

March 24, 2020

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Agnico Eagle Mines Limited
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RE: Effectiveness of existing Whale Tail Pit Project Caribou Protection Measures

Please accept this letter as the Government of Nunavut's (GN) comments towards Agnico Eagle Mines' (AEM) report: *Caribou Road Crossing Mitigation (EDI. Feb 10, 2020)*. In addition to this letter, the GN's technical comments towards the EDI report are attached in Appendix A. The GN agrees with the Baker Lake Hunters and Trappers Organization's conclusion that, at this time, there is insufficient evidence to support capping Whale Tail Pit Project (Project) Spring road closures to 12 days (February 24, 2020).

GN Role in AEM's CPMs

The GN is committed to fulfilling its shared role in monitoring the effectiveness of Project caribou protection measures (CPMs), pursuant to Project Certificate No.008, Term and Condition No. 30:

The Proponent shall work with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization and the Kivalliq Inuit Association through the Terrestrial Advisory Group to develop and update thresholds to trigger implementation of mitigation measures on both the AWAR and Whale Tail Haul road, up to and including temporary road closures. The Proponent shall consider how these thresholds and mitigation measures reflect caribou life cycle sensitivities as well as demonstrate how Inuit Qaujimajatuqangit was incorporated throughout the development of these criteria and procedures.

The stated objective of Term and Condition No. 30 is "[t]o verify the effectiveness of CPMs". Existing Project CPMs were recently considered by the GN, and other Terrestrial Advisory Group (TAG) members, during the Nunavut Impact Review Board's (NIRB) 2018 and 2019 Project reviews. CPMs continue to improve as monitoring data is produced to assess their effectiveness. At the Expansion Project Hearing AEM recently committed to increasing its detection capacity by requiring additional roadside surveys when two collared caribou are within 25km of Project roads. The GN applauds this commitment because increasing detection capacity is key to ensuring that CPMs are implemented in a timely manner, ideally preventing unintentional delays to caribou migrations as well as Project disruptions.

In assessing CPMs for the Haul Road and/or Meadowbank All Weather Access Road, the TAG should consider whether alternative measures could be equally effective while limiting road closure days. We recognize that fewer road closures will result in better economics for the Project. The GN therefore appreciates AEM's efforts in preparing: *Caribou Road Crossing Mitigation (EDI. Feb 10, 2020)*. This technical memorandum provides a helpful review of observed data collected to-date and describes how CPMs could be revised to limit road closures to 12 days. However, like other TAG members, the GN is

concerned that this review is based on a very limited one-year dataset (see Appendix A herein for additional comments).

Road Closures and Flexibility:

We acknowledge AEM's concern that current CPMs may be causing financial and operational challenges for the Project. Last year, AEM's Haul Road was shut down for a total of 61 days (35 days in Spring, and 26 days in Fall). This represents a considerable deviation from the contingency that AEM planned and accounted for: 28 days. There is no approved annual limit on road closure days. The number of road closure days in a given year is determined by weather and by application of CPMs in the Terrestrial Ecosystem Management Plan (TEMP), per Term and Condition 28. Term and condition No. 30 must be reasonably implemented to also ensure that CPMs are not unnecessarily onerous or costly. Section 3.3 (Flexibility) of the Project Certificate contemplates such reasonable or flexible implementation of the Terms and Conditions to achieve certificate objectives:

Where the objective of a Project Certificate term or condition can be achieved through more efficient alternate means, the Proponent is encouraged to consult with the NIRB (and other parties as required) to seek acceptance of proposed alternatives (NIRB, Project Certificate No.008, S. 3.3 Flexibility).

Scientific Uncertainty and Data Collection:

Ultimately, we still do not have enough long-term data from collared caribou interacting with the operating Haul Road to properly assess how this road is or is not affecting the herds. It is unlikely that we will have a large enough collar dataset relevant to the Haul Road, from which we can derive statistically robust and powerful conclusions, for some years. Most of the data that we currently have are for caribou crossing the All-Weather Access Road or data collected before the Haul Road went into operation. The GN has purchased 50 new geofenced collars intended for the Wager Bay and Ahiak herd (25 each) to provide improved long-term collar data relevant to the Haul Road. The GN had planned to deploy these 50 collars in 2020 but recent COVID-19 travel restrictions may postpone this work to 2021. The GN supports the NIRB's determination that:

*"[A] lack of scientific certainty regarding effects will not be used as justification for inaction."
(NIRB, Reconsideration Report and Recommendations, 2019, S.1.8 Evidentiary Issues, p.18).*

Adaptive management decisions pursuant to Term and Condition No. 30 will occur, but AEM must still provide a reasonable amount of proof and rationale in support of any of its proposed CPM changes.

