10,167 tolerant caribou were recorded along the AWAR, and 12,173 tolerant caribou were recorded along the WTHR in 2020." (AEM 2021 Section 9.5)

It appears that tens of thousands of migrating caribou interacting with the AWAR and WTHR were designated as Project Tolerant in 2020. This constitutes an incorrect application of the Project's approved TEMP and is concerning for several reasons, as follows:

• **Intent of Project Tolerant Designation:** The intent of the Project Tolerant provisions in the TEMP was to be able to relax mitigation measures for a handful of caribou that were expected to habituate to the Project and reside long-term in the vicinity, not to reduce protection for tens of thousands of migrating caribou.

• **Evidence of Observation to Confirm Project Tolerant Status**: In-order to designate caribou as Project tolerant, by definition, they must first be observed for at least 48 hours to determine whether or not they move beyond the distance thresholds that trigger actions such as road closures and whether they are visibly disturbed. In the 2020 Wildlife Monitoring Summary Report, the Proponent provides no evidence that each of these hundreds of groups of caribou were observed for this length of time. The Proponent also does not provide an explanation as to how observers were able to distinguish between different groups over time to ensure they were still observing the same groups of caribou rather than newly arriving groups.

• **Initial Closing of Roads followed by Re-opening**: Upon initially observing caribou, within distance thresholds and above the GST, automatic mitigation measures such as road closures are supposed to be implemented. In accordance with the TEMP, these measures can only be relaxed (i.e the road reopened) if, after at least 48 hours of monitoring, the observed caribou meet the definition of Project Tolerant. In other words, for thousands of migrating caribou designated by the Proponent as Project Tolerant in 2020 (AEM 2021, Appendix B), road closures should first have been implemented and only

relaxed after confirming the animals were Project Tolerant (which requires a minimum of 48 hours of monitoring).

This initial closure of roads did not occur in 2020. For example, during the period April 8th to 26th, Appendix B of the report shows that 121 groups of caribou, totalling 6,333 individuals were observed along the WTHR and designated as Project Tolerant. All of these groups were above the GST and within 1.5km distance threshold specified in the TEMP for triggering automatic road closure. The groups ranged in size from 13 to 275 individuals. Groups were observed along the road almost every day during this period. An average of 6 groups per day were seen and on some days as many as 17 different groups were observed. However, every day of this 19-day period, during the peak of spring migration, the road remained open. The closures of the road that should have been automatically triggered in response to these observations, in accordance with TEMP's decision trees, were not implemented (Tables 9 and 10).

The same situation occurred between May 5 and 16, where multiple daily observations of caribou above the GST and within 1.5km of the road did not result in any road closures during this 2-week window (AEM 2021, Appendix B).

• Consultation and Reporting – The relaxation of mitigation measures for caribou deemed Project tolerant, such as reopening of roads, is supposed to be conducted following consultation and subsequently reported in the Proponent's annual report. During the final hearing for the NIRB's review of the Whale Tail Project, the Proponent made the following commitments:

> "Where mitigation measures are to be relaxed for project tolerant animals, the Proponent shall consult with the TAG prior to reducing/removing mitigation."

and

> "The Proponent shall document all cases where mitigation measures are relaxed for project tolerant animals and shall report these cases in the annual project monitoring report."

(NIRB 2017, Appendix B, Commitments 26 and 27)

Consultation with the Terrestrial Advisory Group (TAG) regarding the relaxation of mitigation measures for Project Tolerant caribou did not occur in 2020. Additionally, in the 2020 Wildlife Monitoring Summary report, the Proponent does not report on the relaxation of mitigation measures, such as reopening of roads, for caribou identified as project tolerant (such as those listed in the examples above) because the initial mitigation measures specified in the TEMP, were not implemented and thus could not have been relaxed.

In summary, in the 2020 Wildlife Monitoring Summary Report, the Proponent provides that the caribou decision trees in the approved TEMP were implemented in 2020 (AEM 2021, Tables 14 and 37) and that:

> "The use of decision trees for managing disturbance to ungulates is an ongoing and continuous monitoring and mitigation strategy for the life of the Project. Monitoring and mitigation intensity is increased as ungulates approach the Project." (AEM 2021, Section 9.3)

However, based on the evidence provided to the GN, the GN concludes that these decision trees were not fully and consistently implemented in 2020. An exceptionally large number of caribou were classified as Project Tolerant without evidence that these caribou were properly monitored and met the definition of Project Tolerant. The required initial mitigation measures for these caribou (i.e. road closures) were not implemented and thus thousands of migrating caribou, during the peak of their interaction with the Project, encountered Project roads that were open, in particular the heavily used WTHR. The required consultation with the TAG and required reporting regarding relaxation of mitigation measures for these Project Tolerant caribou did not occur.

The GN feels that the Proponent is non-compliant with term and condition 28 of the Project Certificate (008) as a result of not fully and consistently implementing the TEMP with respect to caribou and not fulfilling implementing commitments 27 and 28 made during the Whale Tail hearing. Also see GN-07 Road Closures for Migrating Caribou.

This is the third consecutive annual report for which the GN has expressed concern about noncompliance with the Project Certificate due to incomplete reporting and incomplete/inconsistent application of the TEMPs caribou protection measures; measures that were submitted by the Proponent during NIRB's review of the Project and which were integral to intervenors' reviews of the Project's Final Environmental Impact Statement (FEIS). The GN urges the NIRB to take immediate action to enforce term and condition 28 of the Project Certificate with respect to these matters.

Recommendation 6: The GN offers the following recommendations with respect to this issue:

1. That the Proponent provide details on the 48 hours of monitoring that occurred to assess each groups listed as Project Tolerant in Appendix B of the 2020 Wildlife Monitoring Summary Report including:

a. The method of monitoring, duration and frequency of monitoring for each group.

b. The data collected which led to the determination each of these groups was Project Tolerant.

c. The data collected which shows that each of these groups remained within 1.5km of the Haul Road for more than 48 hours.

Agnico Eagle's Response:

Monitoring over 48-hour periods are used to identify Project Tolerant caribou. Professional judgement by the same field crew was used to identify Project Tolerant caribou when groups were not visually disturbed by the Project.

2. That the Proponent explain why road closures were not initially implemented on the Whale Tail Haul Road between April 8th to 26th and May 5th to 16th, when caribou in multiple groups above the GST listed in the TEMP v. 7 were observed within 1.5km of the road each day.

Agnico Eagle's Response:

The Whale Tail Haul Road was closed due to blizzard conditions April 12-13; April 17-18; and April 22. For the other days mentioned in GN recommendation, the caribou observed were classified as project tolerant as per the definition of TEMP and reported in the daily notification. Speed restrictions were enforced during those periods.

In addition, in April 2020, the mining operations were significantly reduced by the COVID and the long hauling activities on the Whale Tail road were almost fully stopped. Only medium and light traffic were travelling on the haul road (with very few exceptions).

3. That the Proponent explain what consultation occurred with the TAG regarding the caribou listed as tolerant in Appendix B of the 2020 Wildlife Monitoring Summary Report.

Agnico Eagle's Response:

Agnico Eagle acknowledges GN's comments and would like to discuss further with the TAG.

4. That the Board direct the Proponent to immediately implement the Project's caribou protection measures fully and consistently, in accordance with the approved TEMP's v. 7 GSTs, Distance Thresholds and decision trees; including the automatic measures specified in these decision trees (AEM 2019a, Figures 6 to 10).

Agnico Eagle's Response:

Decision trees were implemented throughout 2020 using results of different monitoring components (e.g., road surveys, viewshed surveys). Moving forward, mitigations implemented due to observations will be documented for each monitoring component and presented in the format used in Tables 9 and 10 to clearly identify use of decision trees.

5. That the Board direct the Proponent to report, in its annual reports, all observations of caribou, alongside any corresponding mitigation actions that were taken in response to each of these observations, in the format previously committed to by the Proponent and as used in Tables 9 and 10 of the 2020 Annual Wildlife Summary Report.

Agnico Eagle's Response:

Agnico Eagle will provide required information from different monitoring components in the similar format as Tables 9 and 10 of the Annual Wildlife Summary Report.

6. That the Board direct the Proponent to fulfill commitments 26 and 27 made during the NIRB's final hearing for the Whale Tail Project (NIRB 2017, Appendix B, Commitments 26 and 27).

Agnico Eagle's Response:

Moving forward, Agnico Eagle will provide documentation of instances where mitigation measures were relaxed due to Project Tolerant animals, and associated records of consultation with TAG for relaxation of mitigation.

1.7 Road closures for migrating caribou

Term and Condition: NIRB Project Certificate 008 T&C 28

References: Agnico Eagle Mines (AEM) Ltd. (2019a). Meadowbank Division Terrestrial Ecosystem Management Plan, Version 7; Agnico Eagle Mines (AEM) Ltd. (2019b). Commitment list from NIRB technical meetings on the Whale Tail Expansion proposal, Baker Lake, June 11-13, 2019; Agnico Eagle Mines (AEM) Ltd. (2020). Meadowbank Mine 2019 Wildlife Monitoring Summary Report. Final. Appendix 52 of the Meadowbank Mine Annual Report; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Boulanger, J., R. Kite, M. Campbell, J. Shaw and D.S. Lee. 2020. Analysis of Caribou Movements Relative to the Meadowbank Mine and Roads During Spring Migration. Government of Nunavut, Department of Environment, Technical Report Series – No:01- 2020. 31 July 2020.

Identification of issue: Throughout the 2020 Wildlife Monitoring Summary Report (AEM 2021), the Proponent states that the Project's caribou protection measures, as specified in the decision trees presented in the Terrestrial Environment Monitoring Plan (TEMP) (AEM 2019a, Figures 6-10) were implemented in 2020. However, evidence presented in the report demonstrates the decision trees were not applied in most cases.

Road surveys along the Whale Tail haul road (WTHR) during the spring migration period observed between 3 to 5 times as many caribou per survey in 2020 compared to 2019. Despite observing many more caribou, the haul road was only closed (or partially closed) for a total of 10 days in the spring of 2020 compared 34 days of closure (or partial closure) in 2019.

This discrepancy between caribou observations and road closures is explained by looking at the data provided in the report. During the spring of 2020, there were numerous days on which multiple groups of migrating caribou were observed near the WTHR; groups that as a result of being within the distance threshold and above the Group Size Threshold (GST) should have triggered automatic road closure in

accordance with the TEMP. However, despite these observations, the road remained open. Had the road been closed on these days (as required under the TEMP), there would have been at least 31 (and potentially up to 41) days of haul road closure in spring 2020; similar to 34 days in 2019.

The GN feels for the 3rd consecutive year that the Proponent is not consistently and fully implementing the caribou decision trees in the Project's approved TEMP despite claiming to do so in its annual reports. This is concerning given recent evidence demonstrating that road closures increase the probability that migrating caribou will cross Project roads. It is the GN's position that the Proponent is non-compliant with term and condition 28 of the Project Certificate (008). The GN requests that the NIRB remedy this on-going problem.

Importance to review and supporting rationale: In the 2020 Wildlife Monitoring Summary Report, the Proponent states that the caribou decision trees in the approved TEMP were implemented in 2020 (AEM 2021, Tables 14 and 37) and that:

> "The use of decision trees for managing disturbance to ungulates is an ongoing and continuous monitoring and mitigation strategy for the life of the Project. Monitoring and mitigation intensity is increased as ungulates approach the Project." (AEM 2021, Section 9.3)

and

> "Road-related monitoring and mitigation is implemented according to Figures 7 and 8 of the TEMP (Agnico Eagle 2019)." (AEM 2021, Section 2.6.5)

However, a review of the reports indicates that these statements are incorrect. Road surveys conducted along the Whale Tail haul road during the spring caribou migration of 2020 observed between 3 to 5 times as many caribou per trip compared to similar surveys in 2019 (AEM 2021, table 5). Despite seeing more caribou, the haul road was closed (or partially closed) for 10 days in the spring (April 1 to May 25) compared to 34 days in 2019 (AEM 2020; AEM 2021, Table 10).

This inconsistency between rates of caribou observation and road closure days in 2020 compared to 2019 can be explained by examining data provided in the 2020 report. The report provides a table showing caribou observations made along the haul road in 2020 and the mitigation action(s) taken in response to the observations (Table 10). However, this table only present caribou observations that led to road closures. A review of caribou observation data provided in Appendices A and B of the report shows there were many days during the spring migration when multiple groups of caribou, observed along the haul road, were above the Group Size Threshold (GST) and within the distance threshold specified in the TEMP (AEM 2019a) for triggering road closures yet the road remained open. These data, summarized in Table 1 (below), show that during the periods April 8 to 29 and May 5 to 16, there were numerous days on which the "automatic" road closure specified in the TEMP should have been triggered (see also GN Comment 06

– Project tolerant Caribou). The 2020, road survey data provided to the Terrestrial Advisory Group, also corroborate these findings. Had road closures been implemented, as required under the TEMP's decision trees, there would have been at least 31 (and potentially up to 41) days of haul road closure in spring 2020; similar to 34 days in 2019.

The GN has previously raised concerns about AEM's reporting on the implementation of caribou decisions trees (GN 2019, GN-10). During the NIRB's review of the Whale Tail Project expansion proposal, AEM committed to the following:

> "All observations of caribou will be reported in future Meadowbank and Whale Tail Wildlife Monitoring Summary Reports using the format presented in Table GN-TRC- #4-1 of AEM's response to technical comments on the Expansion Project." (AEM 2019b, Commitment 11)

Tables 9 and 10 of the 2020 Annual Wildlife Summary Report uses the format for reporting that was committed to by the Proponent but these tables only account for observations resulting in closures of the All-weather-Access Road (AWAR) and haul road. These tables are incomplete because they do not contain information on all the caribou observations in 2020 that should have triggered road closures.

(Note: Data for the fall migration and for the AWAR were not reviewed by the GN so it is unclear whether similar problems with road management occurred.)

Conclusion

Contrary to the Proponent's claim that the caribou decision trees were implemented in 2020, in-order to reduce sensory disturbance of migrating caribou by Project traffic, data in the 2020 report indicate this statement is incorrect. On numerous occasions, the Project's haul road should have been closed, in accordance with the TEMP, to allow migrating caribou to cross. This is particularly concerning given recent research by the GN demonstrating that road closures significantly increase the probability that migrating caribou will cross the Project's roads (Boulanger et al. 2021). In addition, preliminary results from the Proponent's motion-triggered camera study of caribou crossing the haul road found that:

> "All crossing events were documented during road closures, with the exception of one event where speed was limited on a portion of the road away from the camera (Table 32)." (AEM 2021, Section 7.5)

This is the third consecutive annual report for which the GN has expressed concern about non-compliance with the Project Certificate due to incomplete reporting and incomplete/inconsistent application of the TEMPs caribou protection measures; measures that were submitted by the Proponent during NIRB's review of the Project and which were integral to intervenors' reviews of the Project's FEIS. The GN urges

the NIRB to take immediate action to enforce term and condition 28 of the Project Certificate with respect to these matters.

Table 1. Days in 2020, on which groups of caribou above the Group Size Threshold were observed within 1.5km of the Whale Tail Haul Road

Month	Day	Number of Caribou Groups		Road Status
		Incidental Sightings (AEM 2021, Appendix A)	Tolerant Caribou Observations (AEM 2021, Appendix B)	
April	8	-	18	Open
	9	6	13	Open
	10	10	14	Open
	11	6	14	Open
	13	-	8	Open
	14	5	-	Open
	15	1	4	Open
	16	7	7	Open
	17	1	4	Open
	19	6	9	Open
	20	-	4	Open
	21	-	2	Open
	22	2	1	Open
	23	4	7	Open
	24	3	6	Open
	25	5	5	Open
	26	2	10	Open
	27	9	-	Open
	28	5	-	Open
	29	3	-	Open
May				
	5	4	7	Open
	6	6	9	Open
	7	1	4	Open
	8	1	2	Open
	9	1	1	Open
	10	1	1	Open
	11	2	3	Open
	12	4	11	Open
	13	1	1	Open
	14	1	1	Open
	16	1	1	Open

Recommendation 7: The GN offers the following recommendations with respect to this issue:

1. That the Board direct the Proponent to immediately implement the Project's caribou protection measures fully and consistently, in accordance with the approved TEMP's v. 7 GSTs, Distance Thresholds and decision trees; including the automatic measures such as road closures specified in these decision trees (AEM 2019a, Figures 6 to 10).

> ***Agnico Eagle's Response:***
> *Please see previous responses to GN Recommendation 4 above in Section 1.4. Agnico Eagle implemented decision trees in 2020 for road surveys as demonstrated in Tables 9 and 10. Moving forward, mitigations implemented due to individual observations will be documented for each monitoring component, and presented in the format used in Tables 9 and 10 to clearly identify use of decision trees.*

2. That the Board direct the Proponent to report, in its annual reports, all observations of caribou, alongside any corresponding mitigation actions that were taken in response to each of these observations, in the format previously committed to by the Proponent and as used in Tables 9 and 10 of the 2020 Annual Wildlife Summary Report.

> ***Agnico Eagle's Response:***
> *Please see previous responses to GN Recommendation 4 above in Section 1.4. Mitigations implemented due to individual observations will be documented and presented in the format used in Tables 9 and 10 that identify the pathway used in decision trees in future annual reports.*

1.8 Non-native Plants

Term and Condition: NIRB Project Certificate 008 T&C 25

References: Agnico Eagle Mines (AEM) Ltd. (2020). Meadowbank Mine 2019 Wildlife Monitoring Summary Report. Final. Appendix 52 of the Meadowbank Mine Annual Report; AEM 2020b. Response to Meadowbank (03MN107) and Whale Tail (16MN056) 2019 Annual Report comments Part 2; Agnico Eagle Mines (AEM) Limited. (2021). Meadowbank Complex 2020 Annual Report, Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Government of Nunavut (GN). (2003). Wildlife Act, SNu 2003, c26, <http://canlii.ca/t/51x1n> retrieved on 2020-06-02; Government of Nunavut (GN). (2020). Comments on the Meadowbank Gold Mine Project and Whale Tail Pit Project 2019 Annual Report (03MN107 & 16MN056).

Identification of issue: In 2020, the Project's Non-Native Plant Study detected 4 species that are non-native to Nunavut at multiple sites around the Project footprint. Two of these species is classified as noxious weeds in Canada and another as a noxious weed in Manitoba. These non-native plants pose potential risks to wildlife and wildlife habitat in Nunavut.

Although only 2 years of plant sampling has occurred, the GN is concerned that the number of non-native species detected by the study, as well as the size and distribution of the populations of some species, was considerably larger in 2020 compared to 2019. While sampling differences between the 2 years make interpretation of the results challenging, which itself is a concern, evidence of increasing numbers and distribution of non-native species around the Project warrants more intensive monitoring, assessment, and management action. In this regard, the GN is concerned by the Proponent's minimal response to recommendations made by the GN in response to the 2019 Non-Native Plant Study Report.

The GN also notes a concern that the Non-Native Plant Study, and the Proponent's response to the study's results, is focused on species listed by the Canadian Endangered Species Conservation Council (CESCC) as 'not normally found in Nunavut and with a potential for becoming established'. The GN wishes to remind the Proponent that Section 91 of the Wildlife Act, S.Nu. 2003, c 26, prohibits the release of any species into a habitat in which it does not belong or never naturally occurred. The Proponent thus has an obligation to monitor and manage all species of non-native plants introduced to Nunavut as result of the Project. This is the second consecutive year in which the GN has provided the Proponent with notification of requirements under the *Wildlife Act* pertaining to non-native plants.

