Saturday, November 14, 2020

Kivalliq Wildlife Board Technical Comments

Executive Summary

The Kivalliq Wildlife Board (KWB) has completed the technical review of Agnico Eagle Mines (AEM or Proponent) 2020 Final Environmental Impact Statement Addendum (2020 FEIS Addendum) and responses to the information requests submitted by intervenors and regulatory authorities.

The KWB has provided specific technical comments on issues identified in the 2020 FEIS Addendum. These include comments on:

- Potential impacts on caribou;
- Potential impacts from spills into the terrestrial environment and freshwater ecosystems;
- Potential impacts on hunting and Inuit land use; and

The KWB has also provided general comments on other issues. These include:

- Concerns with the technical review process thus far, including:
    - NIRB's handling of the finalized scope of the project and the hearing process timeline;
    - AEM's attempt to limit public participation in the assessment process; and
    - The lack of response from NIRB to Information Requests submitted by the KWB;
- Concerns about other technical aspects of the project, which the KWB would like discussed at the technical meeting, including:
    - The groundwater inflow modeling predictions;
    - The ability of the saline effluent treatment plant (SETP) to effectively treat the groundwater as proposed; and
    - The potential impacts from the treated groundwater effluent on the marine environment and marine wildlife and the monitoring measures for the marine environment; and
- The need for a comprehensive and thorough regulatory monitoring and enforcement regime on the surface contact water and groundwater treatment and discharge activities at the Meliadine Mine.

The KWB has provided recommendations on construction timing, needed improvements to management and monitoring plans, additional monitoring and reporting needs, additional consultation needs, improvements to the technical review process, discussions for the technical review meeting, and the importance of enforcing license requirements and terms and conditions.

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Introduction

The Kivalliq Wildlife Board (KWB) is the Regional Wildlife Organization (RWO) for the Kivalliq Region. The board consists of representatives from each community's Hunters and Trappers Organization (HTO) in the Kivalliq region and a chairperson elected by the HTO members.

The mandate of RWOs and HTOs is detailed in Article 5.7 of the 1993 *Nunavut Agreement*. The *Nunavut Agreement* gives RWOs and HTOs a broad mandate to oversee and manage Inuit wildlife harvesting in their respective regions and communities. The *Nunavut Agreement* also provides RWOs and HTOs with a mandate to represent the interests of Inuit hunters and their hunting rights. The mandate of RWOs and HTOs is further detailed in the Government of Nunavut *Wildlife Act* (S.Nu. 2003, c.26).

The purpose of KWB's technical review was to ensure that potential impacts on wildlife and Inuit harvesting rights and land use were properly assessed and that regional considerations of impacts are also considered rather than focusing only on localized impacts. The major concern of the KWB is on potential impacts from the project on the Qamanirjuaq caribou herd which annually migrates through the area, usually in early to mid July.

Additional concerns of the KWB revolve around the consultation process, the terrestrial environment, marine and freshwater ecosystems, access to harvesting lands and enforcement of the project's licenses and certificates.

Specific Technical Comments

Technical Comment on Potential Impacts on Caribou

Review Comment Number: KWB-TC-1

Subject/Topic: Caribou

References

2020 FEIS Addendum
- Executive Summary, pgs. vii, ix
- Section 1, Sub-section 1.2.1, pg. 3
- Section 5, Sub-sections 5.1 and 5.2, pgs. 38, 45-47
- Section 8, Sub-Sections 8.1.2-6, pgs. 80-81, 84-88, 90-95
- Appendix D: Roads Management Plan

Agnico Eagle Responses to Information Requests
- Response to CIRNAC-IR-13, pgs. 22-23
- Response to CIRNAC-IR-15, pgs. 25
- Responses to GN-IR-03-05, pgs. 36-45
- Response to GN-IR-07, pgs. 48-49
- Response to KivIA-IR-08-11, pgs. 68-78
- Response to KWB-IR-06-13, pg. 87-95
- Response to KWB-IR-26, pg. 108
- Response to NIRB-IR-009, pg. 124
- Response to NIRB-IR-011-012, pgs. 126-129
- Response to NIRB-IR-015, pg. 132
- Appendix IR-8: Anticipated Ecosystem and Socio-economic Impacts with Covering the Waterline
- Appendix IR-11: Literature review of caribou, waterlines, and roads Revision 2 (prepared for AEM by ERM and Golder)

See References Cited section for citations to other literature

Summary

Caribou will interact with the proposed project if it is approved, and the project will have an impact on the Qamanirjuaq caribou herd.

In the 2020 FEIS Addendum, AEM has cited a literature review as well as their "recent caribou behavioural monitoring (July 2020)" to suggest the impact on caribou will be localized and relatively minimal. The KWB disagrees that the impact on caribou will be localized and minimal.

The KWB finds that both scientific literature and Inuit Qaujimajatuqangit suggest that industrial developments and human activities can have significant impacts on caribou and that impacts are often regional in scale.

Importance of Issue to Impact Assessment

Caribou are one of the most important wildlife species in the Kivalliq. They have high ecological importance in sub-Arctic and Arctic ecosystems and are integral to many Inuit cultural practices and traditions, as well as other Indigenous peoples' cultural practices and traditions.