Current CPMs and Precautionary Principle:

Additional evidence and monitoring results are needed for the GN to support permanent TEMP or CPMs revisions. However, the TAG is in place to provide ongoing adaptive management recommendations. The TAG should be open to considering single-year or single-migration CPMs revisions.

Ultimately, parties' interpretation and implementation of Term and Condition No.30 must bear in mind the precautionary principle as described by the NIRB [emphasis added]:

*The Board notes there is a lack of existing monitoring data to fully assess the potential impacts to caribou and other terrestrial wildlife from the haul road and other project components including the continued use of the all-weather access road... Consequently, in the face of this uncertainty, the Board expects the “precautionary principle” to apply to the Expansion Proposal...[I]t is **the Proponent who bears the burden of proof to show that despite the uncertainty, the potential adverse environmental impacts can be mitigated or prevented** (NIRB, Reconsideration Report and Recommendations, 2019, p.18) [emphasis added].*

And:

*[T]he Proponent is **expected to take a precautionary approach to the assessment of impacts and the continued monitoring of the project**, to address the uncertainty of potential impacts. (NIRB, Reconsideration Report and Recommendations, 2019, p.83).*

GN Conclusions and Recommendations:

Pursuant to Term and Condition No. 30 and the TAG Terms of Reference, no TAG party can unilaterally approve permanent or single-year revisions to AEM’s Project CPMs. The TAG operates by consensus.

However, the GN makes the following immediate recommendations to AEM and the TAG:

- Where appropriate AEM should seek single-migration CPM revisions, pursuant to Term and Condition No. 30 and the TAG’s Terms of Reference.
- Otherwise AEM should continue to implement TEMP CPMs, wherever possible enhancing its detection capacity. Late road closures or TEMP non-compliance (seen in 2018 as per GN letter to the NIRB, dated October 24, 2019) may be inadvertently causing prolonged road closure periods. More monitoring results are needed to assess whether this is the case.
- As previously discussed at the TAG, all TAG members should consider whether CPMs could be equally effective when only applicable to oncoming migrations. The GN believes that this CPM revision would be appropriate. This potential CPM revision, as well as the other options identified in *Caribou Road Crossing Mitigation (EDI. Feb 10, 2020)* warrant further discussion, review, and analysis.

The Government of Nunavut remains committed to the TAG and the fulfilment of Term and Condition 30. Please do not hesitate to contact me should you have any concerns or questions.

Best regards,

[original signed by]

Steve Pinksen
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Cc’:

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Appendix A: MEMO

TO:	Brad Pirie, Department of Environment, Government of Nunavut
FROM:	Stephen Atkinson
RE:	Comments on the document entitled: Caribou Road Crossing Mitigation – Technical Memorandum. (EDI. Feb 10, 2020)
DATE:	February 19, 2020

The following provides a list of comments on the above noted document.

1) Throughout the document there is reference to a 12-day cap on the number of spring road closures. For example:

“The project was designed, assessed and approved based on a maximum of 28 road-closure days annually for weather (N=10 days) and caribou migration (N=12 days in spring, and N=6 days in fall; see transcripts p. 38, Day 2 p. 173 and p.439, Day 3; NIRB 2017).” (page 3)

The 28 days of road closure (including 12 in the spring for caribou) was AEM’s assumption in planning the Project but was not an approved cap on road closures. There is no approved limit on number of road closure days annually. The number of road closure days in a given year is determined by weather and by application of the caribou protection measures specified in the Terrestrial Ecosystem Management Plan (TEMP) that AEM is required to implement per term and condition 28 (Project Certificate 008). The TEMP does not specify a cap on number of road closure days. The 12 day cap is considered to be a proposal from AEM.

2) Page 2 states:

“Although this approach is consistent with commitments made by other proponents on other projects (e.g., Sabina), there has been no objective evaluation of whether combining a group size threshold with a minimum level of protection from exposure to road traffic is effective, or even necessary.”