Importance to review and supporting rationale: Based on review of the Non-native Plant Study report (AEM 2021, Appendix N), the following concerns and questions are identified:

Response to GN's 2019 Recommendations

GN concerns regarding Flixweed (*Descurainia sophia*) and other non-native species, introduced as a result of the Project, remain the same as those detailed in comments provided to the NIRB on the 2019 Annual Report (GN 2020, Comment GN-05). As summarized in the attached table (Appendix A), the Proponent has been minimally responsive to the GN's 2019 recommendations. For example:

- The Proponent continues to state in the 2020 report that:

> "Observed flixweed populations have not encroached onto the tundra, and all observations were limited to disturbed areas (see representative photographs in Appendix B)." (AEM 2021, Appendix H, Section 3.0)

However, all survey sites in 2020 were within the Project's footprint. No survey effort was conducted beyond the footprint to validate the conclusion that non-native plants have not spread to undisturbed habitat.

- The risk assessment recommended by the GN and committed to by the Proponent has not been provided.

• The Proponent continues to focus on monitoring and management of non-native species listed by the CESCC. However, the GN advises the Proponent that its obligation extends to all species that "do not belong or never naturally occurred in Nunavut", pursuant to Section 91 of the Nunavut Wildlife Act (GN 2003).

• The Proponent has not provided the recommended review of cleaning and control measures to prevent non-native species introductions.

Number and Distribution of Non-native Species

The number of non-native species detected, as well as the population sizes and distribution of these species, has increased between 2019 and 2020. For example, in 2019 and 2020, 107 and 175 sites were surveyed for non-native species, respectively. Results show that:

• In 2019, two non-native species were detected versus four in 2020.

• For the two most prevalent non-native species, the percentage of survey sites at which the species was detected increased, between 2019 to 2020, from 1% to 4% and from 26% to 52%, for Flixweed and Scentless Chamomile (*Tripleurospermum inodorum*), respectively (AEM 2020, Appendix N; AEM 2021, Appendix H). This suggests an of expansion of range for each species within the Project footprint.

• For the two most prevalent non-native species, the average number of plants detected per sites surveyed increased from 0.009 plants/site to 67 plants/site and from 153 plants/site to 4,670 plants per site for Scentless Chamomile and Flixweed, respectively (AEM 2020, Appendix N; AEM 2021, Appendix H). This suggests an of expansion of range for each species within the Project footprint.

• For the two most prevalent non-native species, the average area covered by populations of these plants at each survey site increased from 0.25m2/survey site to 268m2/survey site and from 258m2/survey site to 6,097 m2/survey site for Scentless Chamomile and Flixweed, respectively (AEM 2020, Appendix N; AEM 2021, Appendix H). This suggests an of expansion of range for each species within the Project footprint.

Overall, when accounting for differences in sampling effort between 2019 and 2020 (i.e. number of sampling sites), the available evidence suggests that both of these species are expanding significantly in terms of range and population sizes.

Sampling Design

The sampling design employed during the Non-native Plant Survey appears to be unsystematic and subject to potential bias and/or lack of precision thereby confounding interpretation of results. For example:

• There is no indication whether the "targeted" sites surveyed in 2020 included the same sites sampled in 2019. This makes it hard to determine if non-native species such as Flixweed and Scentless Chamomile are occurring at the same locations or expanding their range to other sites within the Project footprint. This also makes it difficult to assess the success of control measures.

• There is no information about whether populations sampled at sites in 2019 are growing in number of plants or area covered. This makes it difficult to assess the success of control measures.

• The 2020 Non-native Plant Study Report states, for Flixweed, that:

> "Although it has not yet been observed at the Whale Tail mine site, it is probable that it will migrate along the Whale Tail haul road and into the Whale Tail mine site." (AEM 2021, Appendix H, Section 4).

However, the 2019 study report indicates that Flixweed was found at the Whale Tail mine site (AEM 2020, Appendix 52 (N), Table A-1, Survey Plot MB19DMW026). It is unclear whether the site at which Flixweed was detected in 2019 was surveyed in 2020.

CESCC Listed Species

The 2019 and 2020, Non-native Plant Species Study, and the Proponent's response to the study's results, has been focused on species listed by the Canadian Endangered Species Conservation Council (CESCC) as 'not normally found in Nunavut and with a potential for becoming established'. For example, the Proponent states that:

> "As part of the existing Non-Native and Invasive Plant Monitoring Program, Agnico Eagle remains committed to monitoring changes in abundance and distribution of species identified by the CESCC as Non-Native/Invasive – which does not include flixweed." (AEM 2020b)

As noted above, Section 91 of the *Wildlife Act* prohibits the release of any species into a habitat in which it does not belong or never naturally occurred. The Proponent thus has an obligation to monitor and manage all species of non-native plants introduced to Nunavut as result of the Project, including Flixweed and Scentless Chamomile.

Adaptive Management

In the 2020 Wildlife Monitoring Summary Report (AEM 2021a), the Proponent demonstrates no adaptive management in response to the 2020 Non-native Plant Study's recommendations. For example, the report (AEM 2021, Appendix N, Section 4.0) recommends:

• For Scentless Chamomile – "Although the populations were reduced by hand pulling, the plants had already gone to seed and will likely return next year. Areas that were known to have populations of scentless chamomile should be continually monitored and controlled to prevent further infestations."

• For Flixweed – "It should be controlled to contain the infestation to the Meadowbank Mine site and AWAR and prevent spread north to new locations. Mature plants reproduce by seeds. Because of its large populations, mowing early in the growing season prior to the plants going to seed, would be the best action to manage flixweed populations at the Meadowbank Complex."

The Proponent does not present plans to implement either of these recommendations, despite evidence of growth in population size and range for these species.

Management Plan for Non-Native Species

The report states that:

> "A management plan for non-native plant species employing adaptive management may be implemented if the non-endemic and other non-native plant species continue to be observed and/or are observed to spread further within the Meadowbank Complex area. A non-native plant management plan would describe the methods for the eradication, control and/or minimization of the encroachment of non-native plant species into new areas, and outline additional measures such as on-boarding and training in the identification of non-native plant species for the area. (AEM 2021, Section 16.4)

Evidence in the report suggests non-native plants continue to be observed and have been observed to spread further in the Meadowbank complex. These are the conditions that should trigger the development of a management plan.

Recommendation 8: The GN offers the following recommendations with respect to this issue:

1. That the Proponent fully implement recommendations made by the Government of Nunavut in response to the 2019 annual report (GN 2020).

> ***Agnico Eagle's Response:***
> *A flixweed risk assessment will be included as a component/appendix of the 2021 Wildlife Monitoring Report. The results of this assessment will be shared with regulators and stakeholders, including the Terrestrial Advisory Group.*

2. That the NIRB direct the Proponent to develop a non-native plant species management plan based upon advice provided by the Terrestrial Advisory Group (TAG). The plan should include strategies for the control/eradication of all non-native plant species detected through monitoring, schedules for implementation and monitoring programs to track success.

Agnico Eagle's Response:

Agnico Eagle will discuss the need to develop a non-native plant species management plan with the TAG.

3. Pursuant to the Wildlife Act, the GN is requesting the Proponent:

"[M]ake reasonable efforts to recover" the plant species found around the Project that:

" [Does] not belong or never naturally occurred in Nunavut. …." (GN 2003)

This should begin by working with the GN on recommendations made in 2019.

Agnico Eagle's Response:

Non-native plant monitoring activities focus on all plant species that are not naturally occurring in Nunavut, including detection of four plant species not native to Nunavut and not included on the CESCC list. Reporting separates results into those species identified by the CESCC as Non-Native/Invasive and those not included on the CESCC list, but that are not naturally occurring in Nunavut. Based on previous results, eradication methods are being implemented in 2021.

In 2021, Agnico eagle is conducting hand pulling for scentless chamomile and flixweed along with mechanical trimming for flixweed. Agnico Eagle is also conducting a trial method of covering with landscape fabric for the flixweed. The effort to recover the non-native species will be provided in the 2021 Annual Report.

4. That the NIRB direct the Proponent to adjust monitoring and management of introduced plant species to include any and all species that "does not belong or never naturally occurred" in Nunavut per the Nunavut Wildlife Act (Section 91(2)).

Agnico Eagle's Response:

Non-native plant monitoring activities focus on all plant species that are not naturally occurring in Nunavut, with detection of four plant species not native to Nunavut to date. Monitoring will continue to identify and detect locations of all plant species that are not naturally occurring in Nunavut and will be reported in future annual reports. Please see response to GN recommendation 8 item 3 above.

5. That the Proponent clarify whether the 175 non-native plant sampling sites used in 2020 included the 107 sites sampled in 2019.

Agnico Eagle's Response:

The 175 sites sampled in 2020 included the 107 sites sampled in 2019. Surveyor efficiency and a slightly longer field program allowed for expanded sampling in 2020. Additional sampling sites will be added as mine footprints change and if additional non-native plant occurrences are detected.

6. That in future, non-native plant sampling should be conducted at the same sites year-to-year so that changes in population numbers and area covered at each site can be monitored and reported in the annual reports. This information is useful for monitoring the effectiveness of control measures.

Agnico Eagle's Response:

Sites from previous monitoring years are revisited during the current year's monitoring program. Additional sampling sites will also be added as mine footprints change. If additional observations of non-native species are identified outside of the current sampling locations, additional sites will be added. The monitoring or detection program must have flexibility to adapt as the mine footprint changes over time.

2 Fisheries and Oceans Canada (DFO)

2.1 Effects Monitoring

Recommendation 1: DFO reviewed the Whale Tail 2020 Fish Habitat Offset Monitoring Report and has concerns over the current ability of the Proponent's monitoring programs to determine if flooding provides suitable habitat and enhances productivity of target species. DFO would like to remind the Proponent that, according to section 5.3.1 of Authorization 20-HCAA-00275, the Proponent shall provide a detailed Impact Analysis of Fish Habitat from Flooding by March 31 2024. The content of this report shall be discussed and approved by DFO (and interested parties) and will be used to establish if the proposed offsetting measures are likely to provide suitable habitat and enhance productivity of target species as identified through consultation. As such, DFO asks that the Proponent contact DFO to discuss the content of the Impact Analysis of fish Habitat from Flooding.

Agnico Eagle's Response:

Agnico Eagle submitted to DFO an updated Fish Habitat Offsets Monitoring Plan for the Whale Tail Site (Version 2), which includes a description of the monitoring program that is proposed to fulfill Authorization 20-HCAA-00275 requirements for an "Impact Analysis of Fish Habitat from Flooding" (i.e. monitoring of flood zone habitat prior to construction of the permanent water-retention sill). Agnico Eagle submitted this revised plan to DFO on July 28, 2021 and will arrange for a discussion at their convenience. Agnico Eagle understands that the final program needs to be approved by DFO

(and interested parties), however in recognition of the Authorization requirement to conduct this monitoring annually from the date of issue, Agnico has already planned or initiated the proposed monitoring components for 2021 (water quality, periphyton, shoreline fish surveys), to ensure data is collected this field season while the Plan is under review.

2.2 Compliance Monitoring

Recommendation 2: DFO requested that the Proponent provide detailed engineering plans to DFO for review and approval for construction works that have the potential to impact fish and fish habitat, at least 90 days prior to the commencement of the works. DFO would like to remind the Proponent that those plans need to be submitted directly to DFO for approval as per section 2.3.5 of the Fisheries Act Authorization 20-HCAA-00275.

Agnico Eagle's Response:

Agnico Eagle acknowledges DFO's comment and will ensure to provide engineering design for approval for construction works that have the potential to impact fish and fish habitat at least 90 days prior to the commencement of work.

Recommendation 3: In accordance with term and condition 22 of the Project Certificate, The Proponent shall engage with Fisheries and Oceans Canada to develop project specific thresholds, mitigation and monitoring for any blasting activities that would exceed the requirements of Fisheries and Oceans Canada's Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters. DFO notes that the Proponent exceeded Peak Particle Velocity limits on four (4) occasions, all during the period of egg incubation. The proponent notified DFO following each event, continued monitoring and successfully implemented measures to avoid exceeding the thresholds. DFO asks that the Proponent continues to monitor and notifies DFO in the event of any exceedance in such case, the Proponent should contact DFO immediately to develop and implement a mitigation plan.

Agnico Eagle's Response:

Agnico Eagle acknowledges DFO's comments and will continue to notify DFO of any blast exceedances and include in the report any corrective measures.

3 Crown-Indigenous relations and Northern Affairs Canada (CIRNAC)

3.1 Outstanding issues from CIRNAC's Review of the 2019 Annual Report

3.1.1 Freeze back and Capping Thickness

References: Previously CIRNAC 1.1; 2020 Annual Report: Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail; Appendix 24; Appendix 25; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM include a meaningful discussion of the results from the thermal monitoring in the Annual Report. FEIS predictions should be compared with monitoring results and be clearly presented. AEM should present the updated modeling supporting their conclusions that the conceptual plans for thermal encapsulation of the Tailings Storage Facility (TSF) and the Waste Rock Storage Facility (WRSF) remain effective to prevent and control deleterious seepage over long term. Finally, if results show discrepancies from the predicted values, AEM should discuss the management actions that should be implemented to address the risk.

Agnico Response: "Agnico Eagle is monitoring freeze back in tailings and the waste rock and will continue to do so and expand the monitoring program as required. The data gathered will continue to be analysed and compared to the FEIS prediction to ensure that the closure strategy and concept still meet the closure prediction. The closure strategy for the WRSF and TSF are documented in the interim closure plan. Detailed Engineering closure design will be updated to reflect the current condition of the TSF and WRSF but no significant change to the closure concepts are planned based on the available information. As such progressively reclaimed areas should be considered reclaimed and will only be modified if data show that the previously accepted closure criteria would not be met".

CIRNAC Assessment of Recommendation Status: **Ongoing**: CIRNAC acknowledges that AEM continues to assess the existing and predicted long-term thermal performance of mine wastes and cover systems. However, the 2020 Annual Report provided limited new information in this regard. The topic remains a work in progress therefore the status will be re-assessed by CIRNAC during its review of the 2021 Annual Report and subsequent Interim Closure and Reclamation Plan (ICRP) iterations.

With regard to AEM's position that progressively reclaimed areas "should be considered reclaimed and will only be modified if data show that the previously accepted closure criteria would not be met"; that determination will be made by CIRNAC once all required documentation is provided. Such documentation must include at the minimum, updated modelling demonstrating that the covers are able to meet their design intent. All relevant construction records would also need to be provided (e.g., "as-built" drawings). No such documentation has been provided to date, therefore, the covers are not classified as reclaimed.

CIRNAC also emphasizes that the criteria presented in an ICRP are not final criteria: they are subject to change as a project advances towards closure and additional information becomes available to inform the final closure requirements.

Agnico Eagle's Response:

Agnico Eagle acknowledges CIRNAC's comment on thermal monitoring of the WRSF and will continue to report in the annual report the work and the data that are being gathered to assess the performance of the WRSF. These data will continue to be analysed to ensure they are aligned with closure prediction and the model will be revised periodically to ensure the goal of meeting closure objective. In 2020 instrumentation installation continued on both sites as per O'Kane recommendation. The data gathered at Meadowbank are aligned with the latest review of the thermal model performed in 2019.

Agnico Eagle also acknowledges CIRNAC's comment on the progressive reclamation for the cover of the WRSF. Agnico Eagle will be submitting in due time the necessary documentation to support its claim of completion of the progressive reclamation work done on the WRSF.

3.1.2 Freeze back and Capping Thickness

References: Previously CIRNAC 1.2; 2020 Annual Report: Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail; Appendix 24; Appendix 25; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM provide more information on the nature and extent of research efforts, results of the research and a discussion of how the proposed cover design has been influenced by these results.

Agnico Response: Refer to AEM Response for CIRNAC 1.1 above.

CIRNAC Assessment of Recommendation Status: **Ongoing**: CIRNAC acknowledges that AEM, their consultants and research partners continue to assess the existing and predicted long-term thermal performance of mine wastes and cover systems. However, the 2020 Annual Report provided limited new information in this regard. The topic remains a work in progress therefore the status will be re-assessed by CIRNAC during its review of the 2021 Annual Report and subsequent ICRP documents.

Agnico Eagle's Response:

Refer to Agnico Eagle's response for CIRNAC in Section 3.1.1 above.

3.1.3 Progressive Reclamation

References: Previously CIRNAC 1.3; 2020 Annual Report: Section 9.1.1 for Meadowbank; Appendix 55; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020); NIRB 2019-2020 Annual Monitoring Report Meadowbank Gold Mine and Whale Tail Pit Projects (December 2020)

Prior Recommendation: CIRNAC recommended that future updates to the ICRP include more details on progressive reclamation at Meadowbank such as areas of Tailings Storage Facility (TSF) and Waste Rock Storage Facility (WRSF) facilities covered in the prior year, total areas covered to date, along with the volumes associated with these areas.

Agnico Response: "Agnico Eagle will continue to provide more details on progressive reclamation in future updates to the ICRP. Completed and scheduled work can be found in the closure schedule presented in Appendix P of the ICRP".

CIRNAC Assessment of Recommendation Status: **Ongoing**: CIRNAC requested that the missing information be incorporated into an updated ICRP. In their review of AEM's 2019 Annual Report (December 2020, Table 11) NIRB indicated that AEM was to provide an updated Meadowbank ICRP with the requested progressive reclamation information in the 2020 Annual Report.

An updated Meadowbank ICRP was not submitted with the 2020 Annual Report.

CIRNAC maintains that the missing information is relevant and recommends that the information be provided in the 2021 Annual Report.

> ***Agnico Eagle's Response:***
>
> *In response to 2019-2020 NIRB recommendations, Agnico Eagle has commited to include more details on progressive closure in the 2020 Annual Report. Relevant information to progressive closure can be found in Section 9.1 of the 2020 Annual Report and will continue to be updated annually. Details related to work completed and schedules of progressive reclamation is also included in the closure schedule presented in Appendix P of the ICRP which was updated in March 2020 and provided in the 2019 Annual Report in Appendix 55. Agnico is of the opinion that the last update March 2020 version fulfills the current request. Agnico Eagle is nevertheless committed to providing more details on the progressive closure in the next iteration of the Meadowbank ICRP.*

3.1.4 Results of Thermistor Measurements for Tailings and Waste Rock Storage Facilities

References: Previously CIRNAC 1.4; 2020 Annual Report: Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM analyze the thermistor monitoring results against early thermal modelling predictions and update its Waste Rock and Tailings Management Plans if large discrepancies are observed between the monitoring results and model predictions.

Agnico Response: "Agnico Eagle is monitoring freeze back in tailings and the waste rock and will continue to do so and expand the monitoring program as required. The data gathered will continue to be analyzed and compared to the FEIS prediction as more data becomes available to ensure that the closure strategy and concept still meet the closure prediction".

CIRNAC Assessment of Recommendation Status: **Ongoing**: CIRNAC acknowledges that AEM continues to assess the existing and predicted long-term thermal performance of mine wastes and cover systems at the Meadowbank and Whale Tail sites.

While the 2020 Annual Report presents a high-level summary of the topic, the document contains insufficient detail to understand the status of thermal monitoring/modelling as it relates to final closure. CIRNAC expects that the next iteration of the Meadowbank ICRP will include a comprehensive analysis of all thermal monitoring data and modelling.