This is correct. Evaluating whether these protection measures are necessary was a key focus of the commitments sought by the GN from AEM during the NIRB reviews of the Whale Tail Project and Whale Tail Expansion Project. The commitments obtained by the GN involved the collection of data on the movements of caribou interacting with the operating haul road in both its open and closed states; data

that would have statistical power to detect potential effects¹. These data have not yet been collected. The memo presented by EDI does not evaluate the effectiveness or the necessity of these protection measures since it presents no information on the road's effects on migration movements when subject to these measures or not. Thus, this analysis does not provide an appropriate basis for revising the protection measures.

Recommendation: (1) That AEM, in collaboration with the GN and other TAG members collect collar data on the movements of caribou interacting with the Whale Tail haul road, in accordance with previous commitments made during NIRB reviews of the Project, and, using these data, conduct a comprehensive evaluation of the caribou protection measures in the current approved TEMP.

3) Page 2 states:

"The NIRB recommended a revision to Project Condition no. 30 that included removing reference to specific GSTs, and suggested an adaptive approach involving discussion with the TAG"

The NIRB's revision of project condition 30 does not remove the group size thresholds (GST) specified in the approved TEMP. It allows flexibility in development and revision of triggers, including the GSTs.

4) Page 3 states:

"The current $GST \geq 12$ animals resulted in 35 road-closures days on the Haul Road in the spring, plus an additional 26 road-closure days in summer/fall (61 days total) for 2019. This resulted in a substantial loss of gold production potential and is inconsistent with the approved Whale Tail Expansion Project."

It is unclear what is meant by the phrase "inconsistent with the approved Whale Tail Expansion Project". The road closures were implemented in accordance with the approved TEMP and were therefore consistent with the approved project. The approved project does not have a limit on days of closure. The 28 days of closure assumed by AEM as part of the project proposal was a planning assumption on the part of AEM that contributed to the effects assessment. The project proposal did not specify a request for approval of a 28 day limit on road closures.

5) Page 3 states:

"Agnico Eagle tasked Golder Associates Ltd. (Golder) to conduct a review of the 2019 road monitoring results to evaluate whether the current spring GST is consistent with protection of 75% of the animals interacting with the Project. Golder presented the results of that analysis at a November 2019 TAG meeting (Golder Associates Ltd. 2019), which indicated that a $GST \geq 12$ animals provided enhanced protection (i.e., no exposure to a road with traffic) for 98% of caribou interacting with the Project in the spring. Further, based on the 2019 caribou observation data, $GST \geq 80$ caribou interacting with the Haul Road met the criterion for protection for at least 75% of caribou interacting with the Project in spring (Table 1)."

It is incorrect to say that a Group Size Threshold of ≥ 12 animals provided enhanced protection (i.e., no exposure to a road with traffic) for 98% of caribou interacting with the Project in the spring. The Golder

¹ See for example commitments #1 and 7 (NIRB Final Hearing Report on the Whale Tail Project – Appendix B)

analysis estimates the percentage of caribou that are in group sizes of X or more but it does not estimate the percentage of animals interacting with the project that are provided enhanced protection. This latter metric depends upon the proportion of caribou that are detected by observers. For example, if the intensity of monitoring is low (i.e. infrequent and/or short), the probability of detecting a group of migrating caribou will be low. Thus while it is possible to provide enhanced protection for a high proportion (i.e. 75%) of the caribou groups that are observed interacting with the Project, the overall proportion of the herd that receives enhanced protection is much lower than 75% since only a low proportion of caribou are actually observed.

We currently don't know what proportion of migrating caribou interacting with the road are detected by road survey observers. However, commitment #7 made by AEM, to the GN, during the NIRB's review of the Whale Tail Project states that:

"Within 1 year of Project certification, the Proponent shall revise caribou group-size thresholds for adaptive management, taking into account the frequency of monitoring effort, spatial coverage of monitoring and likelihood of detecting groups of caribou, in order to ensure a majority (70%) of caribou are subject to enhanced mitigation (i.e. levels 1 through 3 of mitigation and monitoring as illustrated in figures 6 through 9 of the Terrestrial Ecosystem Monitoring Plan (TEMP), v4.0). 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."²

Any revision of Group Size Thresholds (GST) must therefore account for monitoring effort and method, and the probability of detecting a group of caribou. Low monitoring effort results in low detection probability and necessitates application of a lower GST.