> ***Agnico Eagle's Response:***
> *Agnico Eagle acknowledges CIRNAC's comment and will evaluate this recommendation during the next updated of the Meadowbank ICRP.*

3.1.5 Geotechnical Design Processes

References: Previously CIRNAC 2; 2020 Annual Report: Section 3.1 to 3.3; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM perform a "lessons learned" assessment of its design processes for the Whale Tail Pit Project water retention structures. The goal of this assessment is to identify and address any systemic design, construction, or operational process deficiencies that may have contributed to the sub-standard performance of the Whale Tail dikes. AEM should also indicate how it will incorporate the lessons learned into its design and environmental management processes.

Agnico Response: "Mammoth, NE and the WRSF Dike now have normal operating conditions and data suggests that the mitigation measures and Whale Tail Dike positively impacted the seepage rate. Agnico Eagle performed a lessons learned exercise on water management in winter 2020 to improve operational procedure. For the design on the expansion project infrastructure will take advantage of the first year of operations and work with multiple parties to ensure the structures meet design intent".

CIRNAC Assessment of Recommendation Status: **Unresolved:** AEM indicates they performed a lessons learned exercise on water management (as opposed to geotechnical design processes). A copy of the lessons learned exercise was not provided in the 2020 Annual Report.

While CIRNAC acknowledges that several of the design issues that occurred in 2019 have since been addressed, the underlying factors that led to dams failing to meet their design intent warrants a rigorous review. Further, the findings of such a review should be placed on the public record.

> ***Agnico Eagle's Response:***
> *Agnico Eagle does not agree with CIRNAC assessment of systemic deficiency in the design, operation, and construction process of water management infrastructure at the Meadowbank Complex. The water management infrastructure at the Meadowbank Complex were designed, constructed, and are operated by Experienced Professional following industry best practice and standard of care (Canadian Dam Association, Mining Association of Canada).*
>
> *Agnico Eagle fully understood the reason for which specific infrastructure under-performed and was able to quickly fix each of these. Each situation was specific, and its underlying cause and mitigation was reported in the annual report and other document transmitted to authority.*

3.1.6 Meadowbank Water Treatment Requirements

References: Previously CIRNAC 4; 2020 Annual Report: Appendix 50; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that the next iteration of the Meadowbank ICRP identify and examine potential water treatment scenarios based on current and future water quality projections during the closure phase. Although final decisions are not required at this time, costs associated with implementing the most likely water treatment scenario should also be incorporated into security estimates.

Agnico Response: "Agnico Eagle intends to start water treatment bench scale testing using reclaim water stored in the pits, to assess the most suitable water treatment processes that can be used at closure prior to pit flooding.

The 2020 Annual Report will include a plan describing the general timeline to perform bench scale lab testing, on-site testing, and development of design of the water treatment process for closure. The ICRP currently provides for water treatment. Following results of bench scale testing, cost associated with water treatment scenario could be adjusted".

CIRNAC Assessment of Recommendation Status: **Ongoing:** CIRNAC acknowledges that AEM continues to assess the requirements for treatment of reclaim water stored in the Goose and Portage pits at the Meadowbank Gold Mine. The approach is summarized in a preliminary water treatment strategy, as presented in Appendix 50 of the 2020 Annual Report. While the strategy lays out an appropriate framework for determining treatment requirements for reclaim water in the pits, CIRNAC notes that the strategy does not address whether on-going treatment of water in the re-flooded pits will be necessary after the reclaim water has been treated and discharged to the receiving environment.

Despite the progress on the treatment strategy for reclaim water, the topic remains a work in progress. Therefore, the status will be re-assessed by CIRNAC during its review of the 2021 Annual Report and subsequent ICRP documents.

Agnico Eagle's Response:

Agnico Eagle acknowledges CIRNAC comments and intends to assess the requirement for treatment of the re-flooded pits within the next iteration of the ICRP.

3.1.7 Meadowbank WRSF Seepage Quality

References: Previously CIRNAC 5; 2020 Annual Report: Appendix 11; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM confirm whether long-term modelling of seepage from the Meadowbank Waste Rock Storage Facilities (WRSFs) is of sufficient duration to characterize seepage after breakthrough. If not, CIRNAC recommends that AEM extend the temporal scope of its WRSF seepage modelling to ensure that potential seepage impacts after breakthrough are accurately characterized.

Agnico Response: "The closure strategy for the Meadowbank WRSF is in the ICRP and based on documentation showing the water quality objective will be met at closure. The cover system is designed to keep the active layer in the non-acid generating (NAG) material to ensure there is no acid-rock drainage (ARD) generation. There is no data to suggest that release of water from the Meadowbank WRSF would impact water quality".

CIRNAC Assessment of Recommendation Status: **Unresolved:** AEM's response does not address CIRNAC's request. Specifically, the response does not clarify whether long-term modelling of seepage from the Meadowbank WRSFs is of sufficient duration to characterize seepage after breakthrough. CIRNAC notes that the water quality forecast modelling presented in Appendix 11 to the 2020 Annual Report only extends up to 2027. For comparison and context, the Whale Tail WRSFs are predicted to achieve breakthrough after approximately 100 years.

CIRNAC maintains that AEM confirm whether long-term modelling of seepage from the Meadowbank WRSFs is of sufficient duration to characterize seepage after breakthrough. If not, CIRNAC recommends that AEM extend the temporal scope of its WRSF seepage modelling to ensure that potential seepage impacts after breakthrough are accurately characterized.

Agnico Eagle's Response:

Long term seepage from the Meadowbank WRSF was not identified as a concern during the FEIS and was not examined. For the next iteration of the Interim Closure & Reclamation Plan, Agnico Eagle will review if this mechanism can have an impact on the closure objectives and if so, will do the necessary analysis to characterise this impact and develop mitigation measure as required. However, it must be noted that, as opposed to Whale Tail WRSF, there is no metal leaching material in the Meadowbank WRSF and the pile is expected to remain in permafrost condition which would suggest that water seeping from the Meadowbank WRSF beyond the NAG capping is unlikely and would have little bearing on the water quality objective at closure.

3.1.8 Chromium in Meadowbank Third Portage Lake (TPL) Sediments

References: Previously CIRNAC 7; 2020 Annual Report: Section 8.12.3.1.1; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: In the 2019 Annual Report, AEM concluded that further assessment of chromium in Third Portage Lake (TPL) sediments is not justified and that no supplemental mitigations are necessary. CIRNAC recommended that AEM provide additional analyses to support their conclusion that additional mitigation for chromium is not required.

The elevated chromium concentrations measured in TPL sediments were caused by the use of ultramafic waste rock with elevated metal leaching potential as a construction material. As a result, CIRNAC recommended that AEM indicate why rock with elevated metal leaching potential was used as a construction material. Further, AEM should describe any changes made to its waste rock management practices to ensure similar materials do not result in similar adverse impacts in the future.

Agnico Response: "Although ultramafic rock generally known to contain elevated concentrations of chromium, it was considered best dike capping material to reduce potential for metal leaching/acid rock drainage (ML/ARD) and is likely sources of chromium in Third Portage Lake East Basin (TPE) sediment. Waste rock management practices will continue to follow the Operational ARD-Metal Leaching Sampling and Testing Plan including quarterly waste rock sampling. Sampling data, benthic invertebrate community abundance, targeted sediment metals bioavailability testing support that follow-up mitigation not necessary. Another year of sediment coring and benthic invertebrate community monitoring is planned for 2020, and the data will help determine if sediment chromium concentrations are stable or increasing and verify the health of the benthic invertebrate community".

CIRNAC Assessment of Recommendation Status: **Unresolved:** AEM's response does not address the recommendations. Specifically, it does not:

a) Provide additional analyses to support their conclusion that additional mitigation for chromium in TPL sediments is not required;

Agnico Eagle's Response:

Sediment chemistry and benthic invertebrate community results from TPE presented in the 2020 CREMP, along with the targeted bioavailability test results from the 2019 CREMP, demonstrate that additional assessment and mitigation for chromium in the East Basin of Third Portage Lake is not warranted at this time. Conclusions presented in the 2019 and 2020 CREMP reports provide conclusive evidence that chromium leaching from dike construction material presents low risk to the health of the benthic invertebrate community, specifically:

1. *Sediment chromium concentrations have plateaued since 2014/2015. Figure 4-68 in the 2020 CREMP shows that chromium concentrations in 2020 are within the range of concentrations reported since 2015. During that period, the benthic invertebrate community has remained stable, implying that any change in sediment chromium concentrations were below concentrations associated with effects to the community composition (see point 3 below).*
2. *Benthic invertebrate community abundance at TPE has remained stable since the baseline period (see Figure 4-73 in the 2020 CREMP). Similarly, species richness at TPE has remained stable throughout the monitoring period (typically 10-17 taxa), with only minor variability between years (Figure 4-76 in the 2020 CREMP report).*
3. *Concentrations of dissolved chromium in sediment porewater were lower at TPE than at the reference area (Pipedream Lake) as part of toxicity tests completed in 2019 (Table 4-14 in the 2019 CREMP report). Furthermore, concentrations of chromium in porewater and sediment were not correlated with effects to Hyalella azteca survival or growth (Figure 4-81 in the 2019 CREMP report).*

Agnico Eagle would like to recommend to CIRNAC to contact us, at their convenience, to discuss this recurrent recommendation. Agnico Eagle is of the opinion that no additional investigation into sediment chromium at TPE is actually required.

b) Provide an adequate explanation of why rock with elevated metal leaching potential was used as a construction material;

Agnico Eagle's Response:

As per the Meadowbank Mine Waste Rock and Tailings Management Plan, the metal leaching potential of chromium for ultramafic waste rock was not flagged as a concern. Therefore, following the waste characterization guidelines this material, meeting all other requirements for acid-rock drainage potential, was deemed suitable for construction material

c) Describe any changes made to its waste rock management practices to ensure similar materials do not result in similar adverse impacts in the future.

Agnico Eagle's Response:

Agnico Eagle continues to follow their approved Waste Rock and Tailings Management Plan and the ARD-ML Management Plan. At present, mining of waste rock material deemed for dike construction purposes is focused at the Whale Tail project. This material is primarily greywacke and has a low leachability and is non-potentially acid generating.

3.1.9 Whale Tail Pit Project Nutrient Sources

References: Previously CIRNAC 8; 2020 Annual Report: Section 8.5.3.2; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that future monitoring reports include a section that describes and quantifies AEM's use of explosives relative to assumptions used in the Final Environmental Impact Statement (FEIS) modelling. In addition, in light of 2019 monitoring results, CIRNAC recommended that AEM revisit its prior conclusion that a change in trophic status in Mammoth Lake will not impact fish productivity.

Agnico Response: "Primary sources of residual explosives are from the Whale Tail Pit and WRSF. Concentrations in operating pits at Meadowbank were used to model water quality and chemical loading, which determined that similar nitrogen contents would occur in the waste rock and open pit drainages. Results of monitoring explosive quantity used, and water monitoring is used to assess blasting performance according to the Ammonia Management Plan and used to adjust blasting practices as needed.

Although the increase in biomass at Whale Tail South (WTS) and Mammoth Lake (MAM) was likely related to increased nutrient concentrations, the observed increase in biomass downstream is consistent with changes predicted in the FEIS. The ecological significance of increased primary productivity at WTS and MAM will depend on how long the trends continue and how far they extend, but difficult to isolate the cause with one year of data (i.e., 2019). Ongoing monitoring will help determine whether the conclusion that the Project is not expected to have significant adverse effects on fish and fish habitat needs revisiting. Additional field studies are planned in summer 2020 led by the University of Waterloo."

CIRNAC Assessment of Recommendation Status: **Unresolved:** AEM's response does not address the recommendations. Specifically, it does not describe and quantify AEM's use of explosives relative to assumptions used in the FEIS modelling.

Agnico Eagle's Response:

The BACI analysis of changes in phytoplankton community metrics showed reductions in biomass at WTS (27%) and MAM (35%) in 2020 relative to baseline/reference conditions, although neither of the reductions were statistically significant. In 2019, the opposite trend was observed with increased biomass in WTS and MAM relative to baseline/reference conditions. Despite higher concentrations of nitrogen species and phosphorus since construction started in 2018, the predicted increase in primary productivity in lakes downstream from the Whale Tail Pit Expansion Project has not occurred. As Agnico Eagle emphasized in last years response, the Whale Tail Pit Expansion Project is in the early stage of operations, and on-going monitoring as part of the CREMP will provide a clearer understanding of whether the predicted increase of primary productivity for lower trophic levels is accurate.

Dr Heidi Swanson's research group at the University of Waterloo are leading the investigation of mine-related effects on fish productivity. That study is on-going, with additional field studies planned for August 2021.

Agnico Eagle will provide the required information on explosive use in the 2021 Annual Report.

3.1.10 Whale Tail Pit Project Mercury Monitoring

References: Previously CIRNAC 9; 2020 Annual Report: Section 8.2; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020); Project Certificate 008 (Amendment 001) Term and Condition 63

Prior Recommendation: CIRNAC recommended that AEM report back to NIRB on a priority basis to determine how it intends to address the significant (40×) spike in mercury concentrations observed in 2019. If the measured mercury concentrations are deemed accurate, AEM should indicate whether the elevated results have the potential to result in significant ecological and/or human impacts.

Agnico Response: "Dr. Heidi Swanson's research group at the University of Waterloo is coordinating with the laboratory at the University of Western Ontario (Biotron) regarding the accuracy of the 2019 water chemistry results for low level mercury and methylmercury. It should be noted that the apparent increases seen in the 2019 data were also seen at the reference lake (Lake 8), which would suggest a regional climatic-driven change. However, until data quality is verified for 2019 there is no point in trying to understand the observed patterns.

An expanded scope of work is planned for 2020 that includes monitoring Hg concentrations in water, sediment and lake trout within the project study area, including the Impoundment area (Whale Tail Lake south basin, Lake A65, and Lake A20), Mammoth Lake, and regional reference areas (Lake D1 and Lake 8). Data generated from the 2020 Mercury Monitoring Program will help determine the validity of the 2019 water quality data and determine the ecological and human health".

CIRNAC Assessment of Recommendation Status: **Ongoing:** Project Certificate 008 (Amendment 001) Term and Condition 63 requires that AEM:

"Conduct additional studies as part of its freshwater aquatic effects analyses to ensure that methylmercury concentrations anticipated to increase during operations in the aquatic environment (including in fish tissue) do not exceed regulatory requirements. In addition, the Proponent shall consider assessing potential risks from consumption of fish containing methylmercury by using Health Canada's hazard quotients as a descriptive tool."

Due to logistical challenges related to COVID 19, components of the mercury assessment and reporting could not be completed prior to issuance of the 2020 Annual Report (e.g., fish tissue analysis). However, based on the available data, mercury concentrations in water in 2020 were similar to those measured in 2019. While the concentrations are elevated relative to baseline, they remain below the Final Environmental Impact Statement (FEIS) predictions. Concentrations in reference lakes are also elevated, suggesting a regional change (as opposed to project impacts).

The topic remains a work in progress, therefore the status will be re-assessed by CIRNAC during its review of the 2021 Annual Report.

> ***Agnico Eagle's Response:***
> *The 2021 Annual Report will include a discussion of the fish mercury data collected in 2020 and findings from the 2021 MMP, including temporal changes in total and methylmercury concentrations in water from the Impoundment and changes in sediment chemistry in the recently flooded areas around the South Basin of Whale Tail Lake and Lake A65.*

3.1.11 Reporting of Mean Data

References: Previously CIRNAC 10; 2020 Annual Report: Appendix 33; AEM Responses to Review Comments on the 2019 Annual Report (Part 1: 7 August 2020 and Part 2: 21 August 2020)

Prior Recommendation: CIRNAC recommended that AEM modify its reporting approach to ensure that comparisons between monitoring data and applicable criteria reflect the temporal and spatial variability inherent in these natural systems.

Agnico Response: "Comparison of the annual mean concentration to the early-warning triggers, combined with visual examination of the chemistry plots has been an effective approach for identifying parameters that have increased in concentration due to mine-related activities".

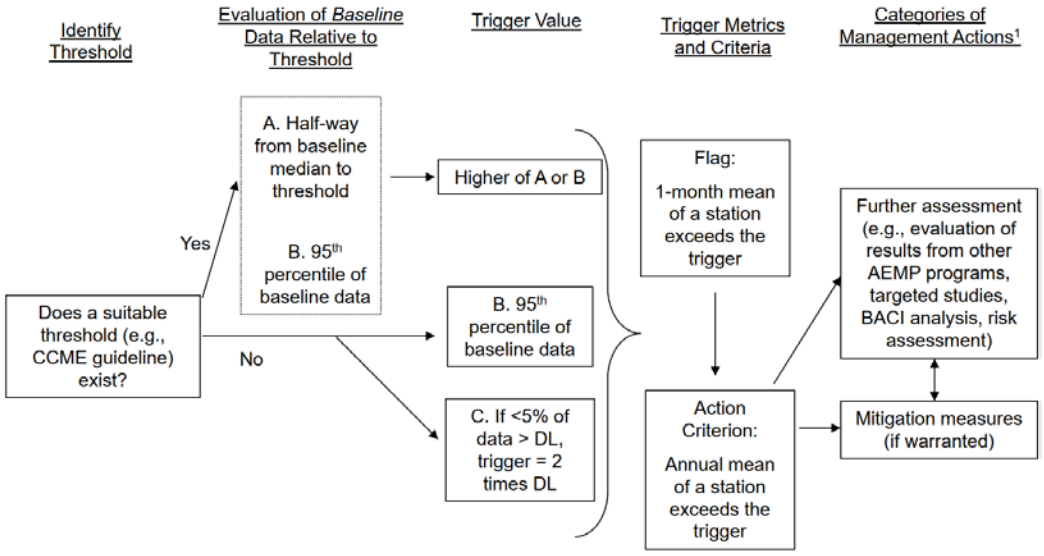
CIRNAC Assessment of Recommendation Status: **Unresolved:** AEM's response does not address the recommendation. Using annual mean monitoring results for entire lakes has the potential to mask spatial and temporal variability in the monitoring data and, by extension, could result in a failure to detect elevated results in localized areas and/or periods. CIRNAC maintains that reporting should be modified to ensure that comparisons between monitoring data and applicable criteria reflect the temporal and spatial variability inherent in these natural systems.

Agnico Eagle's Response:

Agnico Eagle would like to refer to responses submitted on August 7, 2020 to NIRB: 'Agnico Eagle's response to Meadowbank (03MN107) and Whale Tail (16MN056) 2019 Annual Report comments'

The approach to evaluating short-term changes in water quality was first outlined in the CREMP Design Document 2012 (Azimuth, 2012). As depicted in Figure 3 from that report (see below), individual samples are screened against the trigger values each month to determine if there are short-term changes in water quality linked to activities at the mine. The monthly screening assessment is meant to "flag" parameters for closer examination in subsequent sampling events. If a threshold exceedance is detected (i.e., water quality guidelines), and if the exceedance is plausibly linked to activities at the mine, the Environment Department is notified to provide advanced warning of potential changes in water quality. It is important to reiterate that changes in water quality need to be evaluated relative to predicted changes provided in the Environmental Impact Statements for each Project.

Figure 3. Development and Application of Monitoring Thresholds and Triggers for Water Chemistry Variables



[1] Potential management actions are considered as part of the broader AEMP, where results of the CREMP and other programs are considered together.

Agnico Eagle would also like to recommend to CIRNAC to contact us, at their convenience, to discuss this recurrent recommendation. Agnico Eagle is of the opinion that the actual method, approved by the CREMP, is an effective approach to identified parameters that have increased in concentration due to mine-related activities and has showed to be effective based on the more than 10 years of data from Meadowbank operation.

3.2 Meadowbank Post-Closure In-Pit Water Quality

References: 2020 Annual Report: Section 9.1.1.1; Appendix 11; Appendix 50

Issue/Rationale: Water quality predictions presented in the 2020 Annual Report indicate that elevated concentrations of multiple contaminants in the reclaim water from Goose and Portage pits are likely to require treatment prior to closure of the site. The contaminants requiring treatment may include, but are not necessarily limited to: aluminum, arsenic, cadmium, chromium, copper, iron, lead, nickel, selenium, thallium, chloride, fluoride, sulphate, and total ammonia/total nitrogen equivalent (Appendix 11: Section 4).

Appendix 50 of the 2020 Annual Report presents a preliminary “Meadowbank Closure Water Treatment Strategy” for the reclaim water. The strategy identifies reclaim water treatment concepts and maps out a

process for finalizing reclaim water treatment requirements and methods. CIRNAC concludes that the strategy establishes a logical framework for determining treatment needs for reclaim water.

However, CIRNAC notes that the water treatment strategy focuses only on reclaim water prior to closure and does not extend to the post-closure phase when the pits have been re-flooded (i.e., after the reclaim water has been treated and discharged). Instead, the strategy states that: "Water quality forecast will be performed during the flooding period" (Appendix 50: Section 2.2). Similarly, the predictive modelling presented in Appendix 11 of the 2020 Annual Report does not predict long-term water quality in the re-flooded pits during the post-closure phase.

Lack of an up-to-date post-closure water quality prediction for the reflooded pits creates uncertainty regarding the long-term environmental quality of the site after closure has occurred. CIRNAC recognizes that several unknowns (e.g., placement of an in-pit cover, flux of metals from the flooded tailings into the pit lakes, etc.) complicate efforts to predict water quality in the re-flooded pits. Nonetheless, estimates should be developed to better inform closure planning processes.

Recommendation to Address Issues: CIRNAC recommends that AEM:

a) Conduct a modelling exercise to predict post-closure water quality in the re-flooded Goose and Portage mine pits at the Meadowbank Gold Mine site.

> ***Agnico Eagle's Response:***
> *Agnico Eagle acknowledges CIRNAC' comments. Agnico Eagle will integrate this recommendation during the next update of the Meadowbank ICRP.*

b) Incorporate the findings of the modelling into the next iteration of the Meadowbank ICRP.

> ***Agnico Eagle's Response:***
> *Agnico Eagle acknowledges CIRNAC's comment. Findings of the modelling will be taken into consideration in a future update of the Meadowbank ICRP.*

c) Use the modelling results to inform the design of various other closure components, including but not limited to capping of the in-pit tailings and post-closure water management, water treatment facility designs, sludge generation and disposal, requirements as well expected treatment duration all of which should be included in the next iteration of the ICRP.

> ***Agnico Eagle's Response:***
> *Agnico Eagle acknowledges CIRNAC' comments. Agnico Eagle will integrate this recommendation during the next update of the Meadowbank ICRP.*

3.3 Meadowbank In-Pit Tailings Covers

References: 2020 Annual Report: Section 5.1.1; Appendix 50: Section 2.2; Appendix 11; Appendix 22; Project Certificate 004 (Amendment 003) Term and Condition 19

Issue/Rationale: New Commentary provided for Project Certificate 004 (Amendment 003) Term and Condition19 states:

"The cover associated with the In-Pit Tailings Disposal Modification Proposal is a minimum of eight (8) metres of water placed over an appropriate thickness of waste rock cover as conditions warrant."

There is currently uncertainty regarding what conditions might warrant the placement of a waste rock cover over the in-pit tailings. CIRNAC presumes that the final decision will be based on a range of site-specific risk assessment and considerations including but not limited to aquatic habitat, sediment resuspension, contaminant flux into the water column and constructability.

AEM indicates they will be reviewing potential closure concepts during the development of the Final Closure and Reclamation Plan and they have initiated several studies to inform the decision-making process (e.g., tailings pore water assessments).

In CIRNAC's view, selection of a preferred cover concept will require extensive study and should be integrated with decisions regarding other closure components (e.g., management of re-flooded pit water). On this basis, the planning process for the selection of a preferred cover concept for the in-pit tailings is likely to require multiple years and should begin as soon as possible.

There is currently insufficient clarity regarding how AEM will make final decisions on the placement of covers over the in-pit tailings at the Meadowbank Gold Mine.

Recommendation to Address Issues: CIRNAC recommends that AEM:

a) Describe the strategy they will use to evaluate cover requirements and methods for the in-pit tailings (e.g., water covers, coarse/fine granular covers, construction/leave a submerged berm at the connection to the pit).

> ***Agnico Eagle's Response:***
> *Agnico Eagle will present a timeline for further study to determine the requirement of a cover and possible construction strategy during the next update of the ICRP.*

b) Provide the strategy and an update on progress towards the selection of a preferred closure concept in the next update to the Meadowbank Interim Closure and Reclamation Plan (ICRP).

CIRNAC requests that this information be provided to assist in satisfying the New Commentary of Project Certificate 004 (Amendment 003) Term and Condition 19.

Agnico Eagle's Response:

Agnico Eagle will present this information in the next update of the ICRP.

3.4 Thermal Performance of Meadowbank WRSF Covers

References: 2020 Annual Report: Section 5.4; Section 9.1; Appendix 23; Appendix 25; Project Certificate 004 (Amendment 003) Term and Condition 15; Project Certificate 008 (Amendment 001) Term and Condition 8, 9 and 10

Issue/Rationale: The WRSF cover design for the Meadowbank Gold Mine consists of a 4 m thick layer of non-acid generating (NAG) rockfill to contain the active freeze/thaw layer within the cover. The depth of cover was selected based on thermal modelling and instrumentation to assess the probable thickness of the active layer at closure, including potential effects of climate change. As of 2020, approximately 90% of the WRSF has been progressively reclaimed. Additional thermal monitoring and analysis is being performed by AEM to verify the performance of the cover system against the design intent.

CIRNAC notes that the WRSF cover concept for the Whale Tail Pit Project is generally similar to the concept used at the Meadowbank Gold Mine. The only notable difference is that thermal modelling for the Whale Tail Pit site determined that WRSF covers should have a total thickness of 4.7 m (4.2 m active freeze/thaw zone and a 0.5 m buffer). Modelling for the Whale Tail site also predicted that the freeze/thaw zone may penetrate deeper than the 4.7 m design thickness of the WRSF covers under the most conservative climate change scenario.

Given the similarities between the Meadowbank Gold Mine and Whale Tail Pit sites (climate, topography, mine wastes, etc.), it is unclear to CIRNAC why the WRSF cover thicknesses between the two sites are different.

The Project Certificates for the Meadowbank Gold Mine and Whale Tail Pit Projects include multiple Terms and Conditions related to the long-term geochemical stability of the WRSFs. Those terms and conditions include, but are not necessarily limited to:

- Project Certificate 004 (Amendment 003) Term and Condition 15;

and

- Project Certificate 008 (Amendment 001) Term and Condition 8, 9 and 10.

Collectively, these Terms and Conditions require that AEM demonstrate that the WRSF closure strategies will be capable of preventing the seepage of potential contaminants from the rock piles during the post-closure phase.

Recommendation to Address Issues: CIRNAC recommends that AEM describe the technical rationale for using different WRSF cover thicknesses at the Meadowbank Gold Mine and Whale Tail Pit sites. Any notable differences in the design assumptions for the two sites should be provided in the rationale.

Agnico Eagle's Response:

Waste rock covers are designed based on project specific attributes and will naturally have variables that differentiate between sites (i.e., the active layer depth in the region is variable). The freezing mechanism is impacted by the material characteristics, such as the grain size distribution. The attributes of the cover system at Whale Tail include low annual precipitation (less than 300 mm per year); high summer evapotranspiration; coarse-texture soil availability; high spring surface runoff; and creation of low permeability ice barriers.

The development of the 4.7 m cover was based on an active layer depth in the WRSF of 4.2 m during operations and closure with an additional 0.5 m for contingency. The active layer was determined by preliminary 1D steady-state numerical modelling and further confirmed by O'Kane's 2D transient model. Both simulations considered predicted effects of climate change (O'Kane 2019).

Material properties for the cover system and waste rock materials were calibrated based on observed ground temperature measurements obtained from thermistors in Meadowbank's WRSFs (O'Kane 2019). Numerical modelling considered the effect of slope angle, slope aspect, wind exposure on thermal conditions within the WRSF. Modelling of the WRSF cover system indicates a greater thaw depth in the WRSF than observed regional data. Thus, the thaw depth simulated by numerical modelling, rather than the less conservative regional thaw depth, was used in support of the detailed design of the Whale Tail and IVR WRSF cover system.

Agnico Eagle refers CIRNAC to the Whale Tail Project – Thermal Modelling of Whale Tail and IVR WRSFs (O'Kane 2019) report which was previously issued to address CIRNAC's comments under the Whale Tail Expansion Project.

Reference: O'Kane (O'Kane Consultants). 2019. Whale Tail Project - Thermal Modelling of the Whale Tail and IVR WRSFs. Prepared for Agnico Eagle Mines. July 23, 2019. Ref. No. 948-011-R-013.

3.5 Fuel Management

References: 2020 Annual Report: Table 7-2 and Section 9.1; Appendix 9: Table 2; Appendix 28 (Meadowbank 2020 Government of Nunavut spill report for September 22, 2020); Project Certificate 004 (Amendment 003) Term and Condition 75

Issue/Rationale: Table 7-2 of the 2020 Annual Report indicates that fuel was observed in the secondary containment of fuel tanks 5 & 6 during a routine inspection of the Baker Lake Fuel Farm and a "small leak" was subsequently identified (Spill Number 2020-351). The total volume of fuel released from the tanks was estimated to be 100,000 L, which was mixed within the secondary containment area with an additional 403,000 L of water. AEM identified no evidence suggesting that the fuel/water mixture breached the secondary containment of the fuel tanks. Further, according to AEM's spill report, both the fuel and water were retrieved from containment and managed as appropriate; there were no releases to the environment and no off-site impacts to receiving watercourses.

CIRNAC also notes there have been several instances where tank farm inspections have identified deficiencies that have not been mitigated between inspections. To illustrate, the Meadowbank Gold Mine and Whale Tail Pit 2020 Annual Geotechnical Inspection (Appendix 9: Table 2) noted the ongoing presence of standing water within secondary containment, as well as evidence of animal burrows that may be impacting the integrity of liner systems. These deficiencies were identified during prior inspections but have yet to be addressed by AEM.

Based on the volume of fuel noted above, there was a potential for environmentally significant impacts if there was a breach in secondary containment of the fuel tanks. In this regard, CIRNAC notes that the 2020 Annual Report (Appendix 9: Section 9.1) indicates that several holes have been identified in tank farm liner materials during recent geotechnical inspections. While the 100,000 L fuel leak was not released to the environment in the current case, the presence of liner holes elsewhere in the tank farm suggests there is a credible risk of releases in the future.

Recommendation to Address Issues: Consistent with Project Certificate 004 (Amendment 003) Term and Condition 75, CIRNAC recommends that AEM:

a) Perform a comprehensive review of its tank farm facilities to identify and mitigate all potential failure modes (including accidents and malfunctions). The findings of the review should be provided in the 2021 Annual Report.

Agnico Eagle's Response:

As of June 2021, tanks 3, 4, and 6 have been inspected, repaired, and certified. A comprehensive inspection of tanks 1 and 2 is planned for 2022. Additionally, planned repairs will be conducted on tank 6 as per recommendations by the certified inspector. Parts for this repair (replacement on

annular ring) are to be expected on the 2021 sealift. Agnico Eagle commit to provide an update in the 2021 Annual Report.

b) Consider increasing the frequency of tank farm facilities inspections and implementation of mitigative actions within a reasonable timeframe if/as recommended.

Agnico Eagle's Response:

The frequency of future inspections will be determined by the API 653 recommendations following the initial inspections of the tank farm facilities conducted in 2021 and 2022.

3.6 Employee origin

References: Project Certificate 004 (Amendment 003) Term and Condition 65; Meliadine Gold Mine's Project Certificate 006 (Amendment 001) Term and Condition 101; 2020 Annual Report: Section 11.10.3; Appendix 52: Section1.3

Issue/Rationale: CIRNAC recognizes that AEM has made efforts to fulfill the reporting requirements for Term and Condition 65 of Project Certificate 004 (Amendment 003) which requires it to "include in its socio-economic monitoring program for the Meadowbank Gold Mine Project the collection and reporting of data of community of origin of hired Nunavummiut."

Currently AEM is reporting on the community of origin of Inuit employees by Kivalliq community. To better understand the socioeconomic impacts of the approved Meadowbank Gold Mine and Whale Tail Pit Projects, as well as consistency in reporting, AEM should report the origins of both Inuit and non-Inuit employees in a manner consistent with the requirements of its Meliadine Gold Mine's Project Certificate. Term and Condition 101 of Project Certificate 006 (Amendment 001) is comprehensive, requiring AEM to:

"…include with its annual reporting to the NIRB a summary of employee origin information as follows:

a) The number of Inuit and non-Inuit employees hired from each of the Kivalliq communities, specifying the number from each.

b) The number of Inuit and non-Inuit employees hired from each of the Kitikmeot and Qikiqtani regions, specifying the number from each.

c) The number of Inuit and non-Inuit employees hired from a southern location or other province/territory outside of Nunavut, specifying the locations and the number from each;

and

d) The number of non-Canadian foreign employees hired, specifying the locations and number from each foreign point of hire."

Recommendation to Address Issues: CIRNAC recommends that AEM's future Annual Report submissions include details of employee origin in a manner consistent with the requirements for the Meliadine Gold Mine's Project Certificate 006 (Amendment 001), Term and Condition 101. This would allow for an improved understanding of the origins of Inuit and non-Inuit employees. It would also ensure consistent reporting practices for all of AEM's Kivalliq projects.

Agnico Eagle's Response:

Agnico Eagle provides recommended details of employee origin in its Socio-Economic Monitoring Report, Appendix C. Detailed Employment Data found in Appendix 52 of the 2020 Annual Report. All data is represented for Meadowbank & Whale Tail, and for Meliadine.

3.7 Inuit Advisory Group

References: Project Certificate 004 (Amendment 003) Term and Condition 68; 2020 Annual Report: Section 11.9.4

Issue/Rationale: Pursuant to Project Certificate 004 (Amendment 003) Term and Condition 68 for the Meadowbank Mine

> "The Proponent shall, in consultation with Elders, local HTOs and the Meadowbank Gold Mine SEMC, demonstrate that they are working toward incorporating Inuit societal values into mine operation policies."

Section 11.9.4 of the 2020 Annual Report makes reference to the planned formation of an Inuit Advisory Committee to review traditional knowledge in relation to ongoing and planned project activities. It is understood that this committee will allow for improved integration of traditional knowledge and Inuit Qaujimajatuqangit into project operations. AEM has indicated that Elders will participate in this committee. It is not clear if additional efforts will be made to ensure the committee is representative of the communities most impacted by project activities.

Recommendation to Address Issues: CIRNAC recommends that AEM work toward having an Inuit Advisory Committee that is as much as possible, a representative cross section of the community members from Baker Lake and Chesterfield Inlet, the two communities most directly affected by project operations. Representatives of Elders, women, youth, and Hunters and Trappers Organizations should be considered.

Agnico Eagle's Response:

Agnico Eagle is receiving CRINAC recommendation and agrees. Since the submission of the 2020 Annual Report and reference to the planned formation of an Inuit Advisory committee to review

traditional knowledge and Inuit Qaujimajatuqangit, activities took place on this matter at Agnico Eagle. Initiatives and engagements happened with listed representatives, community members and the public to collect and validate traditional knowledge and Inuit Qaujimajatuqangit in Agnico Eagle upcoming projects and ongoing operations.

3.8 Semi-annual Calls with Government of Nunavut Career Development Personnel

References: Project Certificate 008 (Amendment 001) Term and Condition 49; 2020 Annual Report: Section 11.11.1.2; CIRNAC Review of the AEM's 2019 Annual Report (July 6, 2020); AEM's Response to Comments Received on its 2019 Annual Report (August 7, 2020)

Issue/Rationale: Pursuant to Project Certificate 008 (Amendment 001) Term and Condition 49 which was issued for the Whale Tail Pit Project:

> "The Proponent shall make best efforts to collaborate with the Government of Nunavut's Career Development Officer, Regional Manager of Career Development, and Director of Career Development. Semi-annual calls, at a minimum, should be initiated by the Proponent to address:
>
> - Hiring procedures and policies.
> - Issues regarding employee recruitment and retention.
> - AEM policies regarding career pathways and opportunities for advancement.
> - Internal and/or partnered training and development of employees.
> - Long-term labour market plans to facilitate training in communities."

According to the 2020 Annual Report (Section 11.11.1.2), in February 2020, AEM met with the Government of Nunavut's Career Development Officer and three Department of Family Services staff members to satisfy this term and condition. A follow-up meeting was planned to occur in November 2020 but was cancelled due to scheduling conflicts associated with the implementation of measures designed to prevent the spread of COVID-19. Similarly, CIRNAC's review of AEM's 2019 Annual Report noted that one meeting was held in 2019 with respect to this Project Certificate Term and Condition (CIRNAC #15).

Recommendation to Address Issues: CIRNAC recommends that AEM strive to maintain semi-annual calls with appropriate Government of Nunavut personnel to review the discussion points presented in Project Certificate 008 (Amendment 001) Term and Condition 49 as well as any other relevant areas of interest. Maintaining communications will assist efforts to maximize Inuit hiring and capacity development within the region.

Agnico Eagle's Response:

Agnico Eagle acknowledges CIRNAC's recommendation and will continue to strive to maintain semi-annual calls or meetings with appropriate Government of Nunavut's Career Development

Officer, Regional Manager of Career Development, and Director of Career Development in respect to Project Certificate 008 (Amendment 001) Term and Condition 49. In 2020, the pandemic and the no contact order from the Government of Nunavut brought challenges in respect to this Project Certificate Term and Condition.

3.9 Full-time road safety, search and rescue position

References: Project Certificate 004 (Amendment 003) Term and Condition 34; CIRNAC Review of AEM's 2019 Annual Report (July 6, 2020); AEM's Response to Comments Received on its 2019 Annual Report (August 7, 2020)

Issue/Rationale: Pursuant to Project Certificate 004 (Amendment 003) Term and Condition 34 for the Meadowbank Gold Mine, AEM is required to:

> "…in consultation with the Hamlet of Baker Lake, KivIA, and the Royal Canadian Mounted Police, facilitate the hiring of a full-time road safety, search and rescue position to respond to safety matters arising from mine and unauthorized non-mine use of the all-weather private access road, including consulting with Baker Lake and Chesterfield Inlet Elders to incorporate Traditional Knowledge into search and rescue operations."

AEM has not provided an update on this Term and Condition's implementation status. Furthermore, CIRNAC identified this reporting discrepancy in its July 6, 2020 review of AEM's 2019 Annual Report (CIRNAC #14). AEM did not address this comment in its written response to 2019 Annual Report review submissions.

Recommendation to Address Issues: CIRNAC recommends that AEM confirm whether they have facilitated the hiring of a full-time road safety, search, and rescue position pursuant to Project Certificate 004 (Amendment 003) Term and Condition 34.