Recommendation: (2) That AEM in collaboration with the GN and other TAG members conduct studies to estimate the proportion of caribou interacting with the Whale Tail Haul road that are detected via different monitoring methods and intensities. That this information then be used to inform future revision of GSTs and other triggers for road related caribou protection measures.

6) Page 3 states:

"Agnico Eagle has indicated that additional road-closure days (i.e., greater than 28 days annually) is inconsistent with a level of production that can be sustained financially, even with stock piling."

At the November 2019 TAG meeting, members requested economic data and an analysis to substantiate this conclusion. The timeline for submission of this material and its review by the TAG should be clarified.

Recommendations: (3) That AEM provide the requested economic analysis. That the timeline for submission of this material and its review by the TAG be clarified.

² NIRB Final Hearing Report on the Whale Tail Project – Appendix B [NIRB 2017]

7) The caribou group size analysis is based on a single year of data (2019) only. This is insufficient to justify revision of GSTs and timing windows for road closures for several reasons (also see comment #8). Page 4 states:

“We assume that the patterns in the 2019 migration (timing, group size, total count, spatial distribution) were within the range of natural variation and are therefore representative of general pattern expected in future years.”

While the observed patterns in the 2019 data may be within the range of natural variation, we do not know the size and underlying distribution of that natural variation and where within that distribution 2019 fits. The year 2019 may have been an extreme year when spring migrating caribou were in larger or smaller groups than is typical in most years and/or arrived at the haul road earlier/later, in a shorter/longer period, and in a more or less defined peak period. Without a greater understanding of this variation, it is not possible to be confident that revised GSTs and timing windows for road closures will afford adequate protection to caribou. Additional years of data specific to the haul road are needed to properly characterize the underlying inter-annual variation and account for it in revising GSTs and timing windows. Analyses of the multi-year caribou observation data from the AWAR may also provide some insight into variance in the timing and pattern of migration and group sizes.

Recommendation: (4) That additional data on caribou group sizes interacting with the Whale Tail haul road be collected via several methods of observation potentially including, but not necessarily limited, to road surveys, haul truck driver observations, height-of-land surveys, drone observations and aerial observation of collared animals. That these studies consider the effects of method of observation, distance from the Project and road status (i.e. open/closed) on caribou group sizes. That data are collected in sufficient quantity and over sufficient years to characterize the underlying inter-annual variation in features of the migration (i.e. group sizes, timing, duration etc). That this information then be used to inform future revision of GSTs and other triggers for road related caribou protection measures.

7) Page 5 states:

“Group size varied considerably, with many groups comprising 12 or fewer animals, and others as large as approximately 1,000 animals (Panel B, Figure 1). These results are consistent with those presented as part of the technical memorandum outlining the current and proposed mitigation hierarchy (Golder Associates Ltd. 2019), which considered counts west and east of the road.”

How consistent were the results with those presented in the Golder memo? For comparison, it would be useful to present another version of table 1, with separate columns for caribou observed on the east and west sides of the road. Is there a difference in the distribution of group sizes for observations made on the west versus east side of the road? Results from collar data analyses suggest there are differences in movement behavior of caribou before versus after road crossing (Kite et al. 2017). Before crossing, caribou approaching roads tend to mill about. After crossing, movements appear to be more directional and speed increases. This may translate into differences in observed group size on the east versus west side of the road if caribou coalesce into larger groups while milling about and then divide into smaller group after crossing.

Recommendation: (5) Revise table 1 in this memo to present separate columns for caribou observed on the east and west sides of the road.

Recommendation (6) That AEM use caribou observation data from 2019 to calculate the number of days of road closures that would have occurred if road closure triggers contained in the approved TEMP were applied to caribou observed on both sides of the Whale Tail Haul road versus a scenario in which triggers for closure were only applied to caribou observed on the west side.

8) It is curious that the distribution of group sizes observed along the haul road in spring 2019 (table 1) is so different from that of group size data collected along the All-Weather-Access Road over a ten year period (2007-2016) in spring (TEMP version 7, table 16). In spring 2019, caribou tended to be observed in much larger groups along the haul road than observed along the AWAR over a 10-year period. The 75% cumulative percentile in these two data sets occurs at group sizes of 80 versus 15 respectively. The reason for this considerable difference needs to be explored. Is it due to differences in the number of years of sampling and natural inter-annual variation in group sizes, differences in behavior between herds (although some of the same herds cross both the AWAR and haul road), differences in the characteristics of the roads (physical structure, traffic intensity) and caribou response to these anthropogenic factors or differences in methods of data collection? How do the group sizes observed along the haul road in 2019 compare to those observed during spring aerial surveys or collar deployments? How do group sizes observed by road surveys compare to those reported by haul truck drivers?