Agnico Eagle's Response:

Agnico Eagle is of the opinion to operate in compliance with the Term and Condition 34. As mentioned in our response to NIRB 2019-2020 Board's recommendation, there is currently a 24-hour dispatch at the Baker Lake Gatehouse and a 24-hour security guard onsite. Agnico Eagle also has an emergency response team (ERT) ready to respond to any incident that may occur on the AWAR, WTHR, or on site. Agnico Eagle has several protocols and procedures in place to respond to emergencies.

The following details procedures and protocols that are in place in the event of an emergency:

- *When an emergency occurs on the AWAR, WTHR or on site a code one is initiated. All Agnico employees are trained on the code one procedure upon hiring. All code ones are directed to*

the mine dispatch where they will contact the appropriate personnel to respond to the incident. ERT is dispatched to respond to the code one emergency. ERT members can be reached at any time using a Nebula paging system.

- *Agnico has a Memorandum of Understanding (MOU) with the Hamlet of Baker Lake in regard to providing resources to respond to a crisis or emergency for either party. If a request for search and rescue is made, Agnico assesses the request and will provide available resources.*
- *Agnico also has a Crisis Management Plan that is followed when an incident occurs on site or on the AWAR or WTHR. The plan covers several crisis levels with event scenarios and protocols to be followed. A management control group will be initiated to assist the ERT in response to higher crisis levels.*

3.10 Review of Socio-Economic Monitoring Program Results with Community Liaison Committee

References: Project Certificate 008 (Amendment 001) Term and Condition 46; Appendix 61 – Baker Lake Community Liaison Committee Report 2020; Appendix 62 – Agnico Eagle Kivalliq Projects Socio-Economic Monitoring Program, January 2021 Update

Issue/Rationale: Pursuant to Project Certificate 008 (Amendment 001) Term and Condition 46 for the Whale Tail Pit Project, AEM has developed a Kivalliq Projects Socio-Economic Monitoring Program. This Term and Condition requires AEM to:

> "Work in collaboration with all other socio-economic stakeholders such as the Kivalliq Inuit Association, the Government of Nunavut, and Indigenous and Northern Affairs Canada, and the communities of the Kivalliq region to develop the program."

The Adaptive Management and Mitigation section included in AEM's Kivalliq Projects Socio-Economic Monitoring Program (page 4) makes reference to the need to be responsive to the priorities of Community Liaison Committees. Upon further review, the 2020 Baker Lake Community Liaison Committee Report makes no reference to a review of the Socio-Economic Monitoring Program, its 2020 Report, or planned activities for 2021.This committee is a valuable forum for AEM to seek input from community members and organizations on socio-economic topics associated with the Meadowbank Gold Mine and Whale Tail Pit Projects.

Recommendation to Address Issues: CIRNAC recommends that AEM provide the Baker Lake Community Liaison Committee opportunities to review the implementation of its Kivalliq Projects Socio-Economic Monitoring Program and discuss observations during committee meetings. Summaries of discussions and any associated follow-up actions should be included in annual Committee Reports.

Agnico Eagle's Response:

Agnico Eagle acknowledges CIRNAC's recommendation to provide the Baker Lake Community Liaison Committee opportunities to review the implementation of its Kivalliq SEMP and discuss observations during the CLC meetings as it is indicated in the Adaptive management and mitigation section of the SEMP. As recommended, Agnico Eagle will include summaries of discussions and follow-up actions in its annual reports.

3.11 Application of Inuit Qaujimaningit to monitoring plans

References: Project Certificate 008 (Amendment 001) Term and Condition 54; 2020 Annual Report: Section 11.10.1; CIRNAC Review of AEM's 2019 Annual Report (July 6, 2020); AEM's Response to Comments Received on its 2019 Annual Report (August 7, 2020)

Issue/Rationale: Pursuant to Project Certificate 008 (Amendment 001) Term and Condition 54 for the Whale Tail Pit Project AEM:

> "…should ensure that the development of all project monitoring plans and associated reporting and updates are undertaken with active engagement of Kivalliq communities, land users, and harvesters. The Proponent should work with the Kivalliq Inuit Association, the local Hunters and Trappers Organizations and the Kivalliq Socio-Economic Monitoring Committee to report on the collection and integration of Inuit Qaujimaningit through its monitoring programs for the Project."

Through their 2020 Annual Report submission, AEM makes reference to its interactions with the Kivalliq Socio-Economic Monitoring Committee as an important means of engaging with Kivalliq communities, land users, and harvesters to inform the development of its annual Socio-Economic Monitoring Reports. No reference is made to a systematic process of ensuring the active engagement of these stakeholders in the development of all project monitoring plans and the integration of collected Inuit Qaujimaningit.

CIRNAC also identified this reporting discrepancy in its July 6, 2020 review of AEM's 2019 Annual Report (CIRNAC #16). AEM did not address this comment in its written response to 2019 Annual Report review submissions.

Recommendation to Address Issues: CIRNAC recommends that AEM describe how it has engaged with Kivalliq communities, land users, and harvesters in its development of project monitoring plans and associated reporting and updates pursuant to the requirements of Project Certificate 008 (Amendment 001) Term and Condition 54. Furthermore, AEM should summarize how Inuit Qaujimaningit is being integrated into its monitoring programs.

Agnico Eagle's Response:

In 2020, Agnico Eagle undertook engagements and initiatives in different formats to communicate on monitoring and integrating of IQ. Those activities were highly impacted by Covid-19 pandemic and the following no contact order by Government of Nunavut. Agnico Eagle faced limited options to travel and meet with Kivalliq communities, land users and harvesters, but also the Socio-Economic Monitoring Committee (SEMC).

Agnico Eagle understands that in the past, they listed or provided examples of engagements and consultations with the community to gather traditional knowledge and IQ. The same kind of engagements and consultations took place in 2020. Some examples of IQ being integrated in Agnico Eagle's program is the implementation of the Nunavut Language Policy, in collaboration with KIA, that recognize that the use of Inuktitut should increase over the life of Agnico Eagle's projects. Numbers of engagements also happened between Agnico Eagle and Baker Lake HTO where discussions and plans covered fish habitat and caribou migration. Other example of traditional knowledge and IQ integration was the planned trips for Elders to identify traditional place names surrounding Whale Tail area and other exploration sites that were postponed due to the pandemic.

Additionally, there was no Socio-Economic Monitoring Committee in 2020 due to Covid-19 pandemic. Agnico Eagle had virtual activities with the Socio-Economic Monitoring Working Group (SEMWG) to review the Socio-Economic Monitoring Program (SEMP) update and review with the Whale Tail expansion Project Certificate terms and conditions. Final 2020 SEMR was also submitted to the SEMWG for review before final submission.

In response to a systematic process of ensuring the active engagement of community stakeholders, and while facing this unprecedent pandemic situation, Agnico Eagle hired an Inuit Qaujimajatuqangit and Wildlife advisor who was able to travel through Kivalliq communities to discuss traditional knowledge and IQ for upcoming and ongoing Agnico Eagle operations. Other solutions to engage and consult with Kivalliq residents were initiated in 2020 to create virtual/digital public spaces. Solutions that could remain active after the pandemic and continue supporting Agnico Eagle's process of active engagement with stakeholders in the development of plans and the integration of collected IQ.

3.12 Compliance Monitoring

3.12.1 A summary of any inspections conducted during the 2020 reporting period, and the results of these inspections;

3.12.1.1 Meadowbank Gold Mine

On October 1, 2020, an inspection was conducted to ensure compliance with the NWB Type A Water Licence 2AM-MEA1530. As per the inspection report, erosion and deposition of sediments into water course were observed at five bridges (at km 17; km 23; km 69, km 74 and km 83) along the all-weather access road (AWAR). The Inspectors recommended AEM to implement erosion prevention measures and maintenance at these water crossings to prevent further erosion and deposition of sediments into watercourse. AEM will provide Inspectors with a summary report of the maintenance works that were to be completed in 2020. The report is due to Inspectors on July 1, 2021.

On October 1, 2020, an inspection was conducted to ensure compliance with the applicable terms and conditions of the CIRNAC Land Lease authorization no. 66A/8-72-5 (Quarries # 2; 6; 8; 9; 10; 11; 12; 13; 14; 15 and 16). As per the inspection report, garbage/debris/waste was observed inside of some of the Quarries (e.g., Quarry #6; 8; 9; 11; 16 and 18). In addition, it was noted that Quarries # 12 and 18 will need to be resurfaced to match the natural contour allowing minimal water accumulation. Quarries #13; 14 and 15 were filled with water at the time of inspection. The Inspectors recommended AEM to begin the cleanup of garbage/debris/waste deposited in the Quarries and complete it prior to the next inspection. AEM will provide Inspectors with a summary report of the cleanup activities before July 1, 2021.

Agnico Eagle's Response:

Agnico Eagle provided responses to CIRNAC Inspector on July 1st, 2021.

3.12.1.2 Whale Tail Pit

On October 1, 2020, an inspection was conducted to ensure compliance with the NWB Type A Water Licence 2AM-WTP1830. As per the inspection report, erosion and deposition of sediments into water course were observed at five bridges (at km 160; km 148; km 141; km 138; km 135, and km 131) along the Whale Tail Haul Road. The Inspectors recommended AEM to implement erosion prevention measures and maintenance at these water crossings to prevent further erosion and deposition of sediments into watercourse. AEM will provide Inspectors with a summary report of the maintenance works that were to be completed in 2020. The report is due to Inspectors on July 1, 2021.

On October 1, 2020, an inspection was conducted to ensure compliance with the applicable terms and conditions of the CIRNAC Land Lease authorization no. 66H/8-01-2 (Quarries at km 145.5; km 159.9 and km 167). As per the inspection report, garbage/debris/waste was observed inside Quarries at km 167 and

km 145.5. The Inspectors recommended AEM to begin the cleanup of garbage/debris/waste deposited in the Quarries and complete it prior to the next inspection. AEM will provide Inspectors with a summary report of the cleanup activities before July 1, 2021.

Agnico Eagle's Response:

Agnico Eagle provided responses to CIRNAC Inspector on July 1st, 2021.

4 Kivalliq Inuit Association (KivIA)

4.1 Meadowbank Complex 2020 Annual Report

References: S 11.9.2.1.1 Baker Lake HTO

Comments: The annual report lists topics discussed in meetings with the Baker Lake HTO during 2020. One of the topics listed was the "Whale Tail Caribou Management Plan".

Recommendation 1: Agnico Eagle should clarify what management plan they are referring to.

Agnico Eagle's Response:

It refers to the Terrestrial Ecosystem Management Plan (TEMP) for Whale Tail operations. Over the past several years, Agnico Eagle has worked diligently with community groups to develop and implement detailed caribou protection measures.

4.2 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report - Overall

References: Appendix 47

Comments: The 2020 wildlife summary report and related appendices provide an overview of the different methods for monitoring caribou and other wildlife and mitigation actions. The KivIA is pleased that Agnico Eagle has responded to a number of our recommendations on the 2019 summary report, including clarifying vehicle passages and providing additional details on the reasons/triggers for enhanced mitigation and road closures. The latter is progress towards providing more information for which to evaluate the effectiveness of monitoring.

Recommendation 2: NA

Agnico Eagle's Response:

Agnico Eagle is pleased that the KivIA appreciates the level of detail that was included as part of the wildlife monitoring summary and will continue to provide information that will be useful in evaluating effectiveness of monitoring.

4.3 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Road Survey

References: Appendix 47; S 2 Road surveys; TEMP V7

Comments: Use of convoys figures prominently in management of traffic disturbance on caribou (S 2.6.6, pg 2-19; TEMP V7: Figs. 6, 8). Convoying of vehicles, especially large trucks, during caribou migration has the potential to deflect or delay caribou crossing during migration depending on number and spacing of convoys. Convoys are often used during road closures (Tables 9, 10) yet there has been no reporting on the frequency and size of the convoys, and no study or reporting of the efficacy of convoying, the spacing between convoy disturbance events, or the duration of time since disturbance that caribou are more likely to cross.

Recommendation 3: Agnico Eagle should:

i) report on the number, size and spacing/timing of convoys on both the AWAR and WTHR;

> ***Agnico Eagle's Response:***
> *Agnico Eagle will discuss documentation of additional convoy parameters at an upcoming TAG meeting.*

ii) in collaboration with the Terrestrial Advisory Group (TAG), design and implement a pilot haul truck convoy program that could test patterns of timing of road closure and convoying to determine whether convoys of vehicles (including and without heavy equipment) both would impact caribou movements and optimal timing between convoys.

> ***Agnico Eagle's Response:***
> *Agnico Eagle will discuss potential development of a convoy program at upcoming TAG meetings.*

4.4 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Caribou Crossing

References: Appendix 47; S 2.6.6 Caribou Crossings

Comments: Road surveys and incidental sightings provided records of numbers and locations of caribou crossing mine roads (Table 11, pg 2-19). The source for about half of the observations is listed in the notes, primarily from the Wildlife Log. The notes stating "Tolerant Observations" are perplexing, as it is unclear how these were determined and what this has to do with crossing the roads. These data would be strengthened with the addition of road closure status, current traffic level (since various kinds of traffic often occurred on closed roads), and direction that the caribou crossed.

Recommendation 4: Agnico Eagle should:

i) add the following data to Table 11: road closure status, current traffic level, and direction that the caribou crossed

Agnico Eagle's Response:

Agnico Eagle acknowledge KivIA recommendation and will make sure, for the annual report 2021, that the data is sufficiently clear to understand the link between tolerant observation and road status/traffic level. Further discussion on data collection/management will be part of upcoming TAG meetings.

ii) clarify what "Tolerant Observations" notes mean.

Agnico Eagle's Response:

"Tolerant Observations" were considered Project Tolerant caribou. Project Tolerant caribou were recorded separately during monitoring in 2020. Please see responses to GN Recommendation 6 in Section 1.6.

4.5 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Caribou Satellite-Collaring Program

References: Appendix 47; S 5 Caribou Satellite-Collaring Program

Comments: "Agnico Eagle requested access to 2020 collared caribou data on October 27, 2020. The data had not been received at the time of publication of this report" (S 5.6, pg 5-2). The KivIA is extremely disappointed that the Government of Nunavut (GN) and Agnico Eagle were unable to sign a data share agreement to enable the mine to evaluate collar movements relative to their mining operations. Action 2.3c of the Nunavut Caribou Strategy (2014) states that the GN will "Work with industry to make caribou information available for baseline studies and impact assessments". These collar data are an important component of the multitude of data used to assess the effectiveness of monitoring and the accuracy of impact predictions.

Recommendation 5: Agnico Eagle and the Government of Nunavut should develop a long-term data share agreement to enable the mine to use collar data to evaluate the potential impacts of the development on caribou.

Agnico Eagle's Response:

As part of the Meliadine Waterline Application, a commitment was made at the Public Hearing regarding a Data Sample and Sharing Agreement (DSSA). The commitment was listed as Commitment 17 in the June 17, 2021 List of Commitments, and is currently under discussion between Agnico Eagle and the GN. The commitment is as follows:

"Agnico Eagle and the Government of Nunavut commits to continuing communication regarding possible collaboration on GN managed research programs through a Research Contribution Agreement that addresses topics such as discussion of anticipated regional research data required by Agnico Eagle and financial and in-kind contribution of Agnico Eagle to GN research programs. Both parties will continue to collaborate on a Data Sample and Sharing Agreement (DSSA). It is acknowledged by both parties that GN regional caribou monitoring data is collected by GN on behalf of the public interest. Access to such GN regional caribou monitoring data could support Agnico Eagle's requirements and legal obligations in order to carry out its monitoring programs under the Project Certificate."

4.6 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Viewshed surveys

References: Appendix 47; S 6 Viewshed surveys

Comments: Viewshed surveys were implemented in February 2020 to replace height of land (HOL) surveys (S 6.1, pg 6-1) and are well-reported (S 6.6, pgs 6-2 to 6-5). These surveys are designed to help trigger enhanced mitigation when caribou are within 4 km of the haul road, an early warning system for detecting caribou approaching the haul road. Viewshed surveys are effectively 10-minute stops at 12 set locations along the Whale Tail Haul Road (WTHR). The report recommended "increasing the frequency of viewshed surveys in 2021 should be a primary objective" (S 6.7, pg 6-6). The KivIA questions whether the viewshed surveys are making a significant contribution to monitoring that triggers changes in mitigation, or whether these are driven by the more rapid and more frequent road surveys. Only 6% of 163 viewshed surveys observed caribou, although many of these did not occur during migration (S 6.6, pg 6-6), and it is unclear why more viewshed surveys were not conducted throughout the spring migration. Despite viewshed surveys being in place during both migration seasons, the method was only acknowledged once as a trigger for road restrictions on the WTHR (Table 10, pg 2-18). The viewshed surveys should theoretically provide further distance monitoring of caribou numbers for triggers (average distance was 630 m for the road, with furthest 1 km) (S 6.6, pg 6-6) but it is unclear how far off the road caribou were spotted during road surveys.

Recommendation 6: Agnico Eagle should provide:

i) the distance from the road that caribou groups were observed during road surveys (to compare with viewshed surveys)

Agnico Eagle's Response:

Please see response to GN Recommendation 5, item 1 in Section 1.5. Agnico Eagle will include distance of observations during road and viewshed surveys in wildlife observations (Appendix A) of future annual monitoring reports.

ii) a discussion on why more viewshed surveys were not conducted during spring migration 2020

Agnico Eagle's Response:

Please see response to GN Recommendation 5, item 1 in Section 1.5.

iii) a comparison of the contribution road surveys versus viewshed surveys make in triggering changes in mitigation along the WTHR.

Agnico Eagle's Response:

Please see response to GN Recommendation 5 in Section 1.5.

4.7 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Remote Camera

References: Appendix 47; S 7 Remote cameras – App. J

Comments: The primary objective of the remote camera program is "to monitor caribou behavioural interactions with the WTHR, and adapt management practices (i.e., traffic mitigation) as required" and to "… allow[s] for comparisons to determine if caribou crossing locations along the WTHR are related to the physical parameters of the road" (S 7.2, pg 7-1). With only 8 locations (16 paired cameras), the KivIA questions whether there is sufficient sample size to quantify road characteristics and caribou crossing. The "Infrequent capture of caribou crossing events" (S 7.5, pg 7-3) and the data suggest the cameras are not overly useful to document crossings. This section goes on to state "The amount of time since last vehicle passed is shorter when the WTHR is open than closed, which suggests that caribou are not responding immediately to WTHR closures" (S 7.6, pg 7-6). The KivIA respectfully submits that there is a total lack of data to support this statement (all but one crossing occurred during road closure). The limited sample of photos in the 2019 Summary Report (Appendix J) showed delays in when the caribou cross the haul road after traffic. This is a useful start and requires a comprehensive report covering all camera data collected to date.

Recommendation 7: Agnico Eagle should:

i) comprehensively analyze 2018, 2019 and 2020 photos

Agnico Eagle's Response:

The camera photos from the pilot 2018 program follow a different study design, with cameras facing towards and away from the road, and results are not comparable to the updated study design implemented in 2019. Results of the camera data from 2019 to 2021 will be presented in 2021 annual report as well as in upcoming TAG meeting.

ii) recommend any revisions in sampling design for the 2021 TEMP and for TAG review.

Agnico Eagle's Response:

The remote camera program was discussed at a TAG meeting in May 2021. Agnico Eagle updated the angle of cameras in 2021 to better document caribou behaviour on either side of the road, and increased the number of timed (non-motion triggered) photographs to improve the likelihood of caribou detection. The TEMP will be revised to reflect the current camera program design.

4.8 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Caribou Management Decision Tree

References: Appendix 47; S 9 Caribou Management Decision Tree; S 2.6.6; Appendix B

Comments: The Terrestrial Ecosystem Management Plan (TEMP V7) defines 'project tolerant caribou' as "an animal or group of animals (i) observed within a mitigation distance buffer for greater than 72 hours during the winter or 48 hours during other seasons; and (ii) not visibly disturbed by the Project" (TEMP V7, pg 40). Presence of 'tolerant' caribou next to the road results in an exemption to Level 3 road closures in the caribou decision trees (TEMP V7, Figs. 6–9). The reporting of 'tolerant' caribou is a new item for annual reporting and is a concern to KivIA given the high numbers. Over 22,000 caribou were classified as project tolerant in 2020, ~37% of all caribou observed, the vast majority during migrations. Well over 95% of these 'tolerant' caribou were detected on the upstream side of the road during migration (the west side in spring and east side in fall; Appendix B).

The KivIA is concerned with these statistics and their implication to mitigation:

i) Without continual monitoring, what was used to determine that it was the same group of caribou in the same area for >48 hrs?

ii) "Not visually disturbed" is subjective. Agnico Eagle stated "To understand visible disturbance to the animals, behavioural monitoring (i.e., group scans) will be completed when the animal(s) are encountered and at least once per day until they are deemed Project-tolerant" (S 9.5, pg 9-2) but did this happen in 2020 or is it proposed for the future. No data on behaviour of 'tolerant' caribou were presented.

iii) Why were almost all 'tolerant' caribou observed on the upstream side of migration, and why were almost no 'tolerant' caribou observed downstream of the roads during migration? One interpretation would be that the upstream caribou are not tolerant but are being delayed by the mine infrastructure and activities and less eager to cross, and with their designation as 'tolerant' the continued traffic activity would heighten their reluctance to cross.

Recommendation 8: KivIA suggests that defining 'tolerant' caribou should be a topic for TAG in view of more recent information on caribou delaying their road crossings. Agnico Eagle should justify their interpretation and classification of caribou as 'tolerant'. This should include:

i) how caribou residency for >48 hrs was determined;
ii) how 'not visually disturbed' was assessed;
iii) an explanation why almost all 'tolerant' caribou were on the upstream side of the roads during migration and why this was not interpretated as a mine-induced delay in movement; and
iv) Agnico Eagle in consultation with TAG should design an application of the behaviour sampling to test a diagnosis for 'tolerant' caribou and for the presence of 'tolerant' caribou as evidence for mitigation effectiveness.

Agnico Eagle's Response:

i) Professional judgment was used the same field crew over a 48-hour period to assess caribou as Project Tolerant.
ii) 'Not visually disturbed' includes caribou remaining lying down, standing, or grazing in response to Project.
iii) Agnico Eagle always monitored both side of the road. However, Agnico Eagle is focusing on the upstream side of the road when caribou is approaching.
iv) Agnico Eagle will discuss a potential behaviour sampling test for Project Tolerant caribou at a future TAG meeting.

4.9 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Caribou behaviour

References: Appendix 47; S 17.2 Caribou behaviour; Appendix I

Comments: The Caribou behaviour study, 2020 report (Appendix I) is a clear and useful account of a trial project to describe caribou behaviour. KivIA has the following comments:

i) The categorization of walking as a non-response (calm) behaviour is not supported in the literature. Wolfe et al. (2000)1 described walking as a response to aircraft, and Reimers and Colman (2006)2 included both running and walking as a restless (responsive) behavior. We suggest that walking is more likely to be a response (disturbed) behaviour and should be classified as such.
ii) The number of disturbances is relatively high but it is not clear how many, if any, behaviour observations occurred when the road was closed or other mitigation was in effect (e.g., speed limits, traffic halted). Whether the road is closed or not should be included as a variable in analyses, or the objectives should be focused to answer a specific question such as whether the frequency of responses decreases when the road is closed versus when the road is open

to traffic during a single migratory season. With the latter we mean that "normal" behaviour and responses to disturbance likely differ between spring and fall migration.

iii) It is not clear why the number of small groups and groups closer to the road was relatively low; the report states this may be because caribou "tend to avoid areas within 100-300 m of the road" (pg 11). Boulanger et al. (2020)3 reported that caribou were delayed on the upstream side of the road, which implies the caribou were congregating and waiting to cross. Analyses of the road survey data by Stephen Atkinson also showed that the number of groups observed were far more numerous on the upstream side of roads, likely affecting the size of caribou groups being observed. Given that the behaviour report described "distance to road should be considered as a better explanatory variable for caribou behaviour than group size for this pilot program in 2020" (pg 14), an objective could be to increase the sample size for 100–300 m from the road and determine if there are behavioural differences for near and far caribou groups. In addition, although it was recorded which side of the road caribou groups were located, it would also be useful to consider whether caribou were on the upstream or downstream side of the roads as a covariate in analyses.

iv) An information gap that the behaviour study potentially could address is the question of whether project-tolerant caribou are really tolerant (i.e., whether they have a lower frequency of response behaviours).

Recommendation 9: Agnico Eagle should:

i) justify that walking is indeed a non-response behaviour;

ii) include whether the road is closed or not and how long since the last vehicle passage as variables in analyses;

iii) include whether caribou were on the upstream or downstream side of the roads as a covariate in analyses; and

iv) examine whether 'tolerant' caribou do indeed have a lower frequency of response behaviours.

Agnico Eagle's Response:

Agnico Eagle thanks the KivIA for the comments on the 2020 Meadowbank caribou behaviour report. The results of the behaviour monitoring program were presented and discussed at a Terrestrial Advisory Group (TAG) meeting in February 2021. Initial comments were received from the KivIA in March 2021 and discussed with the KivIA and their wildlife consultants on March 26th, 2021. Following that meeting, Agnico Eagle updated the standard operating procedure (SOP) and will be circulating a black-lined version of the SOP to the TAG committee.

4.10 Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report – Integration

References: Appendix 47; S 11 Integration

Comments: While Section 11 Integration is a useful summary of the nine monitoring methods for caribou (Table 11.1) there is no quantitative analysis to describe the effectiveness of the different methods and how adequately they sample caribou distribution at different timescales and spatial scales.

Recommendation 10: Agnico Eagles should provide TAG with a study design for analyses to integrate monitoring results to determine their effectiveness in sampling caribou distribution relative to proposing thresholds.

Agnico Eagle's Response:

The different monitoring components serve different purposes and are intended to provide a comprehensive view of caribou response to the Meadowbank Mine. The results of different monitoring programs are not necessarily comparable, however a summary of the number of times results of the different components were used to trigger mitigation could be presented in future annual reports.

4.11 Whale Tail Haul Road Whale Tail Haul Road KVRW15F01 2021 Work Plan

References: Appendix 4; S 3 2021 Planned Activities

Comments: Widening of the Whale Tail Haul Road from 9.5 m to 15 m has been permitted under Water License 2AM-WTP1830 will be conducted at some point after 2021. In 2018 and 2019 there was much discussion at Terrestrial Advisory Group (TAG) meetings to develop caribou-friendly slopes to the road in specific areas, driven by caribou trails, collar data and IQ. Acknowledging the delays imposed by the Covid-19 pandemic beginning in March 2020, these discussions and planning should continue in preparation for road widening.

Recommendation 11: Agnico Eagle should present a timeline and 'road map' for design of the widening of the Whale Tail Haul Road from 9.5 to 15 m.

Agnico Eagle's Response:

Agnico Eagle acknowledges KIA's comment. At present, a timeline for road widening has not been established.

4.12 Meadowbank Complex 2020 Annual Report – Water Quality

References: 2020 Annual Report, 4.4.3 Predicted Vs Measured Water Quality, 4.4.3.1 Meadowbank Site; Appendix 11: Meadowbank 2020 Water Management Report and Plan Version 9, Appendix C

Comments: "Based on the results of the water quality mass balance presented in Section 4.2 of the Meadowbank Water Quality Forecasting Update for the 2020 Water Management Plan, treatment of the reclaim water at the end of in-pit deposition will be required for metals removal (such as for aluminium, arsenic, copper, iron and nickel) and TSS removal. Ammonia removal may also be needed, as well as Total Dissolved Solids reduction."

The concerns remain that treatment in perpetuity may be required to ensure the mined out pit are suitable aquatic habitats. Contaminant loads continue to exceed forecasted values, possibly exacerbated due to increased leaching of arsenic and other metals from Whale Tail ore.

Recommendation 12: Agnico Eagle should include more detailed plans for bench-scale testing on water treatment to ensure the appropriate water quality is achievable.

Further, should small scale testing indicate that short-term treatment is inadequate for long term habitat suitability, Agnico Eagle should explore alternative habitat offsetting strategies.

> ***Agnico Eagle's Response:***
> *Agnico Eagle intends to start water treatment bench scale testing using reclaim water stored in the pits, to assess the most suitable water treatment processes that can be used at closure prior to pit flooding.*
>
> *The 2020 Annual Report include a plan describing the general timeline to perform bench scale lab testing, on-site testing, and development of design of the water treatment process for closure. Following results of bench scale testing, Agnico could explore alternative habitat offsetting strategies if required.*

4.13 Meadowbank Complex 2020 Annual Report – CREMP

References: 2020 Annual Report, 8.1.2 Whale Tail Site

Comments: "Nutrients – trigger exceedances were statistically significant for total Kjeldahl nitrogen (TKN) at NF areas. Trigger exceedances were statistically significant for total phosphorous (TP), total organic carbon (TOC) and dissolved organic carbon (DOC) at WTS, likely the result of inputs from flooded terrestrial habitats following impoundment and dewatering inputs from WTN. Trigger exceedances were also statistically significant for TOC and DOC at MAM and Lake A20."

Exceeding the CCME guidelines for total phosphorus and increased nutrient levels may result in long term changes in trophic level of the water system. Such deviations may also be indicated by variations in phytoplankton taxa richness.

Recommendation 13: Agnico Eagle should continue monitoring the nutrient loads and phytoplankton biomass and taxa richness. Should total phosphorus and other nutrient concentrations continue to increase, Agnico Eagle should propose a mitigation strategy, as well as discuss how this might impact closure objectives and timelines.

Agnico Eagle's Response:

Nutrient analysis and phytoplankton community analysis will continue to be evaluated as part of the routine CREMP at the Whale Tail study areas. An important aspect of the assessment will look at measured vs predicted changes in nutrient concentrations and whether the phytoplankton and benthic invertebrate communities are showing signs of increased primary productivity in the form of increased phytoplankton biomass, increased benthic invertebrate abundance, or shifts/alteration of the community structure.

4.14 Meadowbank Complex 2020 Annual Report – Mercury Study

References: 2020 Annual Report, 8.2 Methylmercury Studies Whale Tail Site; Appendix 33: Meadowbank and Whale Tail 2020 Core Receiving Environment Monitoring Program Report, Appendix G

Comments: Nemo Lake continues to be used as a reference lake for mercury loading studies; discharge to the Nemo watershed in 2020 was limited to 180,829 m3, down from 1,080,667 m3 in 2019. Should discharge to the watershed again reach 2019 levels, Nemo Lake would not be a suitable spatial reference for mercury concentration.

Recommendation 14: Agnico Eagle should consider removing Nemo Lake as a mercury study reference lake should large volume discharges to the watershed resume.

Agnico Eagle's Response:

Several lakes have been sampled as reference areas for the Mercury Monitoring Program since 2018, including Inugguguayualik Lake, Pipedream Lake, Lake 8, Lake D1, Lake B03, Lake A44, and Nemo Lake (see Table below). Nemo Lake and Lake 8 each have two years of data for ultra-trace mercury (total and methylmercury), which makes them the preferred reference lakes for assessing the influence of natural variability on mercury concentrations in the region. Nemo Lake is a valuable reference area because it is accessible by road, unlike Lake 8 that requires helicopter access. Agnico Eagle preference is to keep Nemo Lake as a reference area for the Mercury Monitoring Program provided that discharge to the Nemo Watershed remains well below levels observed in 2019. No discharge to the Nemo watershed is planned for the upcoming years.

Area	Lake	Year				
		Baseline		Impounded†		
		2016	2017	2018	2019	2020
Impoundment	Whale Tail (south basin)	n=1	n=1	n=2	~~n=2~~	n=2
	Lake A20	-	-	n=2	~~n=2~~	n=2
	Lake A65	-	-	n=2	~~n=2~~	n=2
Downstream	Mammoth Lake	-	n=1	n=2	~~n=2~~	n=2
	Lake A76	-	-	n=2	~~n=2~~	n=2
	Lake DS1	-	-	-	~~n=2~~	n=2
Reference	Inugguguayualik Lake	-	-	-	-	n=2
	Pipedream Lake	-	-	-	-	n=2
	Lake 8	-	-	n=2	~~n=2~~	n=2
	Lake D1	-	-	-	-	n=2
	Nemo Lake	-	-	n=2	-	n=2
	Lake B03	-	-	-	-	n=2
	Lake A44	-	-	-	-	n=2

†Minor flooding of impoundment, limited to Whale Tail (south basin), during 2018 sampling. Extensive during 2019 and 2020 sampling (i.e., connectivity between impounded lakes).

"n =" = number of sites sampled

"-" = data not collected

Water chemistry results from 2019 (strikethrough) were contaminated during storage and excluded from analysis.

4.15 Meadowbank Complex 2020 Annual Report – Spill Management

References: 2020 Annual Report, Section 7, Spill Management

Comments: "During a routine inspection at the Baker Lake Farm, fuel was observed in the secondary containment of fuel tanks 5 & 6. After further inspection, a small fuel leak was observed"

Baker Lake is culturally significant and an important source of fish for the people of the Baker Lake community. A fuel spill resulting in 403,000 L of contaminated water so close its shores is a cause for concern.

Recommendation 15: KivIA recommends Agnico Eagle provides details on the steps they have taken to prevent another such spill from occurring.

Agnico Eagle's Response:

Agnico Eagle will refer to response provided in Section 3.5 above. As mentioned, an intensive tank inspection of the Baker Lake Fuel Farm conducted in partnership with an API 653 inspector is underway. In addition, plans are in place to apply an epoxy coating inside all tanks to prevent leaking. Application will be done in 2022-2024. QA/QC on the tanks will also be performed by an inspector (NACE CIP Level 3).

5 Environment and Climate Change Canada (ECCC)

5.1 Waste Management Activities

References: 6.2.1.1 Stack Testing

Comment: Stack testing at the Meadowbank site was not completed in 2020; the Proponent indicated this was due to not receiving guidance from NIRB regarding testing frequency until December 3rd, 2020. The Proponent had requested to reduce the stack testing frequency to biennial following 5 years of compliance.

Recommendation 1: ECCC recommends that the Proponent ensure stack testing is completed in 2021 to confirm continued compliance.

Agnico Eagle's Response:

Agnico Eagle is going to perform a stack testing at his Meadowbank incinerator in 2021. Results will be provided as part of the 2021 Annual Report.

5.2 Spill Management

References: 7.1 Spill Summary; 7.1.1 Meadowbank Site

Comment: An environmental incident occurred whereby tailings dust became airborne at the tailings storage facility, and spread outside the property. Short-term dust suppression was implemented.

Recommendation 2: ECCC recommends that the Proponent ensure a dust management plan is developed and implemented to reduce the risk of similar incidents occurring.

Agnico Eagle's Response:

Following the dust event of 2020 an action plan was developed to reduce the risk of a similar incidents occurring and various options were assessed. In the summer of 2021, the tailings surface exposed to air will be sprayed by chopper with a chemical (MinCrylx 50) to inhibit dust formation. This chemical is supposed to inhibit dust formation for 2 years. Agnico Eagle will monitor the success of this mitigation strategy and will repeat it as required in the coming year until the surface of the tailings are capped with rockfill as per the closure plan thus permanently preventing tailings dust from leaving the facility.

5.3 Seabird Monitoring

References: Appendix 57 – Meadowbank and Whale Tail Marine Mammal and Seabird 2020 Annual Report

Comment: ECCC supports the Proponent's approach to consolidating the Meadowbank and Meliadine marine mammal and seabird monitoring results into a single report given the amount of spatial overlap and the shared shipping vessels.

ECCC provided comments to the Proponent's consultants and had a follow-up discussion in March 2021 related to the seabird data collected in 2020. ECCC noted inconsistencies in how observers recorded the data during the surveys in relation to the standardized protocols and some issues with species identification.

Recommendation 3: ECCC recommends the Proponent continue to provide and improve training for seabird observers to minimize errors implementing the protocols, recording data and identifying species.

Agnico Eagle's Response:

Agnico Eagle appreciate ECCC's support regarding the consolidated Meliadine and Meadowbank Marine Mammal and Seabird Observation Report and will maintain this approach for future annual reports.

Regarding observer training, with the assistance of a third-party Expert, Agnico Eagle continues to provide and to improve training to minimize errors implementing the protocols, data recording and misidentifications.

In 2021, prior to the start of the shipping season, a hybrid in person and virtual training session was conducted with the shipping company. Elements brought forward by ECCC on the 2020 data inconsistencies were discussed during this training and adjustments to the training material and related observation sheets and tools were also made.

Throughout the 2021 shipping season, Agnico Eagle will also be collecting and reviewing the shipping company's observation at an increased frequency to allow for earlier identification of inconsistencies in data recording – if any – and timely training refreshers and reminders as needed.

Agnico Eagle is confident these measures will result in continued overall improvements of its Marine Mammal and Seabird Observation program.

5.4 Breeding Bird Monitoring

References: Appendix 47 – Meadowbank and Whale Tail 2020 Wildlife Monitoring Summary Report; Agnico Eagle. 2020c. Bird Survey Data Analyses – 2003 to 2015. November 2020. 164p.

Comment: ECCC reviewed the comprehensive 2003-2015 analyses of bird data (Agnico Eagle 2020c) and provided comments to the Proponent directly between December 2020 and April 2021. ECCC acknowledges the considerable amount of effort and detail that went into the analyses of the 2003-2015 bird monitoring data.

Although ECCC did not recommend further analysis of the data, ECCC noted that some concerns remain with the report (e.g. statistical approach not validating impact predictions, not accounting for the potential that effects were already present from advanced exploration, unclear statistical power to detect effect size of interest, and interpretation of results). ECCC maintains that several of the results in the report are suggestive of an effect of distance to infrastructure on bird abundance and that the interpretation of results should be more nuanced.

Given the location of the project and low detection of species at risk to date, ECCC accepts that an adequate amount of project-related effects monitoring for upland breeding birds has taken place. ECCC supports the Proponent's proposal to change the monitoring objective for the upland breeding bird VEC.

ECCC sees value in continuing bird monitoring on site to assess the effectiveness of mitigation measures and surveying for the presence of species at risk on site by qualified observers. The presence of species at risk could be monitored by contributing to regional and national bird monitoring programs following standardized protocols.

Recommendation 4: N/A – For NIRB's information

Agnico Eagle's Response:
Agnico Eagle acknowledges ECCC's comments.

5.5 Seepage Volumes

References: Appendix 11 – Meadowbank 2020 Water Management Plan, Section 3.1.11 – Seepage Management

Comment: The Water Management Plan provides brief summaries of the volumes of seepage that reported to each location in the year. At sampling location ST-16 115, 868 m^3 was pumped back to the North Cell TSF in 2020. However, no information is provided on how this compares to expected volumes, previous monitoring data, or average seepage volumes. In comparison to the 2019 Water Management Plan, in 2020 this location had 46,975 m^3 more seepage than 2019. While some monitoring stations (for

example, central dike seepage) provide information on how the 2020 monitoring data compares to previous years, for other stations it is unclear whether the 2020 seepage volumes are within previously observed values or are increased compared to previous years. Comparisons to historical and expected volumes should be presented for all locations. If increased volumes are observed, potential causes of increased seepage (for example, increased precipitation) should be discussed.