Page 4 of the memo states:

“We assume that the patterns in the 2019 migration (timing, group size, total count, spatial distribution) were within the range of natural variation and are therefore representative of general pattern expected in future years.”

While the observed pattern in the 2019 group size data may be within the range of natural variation, we do not know the range and underlying distribution of that natural variation and where within that distribution the observations made in 2019 fit. The year 2019 may have been an extreme year when spring migrating caribou were in larger groups than typical in most years. Without a greater understanding of this variation, it is not possible to be confident that revised GSTs for road closures will afford adequate protection to caribou.

In addition to natural variation, group size may be the result of anthropogenic factors. For example, migrating caribou approaching an open road with constant traffic may tend to mill about as a disturbance response and form into larger groups before successfully crossing (a sort of ‘back-up’ effect). Analyses of collar data support this hypothesis. Data on groups sizes collected during periods when the haul road is open may thus be biased towards the observation of larger groups that do not reflect the natural group sizing of undisturbed caribou. The memo itself appears to acknowledge this by the statement that:

“We acknowledge that the patterns evident in the data reflect the road-closure regime conducted in 2019, and that migration patterns associated with a different road-closure regime may not be consistent.” (page 4)

If the object of the mitigation is to facilitate undisturbed crossing of the road by migrating caribou, group size thresholds should be based on natural group sizing not on artificially enlarged groups.

Additional years of group size data for the haul road are needed to explore these natural and anthropogenic factors. This should include:

- Sufficient years of sampling to quantify variance in the timing and pattern of the migration's interaction with the haul road to ensure that GSTs and timing windows for road closures accommodate this variation to a reasonable degree.
- Sampling by several methods of observation (e.g. road surveys, driver observations, relocation of collared caribou to count group size, use of drones etc...)
- Sampling under different road states (e.g. open, restricted traffic, closed).
- Analyses of data incorporating multiple covariates that could affect group size including, distance from road, method of observation, road status (open versus closed).

Similar concerns apply to the data on timing and temporal pattern of caribou group sizes interacting with the road. Analyses of the multi-year caribou observation data from the AWAR may also provide some insight into variance in the distribution of group sizes.

Recommendation: (7) That further analyses be conducted to explore and explain the differences in the distribution of groups sizes observed along the Whale Tail haul road in 2019 relative to observations made along the AWAR since 2007.

Recommendation: (8) That AEM in collaboration with the TAG, design and implement studies to collected additional years of data needed to explore natural and anthropogenic factors affecting the group sizes and the patterns of migration of caribou that interact with the Whale Tail haul road. This should include:

- Sufficient years of sampling to quantify variance in the timing and pattern of the migration's interaction with the haul road to ensure that GSTs and timing windows for road closures accommodate this variation to a reasonable degree.
- Sampling by several methods of observation (e.g. road surveys, driver observations, relocation of collared caribou to count group size, use of drones etc...)
- Sampling under different road states (e.g. open, restricted traffic, closed).
- Analyses of data incorporating multiple covariates that could affect group size including, distance from road, method of observation, road status (open versus closed).

9) During road surveys data on the distance of observed caribou groups from the haul road were collected. However, these data are not presented or analyzed in the memo. Distance from road is an important covariate that may affect caribou group size for several reasons. Group size may be a function of distance from road if caribou tend to aggregate as they approach the road as part of a disturbance

response. A relationship between group size and distance may also exist as a function of detection probability if larger groups are more visible at greater distances and thus more likely to be detected. Analyses should be performed examining group size as a function of distance from road. A negative slope for the relationship between group size and distance would be concerning since it would be consistent with a 'disturbance' hypothesis. A positive slope would indicate that observation data from road surveys are biased in favor of larger groups and may not adequately represent the group sizes of caribou interacting with the road.

Recommendation: (9) Please provide further analyses incorporating effects of distance from road, side of road (i.e. west versus east), method of observation (e.g. road survey, incidental driver observations etc.), and group size on caribou observations. This should consider that the ZOI of the road is likely greater than the range over which roadside observers are able to observed caribou.