Recommendation 5: ECCC recommends that seepage volumes for all stations be compared to previous years and expected averages to aid in interpretation of data. In addition, for any locations with increased seepage as compared to previous years or expected averages, a preliminary discussion of potential sources/causes should be provided.

Agnico Eagle's Response:

Agnico Eagle understands the importance of including historical seepage volumes for all monitoring stations to aid in the interpretation of data. Although this information briefly outlined within the Water Management Plan, Section 8 of the 2020 Annual Report includes detailed historical data for each monitoring station for 2013-2020.

5.6 Scaling of Graphs

References: Appendix 11 – Meadowbank 2020 Water Management Plan, Appendix C

Comment: Several figures provided in Appendix C depict concentrations at various monitoring locations compared to the previous year forecasted values. However, several of the figure's Y-axis are not scaled appropriately causing data to be located at the bottom of the graph, making it difficult to interpret when CCME guidelines or Water Licence limits are exceeded. The Y-axis in the figures of Appendix C should be scaled appropriately such that data is clearly presented and easily interpreted.

Recommendation 6: ECCC recommends that figures use appropriate Y-axis to aid in interpretation of data.

Agnico Eagle's Response:

Agnico Eagle appreciates ECCC's comment. For the 2021 Annual Report, the Y-axis scale will be adjusted to make interpretation of the date easier.

5.7 Measured Values Compared to Forecasted Values

References: Appendix 11 – Meadowbank 2020 Water Management Plan, Appendix C Figure 2-6 and Table 2-7

Comment: Figure 2-6 and Table 2-7 provide a comparison of measured water quality values to forecasted values for Portage Pit and Goose Pit. However, there is very little analysis and interpretation of these results, specifically when measured concentrations exceeded forecasted values. ECCC acknowledges that

these comparisons are intended to aid in the understanding and identification of potential contaminants of concern and the development of treatment measures. However, additional interpretation of the results will aid in understanding of what may be driving these conditions.

Recommendation 7: ECCC recommends that the comparison of measured versus forecasted values also include some preliminary discussion on potential sources when measured results differ from the forecasted values, specifically if the measured values exceed forecasted.

Agnico Eagle's Response:

Agnico Eagle acknowledges ECCC's comment and will add additional notes and details to provide potential causes that may explain the differences observed between the measured and forecasted values in the 2021 Annual Report.

5.8 Mine Effluent 2020 Average vs Mill Effluent Quality Used in Model

References: Appendix 11 – Meadowbank 2020 Water Management Plan, Table 3-3 – Mill Effluent Concentrations when Processing Whale Tail Pit Ore

Comment: Table 3-3 presents the mill effluent average concentration in 2020 to the mill effluent quality retained in the model. The Proponent states that "in order to obtain the forecasted concentrations that are in the same order of magnitude as the measured values found in the Goose Pit and Portage Pit in 2019 and 2020, an adjustment factor was applied to the average measurement taken of the mill effluent in 2020 when processing Whale Tail ore at the mill." In many cases the mill effluent quality retained in the model is the same, or higher than the measured average mill effluent concentration in 2020, which should result in a reasonable amount of conservatism within the model. However, for several parameters (cadmium, chromium, molybdenum, nickel, strontium, zinc, cyanide, ammonia, and TDS) the concentrations used in the model are lower than the averages measured in the mill effluent. It is not clear how these adjustment factors were applied and why the concentrations used in the model would be lower than observed values.

Recommendation 8: ECCC recommends the Proponent provide additional supporting information as to why for some parameters the concentrations used in the model are lower than the observed average concentrations in mill effluent in 2020.

Agnico Eagle's Response:

For each parameter, the adjustment factors used in the water quality forecast model is evaluated by first running the model with no adjustment and comparing the forecasted and measured concentrations. If required, an adjustment factors are added so that the forecasted values are similar to the measured concentrations.

The water quality forecast model is based on a mass balance approach, where all mass is conserved. It does not consider that a fraction of the total metals could precipitate out in solution, effectively reducing its total concentration. Thus, for parameters where the concentrations used in the model are lower than the observed average concentrations in mill effluent in 2020 indicate that a fraction of it could readily settle out in the pits with the tailings.

5.9 Phytoplankton Community

References: Appendix 33 – Meadowbank and Whale Tail 2020 CREMP, 5.4 Phytoplakton Community, 5.4.1 General Observations

Comment: Diatoms are referred as belonging to the phylum Cryptophyta, which is incorrect.

Recommendation 9: ECCC recommend that the proponent update the text to refer to the correct diatom phylum Bacillariophyta.

Agnico Eagle's Response:

Agnico Eagle appreciates ECCC's comment. Section 5.4.1 incorrectly referred to diatoms as belonging to Cryptophyta. The six major taxa were correctly listed in Section 4.4.1: blue-green algae (Cyanophyta), green algae (Chlorophyta), golden-brown algae (Chrysophyta), Diatoms, Cryptophytes and Dinoflagellates. Future CREMP reports will correctly identify diatoms as belonging to the phylum Bacillariophyta.

5.10 Increased Arsenic and Chloride at Pit-E Seepage Monitoring

References: Appendix 42 – Meadowbank 2020 Groundwater Monitoring Report, Section 6: Conclusions

Comment: The 2020 Meadowbank Groundwater Monitoring Report states that "in general, water quality was similar to results previously obtained, with a few exceptions. Concentrations of arsenic and chloride were higher than historic values at the Pit-E seepage monitoring location." The proponent states that there is uncertainty around what may be causing these increased concentrations at this location but hypothesizes that it may be due to deposition of reclaim water effluent at the top of the west wall of Pit-E. Based on the recommendations provided in Section 7 of the report, it is unclear what potential next steps the proponent may be implementing to reduce uncertainty associated with these increased concentrations.

Recommendation 10: ECCC recommends that the Proponent provide information on any potential next steps in monitoring to reduce uncertainty associated with the source of the elevated arsenic and chloride concentrations at Pit-E Seepage location.

Agnico Eagle's Response:

Agnico Eagle intent to conduct additional water quality monitoring to monitor the elevated chloride and arsenic concentrations observed in 2020 at the Pit E seepage location, if it i's safe to do. Monitoring results will be provided in the 2021 Annual Report

5.11 Third Portage Lake Studies

References: Appendix 50 – Meadowbank Closure Water Treatment Strategy, Section 4.0: Conclusion

Comment: The Closure Water Treatment Strategy refers to the need for environmental studies to assess the assimilative capacity of Third Portage Lake in order to help define the allowable discharge volume and treated effluent requirements. Although it is acknowledged that discharge is not intended to begin until 2027, no details are provided on the timeline for when this study may be completed.

Recommendation 11: ECCC recommends that the Proponent provide a general timeline for when the assimilative capacity studies for Third Portage Lake may be completed.

Agnico Eagle's Response:

The 2020 Annual Report includes a plan describing the general timeline to perform bench scale lab testing, on-site testing, and development of design of the water treatment process for closure. One of the items of that plan is to perform Environmental Study which will include a determination of the assimilative capacity of Third Portage Lake. It is planned to start this study in 2021 and to have it completed in 2022.

5.12 Road and Construction Materials

References: Appendix 4 – Whale Tail Haul Road 2021 Work Plan; Appendix 5 – Whale Tail KVCA15Q01 2021 Work Plan; Appendix 6 – Whale Tail KVCA15Q02 2021 Work Plan; Appendix 7 – Whale Tail KVCA18Q01 2021 Work Plan

Comment: The 2021 esker work plans (i.e., Appendices 5, 6 and 7) state that, in order to minimize the disturbance of eskers, priority will be given to using non-potential acid generating waste material from the Whale Tail pit instead of esker materials. Similarly, the Whale Tail Haul Road 2021 Work Plan (Appendix 4) states that priority will be given for the use of non-potentially acid generating waste material from the Whale Tail Pit for the operation activities and maintenance of the Whale Tail Haul Road.

ECCC notes that road and construction materials should be non-metal leaching, as well as non-potentially acid generating. However, the work plans do not indicate whether the prioritized waste material will be non-metal leaching.

Recommendation 12: ECCC recommends that road and construction materials be non-metal leaching and non-potentially acid generating, including for road operation and maintenance, and that applicable documents (including the Whale Tail Haul Road 2021 Work Plan and the 2021 esker/quarry work plans) be updated to reflect this guidance.

Agnico Eagle's Response:

As per our protocols, Agnico Eagle use only non-metal leaching and non-potentially acid generating material for road operation/maintenance and construction. Agnico Eagle acknowledges ECCC's comment and will add a precision into the 2022 Work Plan.

5.13 Receiving Environment Predictions for Nitrate and Phosphorous

References: Appendix 12 – Whale Tail 2020 Water Management Report, ver 6; Appendix D (Whale Tail Water Quality Forecast Update)

Comment: Updated water quality modeling results predict increased productivity in the receiving environment until approximately eight years after closure is initiated. Monitoring will be continued through life of mine and model predictions will be updated annually. ECCC notes that management response(s) would be needed if modeling indicates effects associated with the nutrient loading (e.g. productivity increases lead to dissolved oxygen depletion under-ice) or if modeling has under-predicted concentrations of phosphorus and nitrogen. Management options should be identified in advance.

Recommendation 13: With respect to increased nutrients/productivity in the receiving environment, ECCC recommends that the Proponent proactively identify management response options to address potential effects, including under-predicted parameter concentrations.

Agnico Eagle's Response:

Agnico Eagle monitors nutrients according to discharge limits set out in the Type A Water Licence 2AM-WTP1830, and nutrients and Dissolved Oxygen (DO) in the receiving environment according to the CREMP as per Type A Water Licence 2AM-WTP1830. Based on experience acquire at Meadowbank, it is expected that monitoring, limits and CREMP triggers/ thresholds will continue to ensure the protection of the receiving environment. As described in the FEIS Addendum, receiving environment water quality predictions are conservative and Agnico Eagle will continue to monitor, adaptively manage, and subsequently mitigate to ensure limits are met and receiving water quality as outlined in FEIS Addendum.

The Water Quality and Flow Monitoring Plan specifies how water quality in the receiving environment will be monitored during the operations and closure phase. Results of the monitoring are intended to inform the "adaptive management" process, supporting the early identification of

potential problems and development of mitigation options to address them by comparing results to established threshold and trigger levels.

For regulated discharges, the Compliance Monitoring (CM) Program ensures compliance of mine contact water with regulatory requirements; the Core Receiving Environment Monitoring Plan (CREMP) is designed to measure and assess the potential impacts to receiving environment of constituents not regulated under MDMER or NWB. The CREMP describes trigger levels that were developed to facilitate adaptive management of potential water quality issues in the receiving environment. The criteria were developed with the assumption that action will be considered before certain monitored parameters reach levels that cause or have the potential to cause adverse effects to aquatic biota. Triggers are intended to act as early warning criteria that may lead to action; exceedance of a trigger value does not necessarily imply that an adverse effect may be expected. In general, exceedance of early warning triggers will trigger further assessment, which may then lead to mitigation.

5.14 Model Inputs and Assumptions – Changes Regarding STP Effluent Concentrations

References: Appendix 12 – Whale Tail 2020 Water Management Report, ver 6; Appendix D (Whale Tail Water Quality Forecast Update); Sewage Treatment Plant O&M Manual (May 2019)

Comment: Section 2.1.1 of the Whale Tail Water Quality Forecast Update states that water quality inputs for the sewage treatment plant (STP) effluent were updated to reflect 2020 monitoring results from STP effluent at Station ST-WT-11. Table 1 of this section indicates that nitrate and phosphorus concentrations in STP effluent are not meeting the operational effluent targets identified in Table 6 of the Sewage Treatment Plant O&M Manual.

The 2020 annual report does not discuss potential causes of the elevated STP effluent parameters and does not indicate any response actions. It is unclear whether measures will be taken to improve STP effluent quality and meet operational/design targets in future.

Treated STP effluent is discharged to the attenuation ponds. As such, targets are not a regulatory concern but the STP does represent a source of nitrate and phosphorus loadings which should be minimized to the extent practicable.

Recommendation 14: ECCC recommends that the Proponent:

- Clarify whether any actions are planned to improve sewage treatment plant (STP) effluent quality and meet the operational/design targets for nitrate and phosphorus, as set out in Table 6 of the Sewage Treatment Plant O&M Manual; and

Agnico Eagle's Response:

Elevated nitrate and phosphorus in STP effluent are being addressed by increasing chemical dosing of both Alum and Micro C. During the beginning of 2021, modifications have been made to better manage the increased sludge output from increasing Alum. Additional pumps have also been added to aid in transporting these chemicals into the plant to keep up with the additional dosing. Agnico Eagle will continue to evaluate the performance of the STP and make any other adjustment as needed.

- Clarify whether STP effluent exceeded operational/design targets for any other Table 6 parameters.

Agnico Eagle's Response:

The STP effluent results for 2020 did also exceed operational/design targets outlined in Table 6 for biological oxygen demand, pH and total oil and grease as presented in Table below. They are probably associated to sampling error as the result were below limit before and after those sampling. Agnico Eagle realized that some of the parameters with design criteria were not provided in the 2020 Annual Report and this will be corrected for the 2021 Annual Report.

Sample date			2020-01-01	2020-01-06	2020-01-13	2020-01-20	2020-01-27	2020-02-03	2020-02-10	2020-02-17	2020-02-24	2020-03-02	2020-03-09	2020-03-17	2020-03-23	2020-03-30	2020-04-06	2020-04-13	2020-04-20	2020-05-04	2020-05-11	2020-05-18	2020-05-25	2020-06-01	2020-07-07	2020-08-03	2020-09-07	2020-10-05	2020-11-02	2020-12-07
Parameter	**Design Criteria**	**Unit**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WQ01- Field Measured																														
pH	**6.5-9.5**	**pH units**	7.40	6.60	6.96	6.90	6.90	6.26	6.78	6.50	6.81	6.40	6.70	6.70	6.88	7.40	7.10	6.90	7.00	6.60	6.89	7.50	7.26	7.29		7.20	7.34	7.18	7.61	7.44
WQ02- Conventional Parameters																														
TSS	25	**mg/L**	1	2	2	2	1	5	1	< 1	3	2	2	3	< 1	1	5	< 1	9	5	3	2	6	< 1	< 1	1	3	< 1	6	11
WQ04- Nutrients and Chlorophyll a																														
Biochemical Oxygen Demand	**25**	**mg/L**	6	< 1	< 1	< 1	1	< 1	< 1	1	**261**	< 1	3	1	< 1	2	13	-	< 1	2	< 1	1	< 1	2	< 1	< 1	-	< 1	< 1	1
Un-Ionized Ammonia, calculated	1.25	**mg-N/L**	-	< 0.01	< 0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.01	< 0.01
Nitrate	**5**	**mg-N/L**	-	**9.98**	**10.9**	**10.3**	**11.4**	**14.8**	**16.3**	**17.1**	**15.2**	**15.8**	**14.3**	**20**	**16.0**	**15.2**	**10.6**	**12.8**	**9.38**	**47.0**	**45.6**	**15.5**	**9.93**	**15.8**	**54.7**	**5.37**	**9.65**	**14.0**	1.90	**6.28**
Total phosphorus	**0.5**	**mg/L**	**5.34**	**5.26**	**4.4**	**6.01**	**5.36**	**6.18**	**7.65**	**9.40**	**7.01**	**5.23**	**4.46**	**6.57**	**6.62**	**5.33**	**7.20**	**7.81**	**7.59**	**8.69**	**7.82**	**5.01**	**4.52**	**3.55**	**5.30**	**3.80**	**4.68**	**4.73**	**4.6**	**6.86**
WQ05- General Organics																														
Total oil and grease	**5**	**mg/L**	1	< 1	< 1	3	2	4	1	4	2	4	1	2	< 1	< 1	< 1	< 1	< 1	< 1	**6**	2	< 1	1	< 1	< 1	1	< 1	2	1
WQ13- Coliforms																														
Fecal Coliform	200	**CFU/100mL**	-	< 2	< 2	< 2	< 2	< 2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	12	72	18	16	13	34	60	22	< 2	24	6	< 2	< 2	4

5.15 TSS-Turbidity Monitoring During Dike Construction

References: Appendix 59 – Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 3 (May 2020)

Comment: Section 4.3.2, which describes the Standard Operating Procedure for open water dike construction, does not indicate whether Total Suspended solids (TSS) samples will be collected for laboratory analyses.

Recommendation 15: ECCC recommends that the Proponent clarify the frequency of TSS sample collection for laboratory analyses during open water dike construction, and updates relevant management plans as appropriate.

Agnico Eagle's Response:

As mentioned in Section 4.2.2 of the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, a routine water quality will also be conducted on a weekly basis and include TSS.

5.16 TSS Turbidity Relationship

References: Appendix 59 – Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 3 (May 2020)

Comment: Section 4.4 (QA/QC for Turbidity Measurements) indicates that the TSS-turbidity relationship developed for Meadowbank in 2010 has been incorporated into the Whale Tail Pit and Haul Road Project monitoring program. The plan does not discuss whether or how the Meadowbank TSS-turbidity relationship has been validated for the Whale Tail site.

Recommendation 16: ECCC recommends that the Proponent clarify whether and how the Meadowbank TSS-turbidity relationship has been/will be validated for the Whale Tail site, and whether paired TSS-turbidity samples will be collected during construction at applicable locations in the Whale Tail site to validate or update the site-specific TSS-turbidity relationship.

Agnico Eagle's Response:

During the dewatering of the Whale Tail North Basin, Agnico Eagle collected daily turbidity along with a TSS sample for analysed to an external accredited laboratory. Based on these results and those collected during the previous years in-water construction, Agnico Eagle will be able to validate the paired TSS-turbidity relation. This validation will not be performed before other dewatering or in-water dike construction will be needed on site, if any.

5.17 QA/QC Plan

References: Appendix 54 – Meadowbank and Whale Tail Quality Assurance/Quality Control (QA/QC) Plan, Version 6 (July 2020)

Comment: Section 2.2.5 (Field Duplicates, Field Blanks and Trip Blanks) states that one field duplicate, one filter blank, and one field blank are collected for a) every 10 samples, b) each sampling event or c) once per year. The QA/QC Plan does not provide a rationale for the difference in QA/QC sampling frequencies among the various monitoring programs, nor justify collecting control samples only once per year for some programs.

Table 2.2 indicates a very low QA/QC sampling frequency (i.e., 2-3 samples per year) for the compliance monitoring programs regarding Groundwater Chemistry and Mine Facilities. QA/QC samples should comprise 10-15% of the samples analysed overall. It is also noted that most of the compliance monitoring programs listed in Table 2.2 include field duplicate and field blank samples, but no trip blanks.

Recommendation 17: ECCC recommends that the Proponent update the QA/QC Plan as follows:

- Provide a discussion/rationale for the QA/QC sampling frequencies presented in Table 2-2 (Quality Control Sample Frequency);

  Agnico Eagle's Response:

  The QA/QC sampling frequencies in Table 2.2 serve as a summary for outlining the minimum requirements for each compliance monitoring program. These are all in line with the 10% frequency target that is outlined in the QA/QC management plan for Meadowbank/Whale Tail as well as within range of the industry standard of 1 in 20 samples used by EPA and other environmental agencies.

- QA/QC sampling frequency of the compliance monitoring programs for Groundwater Chemistry and for Mine Facilities should be in line with best practices for each monitoring program; and

  Agnico Eagle's Response:

  Agnico Eagle ensures that the current QA/QC sampling frequency for the Groundwater Chemistry and Mine Facilities compliance monitoring programs is in line with the best practices for each program as the frequency of duplicate sampling is above 10% for each site. Monitoring programs at Meadowbank have a QA/QC collection frequency of 24% for duplicates, 24% for field blanks, and 18% for trip blanks. Monitoring programs at Whale Tail have a QA/QC collection frequency of 17% for duplicates, 18% for field blanks, and 14% for trip blanks.

- Include trips blanks in all monitoring programs listed in Table 2-2.

Agnico Eagle's Response:

The current approved management plan states that trip blank will be collected for a total of 10% annually. The goal is to collect trip blank on the overall number of sampling collected during the year and not on each specific sampling location. Agnico Eagle acknowledges that trip blanks are only listed as a QA/QC requirement for groundwater chemistry monitoring in Appendix 54 Table 2.2. The QA/QC guidelines for groundwater monitoring sampling outline that one trip blank must be collected at each sampling campaign, whereas the guidelines for mine facilities monitoring indicate that trip blanks will be collected for a total of 10% annually. This frequency is detailed in section 2.2.5 of Appendix 54. As outlined in the response above, trip blanks were collected for monitoring programs at a rate of 18% at Meadowbank and 14% at Whale Tail as outlined in sections 8.5.7.2 and 8.5.7.1 respectively, of the 2020 Annual Report. This is well in line with the 10% annual frequency outlined in the QA/QC guidelines.

5.18 Thermal Monitoring Report

References: Appendix 25 – Whale Tail 2020 Thermal Monitoring Report

Comment: As described in Section 3.2.1 (Expected Thermal Effects on Permafrost), the Proponent expected minimal effects to permafrost at the Whale Tail Dike abutment areas. Contrary to the expected minimal effects, thermal monitoring results indicate that the trend of permafrost degradation at the Whale Tail Dike abutment continued in 2020. In addition, a rapid warmup in the wall and foundation was also noted. The 2020 Thermal Monitoring Report states that this permafrost degradation at the abutment has not resulted in a seepage increase for the moment, but does not discuss the likelihood or potential effects of increased seepage. Nor does the report identify options to mitigate or manage a potential seepage increase.

Recommendation 18: With respect to the continued trend of permafrost degradation at the Whale Tail Dike abutment and the rapid warmup in the wall and foundation, ECCC recommends that the Proponent describe:

- The likelihood that these changes would result in a seepage increase, and the potential timing and extent of increased seepage;
- Potential effects of such a seepage increase;
- Options to mitigate and manage a potential seepage increase; and
- Any other changes/impacts that may result from the continuing permafrost degradation at the abutment and the rapid warmup in the wall and foundation, and options to mitigate and manage such changes/impacts.

Agnico Eagle's Response:

Thermal monitoring data show that most of the permafrost area of Whale Tail Dike have degraded as of 2020. As the level of Whale Tail South is not expected to raise further additional permafrost degradation is unlikely. In 2020 and Q1-Q2 of 2021 no new seepage channel was observed in the downstream area of the dike and the seepage flow reporting downstream of the dike as not increased. These observations seem to indicate that the system is in steady state and that further increase of the seepage is unlikely.

The increase in the seepage is not expected to have any incidence on the stability of the structure as the seepage path is in the upper fractured bedrock. An increase in seepage would result in more water having to be managed on site. Note that in 2020 a remedial grouting campaign was performed at Whale Tail Dike and was able met the objective of decreasing the seepage by more than 40 %.

If the seepage would increase again, Agnico Eagle would have the option of either managing it on site using the existing pumping system, improve the pumping capacity on site or to perform additional grouting work of the dike. The selected option would depend on several factor such as the seepage flow rate and the impact of this increased seepage on operation.

The permafrost degradation of the abutment is not expected to significantly change the condition of the structure as most of the degradation as already occurred. Permafrost degradation can be associated with settlement, sloughing and tension cracks. If those occur, they will be monitored and repaired if required.

5.19 Whale Tail Interim Closure and Reclamation Plan

References: Appendix 51 – Whale Tail Interim Closure and Reclamation Plan, ver 4 (July 2020)

Comment: Per Table 5.2-2 (Closure Objectives and Criteria – Open Pits Workings) of the Whale Tail Interim Closure and Reclamation Plan (ICRP), routine pit lake water quality monitoring will be undertaken during closure and for three years into post closure.

Post-closure water quality monitoring should be of a sufficient duration to demonstrate stability of water quality onsite and in the receiving environment. As it is currently unknown how long it will take to achieve acceptable and stable water quality, the proposed 3-year post-monitoring period should be a minimum monitoring duration, with monitoring to continue as needed until conditions are stable.

Recommendation 19: ECCC recommends that prior to decommissioning the contact water management system or reconnecting the pit lake to surface waters, monitoring results and water quality predictions demonstrate that runoff, seepage, and pit lake water quality has stabilized and will be consistently

acceptable for release over the short-, medium- and long-term, taking into account seasonal and inter-annual variability and climate change considerations.

Agnico Eagle's Response:

As part of the Regulatory process of the Whale Tail Expansion Project, many discussions were had with all parties, ECCC included, around the duration of monitoring and was agreed upon.

The post-closure phase is the period of time that would commence upon completion of the agreed closure activities set out in the FCRP. The projected duration of the closure period is 18 years. As per the ICRP a three-year post-closure monitoring phase is anticipated to confirm site stability.

For clarity, the post-closure period (i.e., at the time of reconnection) will not begin until closure criteria are met. While based on site data, and extensive water quality modelling efforts, a three-year monitoring period will be sufficient to demonstrate long-term site stability. This was confirmed through the application of a variety of models which includes:

- *operations, closure, and post-closure site and downstream receiving environment water quality models with varying optimization conditions*
- *pit lake and receiver hydrodynamic models*
- *climate change scenarios RCP6.0 and RCP8.5*
- *1-10 and 1-100 year flood event scenarios*
- *cryo-concentration effects*
- *contamination of the WRSF thermal cover with high arsenic leachable material*

During the operations and closure phase, site monitoring data will be used to recalibrate and update the site water quality models on an annual basis, which will validate projected post-closure conditions. At that point, taking into account monitoring during the operations and closure phases, Agnico Eagle will have at least 24 years of data and updated water quality predictions before entering the post-closure phase.

Regular monitoring throughout the closure period will focus on physico-chemical parameters, such as pH, specific conductivity, temperature, and dissolved oxygen, throughout the water column, as well as general water quality parameters, including nutrients and metals, at near-surface and deep-water intervals.

The timing of flooding is beneficial to implementing a comprehensive monitoring plan during closure, particularly as a relatively large proportion of the pits will fill quickly. For each pit, this allows the benefit of reducing uncertainty in the final flooded water quality conditions. The Whale Tail Pit is expected to take approximately 17 years to flood to surface level, however, it will reach 75% in approximately 14 years, with only 25 m of depth remaining for the final three years. The

IVR Pit will be filled to 90% of its volume (approximately 4 m below the target flood level) within the first two years of closure.

The Adaptive Management Plan has proposed mitigation strategies in the event water quality forecast results do not meet predictions during operations, which will further ensure closure and post-closure water quality predictions are met. This Adaptive Management Plan has been developed with intervenors through a series of workshops and will be an effective tool to manage operations to help alleviate risk to post-closure water quality.

Based on the above, Agnico Eagle is confident that a three-year post-closure monitoring program is sufficient.

ECCC also recommends that relevant sections of the Whale Tail ICRP, including Table 5.2-2 (Closure Objectives and Criteria – Open Pits Workings), be revised to:

- Acknowledge that a post-closure water quality monitoring period of 3 years is aspirational and that 3 years would be a minimum duration; and
- Provide post-closure water quality monitoring until it is demonstrated that pit lake water quality is stable and will consistently meet water quality objective values over the short-, medium- and long-term.

Agnico Eagle's Response:

Agnico Eagle is not ready to make this commitment at the moment. The post-closure criteria were agreed upon during the Water Licence Process. As provided in the response above, during the operations and closure phase, site monitoring data will be used to recalibrate and update the site water quality models, which will validate projected post-closure conditions. At that point, taking into account monitoring during the operations and closure phases, Agnico Eagle will have at least 24 years of data and updated water quality predictions before entering the post-closure phase. The closure strategy is to have a long enough closure period to be able to demonstrate these point at closure as to reduce the post-closure period.

5.20 Classification of ARD Potential

References: Appendix 21 – Whale Tail Operational ARD-ML Sampling and Testing Plan. Ver 6, Section 3.2.1

Comment: Proponent states that:

> The [Acid Rock Drainage (ARD)] potential of waste materials will be classified first based on total sulphur content and then using the NPR-based guidelines published by MEND (2009). Total sulphur will be used as an initial screening criteria to identify NPAG material, whereby a sample

will be considered NPAG when it contains less than 0.1 wt% sulphur, regardless of the CaNPR (Golder 2018). Where total sulphur is above 0.1%, the calculated carbonate CaNPR value will be used for sample classification, as summarized in Table 3.1."

ECCC is of the view that Neutralization Potential Ratio (NPR) or CaNPR indicates the relative magnitude of the neutralization potential (NP) and acid potential (AP) expressed by the ratio of NP/AP (or NPR). The values of NP and AP are based on the acid base accounting (ABA) process, therefore, the rock unit that contains 0.1 wt. % of sulphur but not enough neutralization potential such that its NPR is equal to 2 or less, that unit or rock type should be classified as Potentially Acid Generating (PAG). With this in mind, the statement by the Proponent that "any samples with 0.1% or less, sulphur would be non-PAG regardless of the CaNPR ratio" does not appear to align with that classification principle.

Recommendation 20: ECCC recommends that the Proponent reconsider its non-PAG classification criterion as expressed above.

Agnico Eagle's Response:

Agnico Eagle does not intent to reconsider its non-PAG classification criterion. Agnico Eagle will refer ECCC to the Whale Tail Expansion Volume 5-E 'Addendum Evaluation of the Geochemical Properties of Waste Rock, Ore, Tailings, Overburden and Sediment'. This document demonstrated that for all the different lithology, 0.1% has proven to be a suitable cut-off for PAG/NAG determination regarding the very low capacity of generating acidic environment from the poor sulfides content of the rock even with poor Carbonate buffering capacity. See extract below form Volume 5-E:

> *[…]based on the results to date a total sulphur content of 0.1 wt% appears to be a suitable cutoff below which waste rock can be categorized as NPAG for all lithologies. During operations, material will be tested for total sulphur and total inorganic carbon at the on-site laboratory at Meadowbank. It will then be segregated based on both the total sulphur content and the CaNPR (following MEND (2009) guidelines), as detailed in the Operational ARD/ML Sampling and Testing Plan (Agnico Eagle 2018c). Material with total sulphur below 0.1% will be considered NPAG, while material above 0.1% total sulphur will be evaluated based on the CaNPR value.*

5.21 ARD/ML Plan Adaptive Management Actions

References: Appendix 21 – Whale Tail Operational ARD-ML Sampling and Testing Plan. Ver 6, Section 5.1

Comment: ECCC notes that in the Potential Issues column of Table 5-1, one item is that "Thermal monitoring confirms that the waste rock cover freeze back is not occurring as anticipated". The steps to

be taken did not include investigation of the presence of "hot spots" within the Waste Rock Storage Facility (WRSF), which could potentially cause some spots or layer in the waste rock facility not to freeze back.

Recommendation 21: ECCC recommends that the actions include the investigation of the possible presence of hot spots in the WRSF.

Agnico Eagle's Response:

The Whale Tail Adaptive Management Plan was submitted to Nunavut Water Board and is currently under review by the parties. Agnico Eagle expect this plan will address ECCC's recommendation.

5.22 TSF Cover Design

References: Appendix 22 – Meadowbank Mine Waste Rock and Tailings Management Plan Ver 11, Section 7.1

Comment: The Proponent indicates that the Design criteria specific to the cover system design include:

- In areas where the active layer extends into the tailings material, the thawed layer should be limited to the upper 30 cm of the tailings mass and saturation of the tailings should remain above 85% to limit oxidation of the tailings.
- As an additional method to reduce tailings reactivity, the degree of saturation within the tailings mass should remain above 85%. This will reduce the tailings reactivity should part of the upper region of the tailings mass thaw during a warm year event.

The Proponent indicates that the objectives of the cover system are to maintain the tailings material below 0°C under most conditions and to maintain saturation above 85%. In addition, the unfrozen tailings are segregated in the upper 0.5 m of the Tailings Storage Facility (TSF) and remain above 85% saturation, thus reducing the risk of oxidation until the material freezes back into the permafrost over time. However, the Proponent did not explain how it plans to maintain the 85% saturation in the 0.5m section of the TSF that will be penetrated during the warm months, and how this will be maintained given the ongoing impact of climate change in the region.

Recommendation 22: ECCC recommends that the Proponent explain how they plan to maintain the 85% saturation in the 0.5m section of the TSF that will be penetrated by thaw during the warm months, and how this will be maintained given the ongoing impact of climate change in the region.

Agnico Eagle's Response:

The study submitted to support the engineering design of the closure landform of the TSF demonstrate that the design criteria of the cover can be attained to meet closure objective. As the

closure landform will need to be updated in the coming year, Agnico Eagle would propose that ECCC wait for the update of the detailed engineering study for the answer to this question.

5.23 WRSF Monitoring and Closure

References: Appendix 23 – Whale Tail Waste Rock Management Plan Ver 7, Section 9.1.1

Comment: The Proponent states, "Once water quality meets the discharge criteria established through the water licensing process, the contact water management system will be decommissioned to allow the surface runoff and seepage water from the Whale Tail WRSF and IVR WRSF to naturally flow to the outside environment".

Given the above statement, ECCC would like to remind the Proponent that as long as the Whale Tail mine is regulated under the Metal and Diamond Effluent Regulations (MDMER), all effluent discharge from the mine site would need to be monitored and discharged through a final discharge point until the mine acquires the recognized closed mine status (RCM). After which time the mine is no longer subject to MDMER but captured under the general prohibition against the deposit of deleterious substances into waters frequented by fish, described in ss. 36(3) of the Fisheries Act.

Recommendation 23: Recommends that the proponent be aware of the requirements of the MDMER.

Agnico Eagle's Response:

Agnico Eagle acknowledges the reminder provided by ECCC regarding monitoring requirements under the MDMER and will ensure to follow these regulations into mine closure.

6 Transport Canada (TC)

6.1 Post Oil Transfer reports

References: NA

Comment: Transport Canada notes that AEM's 2020 annual report for the Meliadine Gold Mine Project included Post Oil Transfer Reports (Appendix 35), while these reports were not included in the 2020 annual report for the Meadowbank Gold Mine and Whale Tail Pit Project. As we discussed in our May 26, 2021 comments on the 2020 annual report for the Meliadine Gold Mine Project, Post Oil Transfer Reports are a Transport Canada internal tool used to supplement the Department's oversight of Oil Handling Facility (OHF) operations. These reports are to be submitted by AEM to Transport Canada as and when required. As such, for the purposes of Transport Canada, the Post Oil Transfer Reports continue to not need to be included in future annual reports for the Meadowbank Gold Mine and Whale Tail Pit Project.

Agnico Eagle's Response:

Agnico Eagle acknowledges Transport Canada's comment and will continue to submit the Post Oil Transfer Reports directly to Transport Canada, when required.

6.2 Oil Pollution Emergency Plan (OPEP) / Oil Pollution Prevention Plan (OPPP)

References: Appendix 32

Comment: Under section 12 of the Environmental Response Regulations passed pursuant to CSA 2001, there is a requirement to complete annual reviews and if necessary update the Project's Oil Pollution Emergency Plan (OPEP) and Oil Pollution Prevention Plan (OPPP). If plans are updated, they must be submitted to Transport Canada no later than one year after the update. As required under the CSA 2001, the oil handling facility (OHF) will need to notify Transport Canada of proposed changes to the OHF's operations relating to the loading or unloading of oil to or from vessels (180 days in advance of the change). The facility is also required to submit a revised OPEP/OPPP 90 days before a change in operation. (**Excerpts from the CSA 2001 and Environmental Response Regulations follow this email.)

Recommendation: Continued inclusion of an up-to-date OPEP/OPPP in future annual reports – AEM is required to submit the OPEP/OPPP to Transport Canada as detailed above. The continued inclusion of the updated and Transport Canada reviewed OPEP/OPPP in the annual report for the Meadowbank and Whale Tail Pit Project is an indicator of the compliance status of the Proponent. Transport Canada recommends these continue to be included in future annual reports for the Project and is aware that OPEP/OPPP's are part of annual reports for other NIRB projects.

Agnico Eagle's Response:

Agnico Eagle acknowledges Transport Canada's comment and will continue to include the most up to date OPEP/OPPP as part of the annual report.

6.3 Shipping Management Plan

References: Version 3, December 2018

Comment: Canada developed new regulations, the Arctic Shipping Safety and Pollution Prevention Regulations (ASSPPR) under the CSA 2001 and the Arctic Waters Pollution Prevention Act. The ASSPPR incorporate the International Code for Ships Operating in Polar Waters (the Polar Code), with the addition of specific Canadian modifications designed to provide clarity on discharge requirements for the prevention of pollution by oil, sewage, and garbage from vessels, as well as the control of pollution by noxious liquid substances in bulk. The ASSPPR came into force on December 19th, 2017.

Recommendation: Inclusion of reference to the Arctic Shipping Safety and Pollution Prevention Regulations in the Project's Shipping Management Plan - Transport Canada recommends that the Project's

Shipping Management Plan reference and discuss the ASSPPR, particularly with regard to the prevention of the discharge of waste and adherence to the Polar Code.

Agnico Eagle's Response:

Agnico Eagle thanks Transport Canada for their review of the 2020 Annual report and will update the Shipping Management Plan to reference the Arctic Shipping Safety and Pollution Prevention Regulations.

6.4 Transportation of Dangerous Goods

Comment: A Transport Canada Transportation of Dangerous Goods (TDG) inspection was conducted remotely for the Meadowbank project in 2020. No non-compliances were noted during this remote oversight activity.

Non-compliance issue: Agnico Eagle hired a third party contractor to ship hazardous wastes via marine transportation. Upon review of the waste manifests provided with AEM's 2020 Annual Reports for the Meliadine Gold project and the Meadowbank/Whale Tail projects, non-compliances were noted on the shipping documents used to ship hazardous wastes via marine transportation. A Transport Canada Transportation of Dangerous Goods report will be issued to the third party contractor for the non-compliances noted on the shipping documents. Upon receipt of the TDG report, the third party contractor has 30 days to provide a compliance response to Transport Canada TDG.

Agnico Eagle's Response:

Agnico Eagle thanks Transport Canada for bringing to its attention that non-compliances were noted on the shipping documents used to ship hazardous waste via marine transportation and that a Transport Canada Transportation of Dangerous Goods report was issued to the third-party contractor.

As of July 29th, 2021, and as communicated to Transport Canada via email, Agnico Eagle and the third-party contractor have not yet received the aforementioned report.

Once the report is received, Agnico Eagle will follow-up with the third-party contractor to ensure a compliance response is provided to Transport Canada within 30 days of its reception and that appropriate corrective measures are implemented.