10) The memo presents two scenarios, 'lead herd' and 'main herd', using group size thresholds of 80 and 200 caribou respectively. It is unclear how the threshold of 200 was derived. What analyses were performed to establish this threshold? Were the data simply visualized, as presented in figure 1, and a threshold selected that would meet the 12-day cap on road closures? If so, selecting a group size to satisfy a cap on road closures is not an appropriate method of mitigating project effects on caribou. Mitigation should be determined by measurement of effect or likelihood of effect not by arbitrary limits on intensity or duration of mitigation.

Recommendation: (10) Explain how the threshold of 200 was derived. What analyses were performed to establish this threshold?

11) The analysis ignores the issue of detection probability. Page 5 states:

"Intermittent closure-days would have extended from 14 April to 02 May and indicate that 84% (N=26,197) of the total number of caribou counted (N=31,187 on the west side of the Haul Road) would have been exposed to a closed road."

This result does not estimate what proportion of migrating caribou interacting with the road would be exposed to a closed road. It only estimates the proportion of those groups detected that would be exposed to a closed road. At present, the proportion of caribou groups detected versus undetected by a once daily road survey is unknown. This detection probability is a critical metric that must be estimated in-order to understand the level of protection that is actually being afforded to the migrating herd as a whole. This will require further data collection and analyses including distance from road, method of observation (i.e. road survey, incidental driver observations etc), frequency of survey and group size as covariates. Stating that 84% of the total caribou counted would have been exposed to a closed road does not necessarily constitute a high level of protection if only a relatively small proportion of caribou interacting with the road are detected by observers.

Caution should also be exercised in utilizing this result. This is a retrospective analysis with only a single year of data. If group sizes and the timing and distribution of group sizes varies substantially from year-to-year, the results could differ significantly. Sensitivity testing with additional years (and other sources) of data is required to assess the robustness of these mitigation proposals.

Recommendations: See recommendations #2 and #4 above.

12) The analysis ignores important questions regarding the frequency of monitoring. Road surveys in 2019 were conducted once daily during migration. A key question that the analysis does not address is how many days would the road have been closed if road surveys had been conducted more frequently (e.g. 2-3 times daily)? For example, under scenario 2, with the intermittent exposure (closure) protocol, table 2 indicates the road would have been closed for 12 days over a period of 19 days. However, if monitoring for caribou had been more frequent than a once daily drive along the road, there may have been other days within the 19-day period on which groups of 200 or more caribou were observed. Consequently, the number of required road closures during that period would have increased from 12 or the closure period would need to be shortened. Shortening of the closure period might significantly reduce the proportion of the herd encountering a closed road. The same problem applies to the other scenarios used in this analysis. For example, with more frequent monitoring, groups of 200 or more may have been observed prior to April 14 which would have initiated the period of closures earlier and might have resulted in the large parts of the herd encountering the road after the 12-day closure cap was reached. Additional data should be collected to explore the effect of survey frequency on the timing and duration of road closures, relative to the pattern of migration.

Recommendation: (11) That AEM, in collaboration with the TAG, design and implement studies to explore the effect of survey frequency on the timing and number of road closure days triggered by caribou protection measures specified in the approved TEMP, relative to the pattern of migration; as discussed in this comment. See also recommendation #2 above.

13) This analysis is based on observations made during road surveys. If observations of caribou groups by haul truck drivers can also trigger road closures, which they currently do according to the TEMP, the pattern of road closures could look very different. This has not been explored. If both road surveys and incidental observations by drivers are triggers for road closure, both sources of data should be included in the analyses because they will both affect the timing and length of the window in which closures occur.

Recommendation: (12) Revise the analyses to include incidental observational data collected from haul truck drivers and other personnel.

14) The memo presents two alternative scenarios for the management of road closures. One scenario is intended to ensure caribou at the leading edge of the migration ('lead herd') encounter a closed road. The other attempts to ensure the bulk of migrating caribou ('main herd') encounter a closed road. These two scenarios should not be presented as alternatives to one another; they are both necessities. There is a need to close the road to facilitate crossing of both the leaders and the bulk of caribou.

Recommendation: (13) Revise the analyses to consider a third scenario in which protection is provided to both lead caribou and the bulk of the herd. How many days of road closure would this necessitate and what GST would be applied?