It is very important that this project has a minimal impact on caribou. AEM should commit to a plan of action that all parties come to the consensus will minimize impacts on caribou and to a monitoring plan that will help understand both the local and regional impacts of the project on caribou.

Detailed Review Comment

AEM states that they understand the "precautionary principle" to mean "if an action has suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus, then that action should be considered harmful" (2020 FEIS Addendum, p. 3). AEM suggests that "consensus" is needed based on scientific data and local and traditional knowledge to provide sound evidence that minimal harm will result from a course of action. The KWB finds that the scientific literature and traditional knowledge on caribou's interactions with pipelines and other industrial infrastructure and developments does not provide clear "consensus" about the risk of pipelines to barren-ground caribou. However, much of the literature finds that these developments negatively impact caribou behaviour and populations.

It does not appear that AEM followed their own application of precautionary principles in regards to their analysis of the impacts of pipelines on caribou. In the 2020 FEIS Addendum, they present evidence that suggests caribou will be minimally impacted by the proposed amendment and suggest that caribou could cross the pipelines (whether they are covered or not) without much disturbance. AEM states that caribou might have "a familiarity phase" when pipelines are first constructed, such as exhibiting "some initial minor delays in crossing until they find appropriate crossing opportunities," based on "recent caribou behavioural monitoring (July 2020) and experience with above-ground pipelines in Alberta" (2020 FEIS Addendum, p. viii, 84).

AEM also cites a report written by ERM, one of their consultants, to defend the statement that caribou "will cross small-diameter waterlines on the ground when waterlines are less than 20 inches (50 cm) in diameter without any specific mitigation" (2020 FEIS Addendum, p. 80, 94). The KWB's reading of Appendix IR-11 does not come to the same conclusion. ERM (Appendix IR-8, p. 5) cites the monitoring report from consultants of a diamond mining company (Rescan Environmental Services Ltd., 2011) that concluded that caribou will have more difficulty crossing a snow berm that is greater than 50 cm in diameter. It does not mention anything about

pipelines or if caribou might be impeded in some ways by pipelines less than 50 cm.

The citation of the peer-reviewed article by Mallory et al. (2020) seems out of place for this project (2020 FEIS Addendum, p. ix, xv, 87). AEM cites Mallory et al. (2020) to support evidence that caribou may have a delay adjusting to pipelines' presence on the landscape. This paper is about caribou's resilience to climate change and does not provide any support for caribou's ability to habituate to industrial infrastructure. In fact, it suggests that caribou's ability to adapt to the changing environment may be hampered by industrial developments: "The potential for caribou to adjust migratory behaviour in response to changing environmental cues could be hampered by novel disturbances along their migratory routes, and it is, therefore, imperative that decision makers give adequate weight to these effects when considering human activities on migratory ranges" (Mallory et al., 2020, p. 849).

The KWB supports the commitment to cover 80-90% of the pipeline and views this as a better mitigation measure for the proposed amendment than building 70 to 80 crossings. However, AEM's analysis of the impacts of this aspect of the project on caribou suggests that this will have positive impacts on caribou. For example, in their response to CIRNAC-IR-13, AEM states, "Impacts to caribou, related to barriers to movement are anticipated to be positive..." (2020 AEM Information Request Responses, p. 23). In Appendix IR-8 (p. 5), AEM does qualify that they anticipate the positive impact would only be in relation to not covering the pipelines. However, they have not provided a comprehensive analysis of the anticipated negative impacts on caribou from the installation of a mostly covered pipeline. The KWB disagrees that the installation of twinned pipelines that are 80 to 90% covered will have positive impacts on caribou.

While the scientific literature does not provide "consensus" about the risk of pipelines to barren-ground caribou, much of the peer-reviewed scientific literature agrees that industrial developments and linear infrastructure, such as roads and pipelines, negatively impact caribou densities near the infrastructure (Boulanger et al., 2012; Cameron et al., 1992; Cameron et al., 1995; Cameron et al., 2005; Dau and Cameron, 1986; Johnson et al., 2005; Johnson et al., 2020; Nellemann and Cameron, 1996, 1998; Noel et al., 2004; Prichard et al., 2020). This is particularly evident during the calving period of caribou (Bergerud and Page, 1987; Cameron et al., 2005; Johnson et al., 2020). A recent study also suggests that avoidance behaviour occurs during the post-calving and late summer periods (Johnson et al., 2020). Many Inuit have also recognized impacts from industrial developments on caribou movements, and they often emphasize the importance of protecting calving and post-calving lands (Alaralak, 1982; Bernauer, 2014; Blangy and Deffner, 2014; Evo, 1982; Killularк, 1982; Kusugak, 1982; Lokken et al., 2019; Suluk, 1982; Tapatai, 1982; Tartak, Greene, and Bernauer, 2020; Thorpe et al., 2001). The Qamanirjuaq caribou herd are very likely to interact with the proposed project during their post-calving period and could be negatively impacted by it. Nursing cows and newborn calves may be at a higher risk of being impacted by the proposed project (see Dau and Cameron, 1986; Johnson et al., 2020; Murphy and Curatolo, 1987; Nellemann and Cameron, 1998; Prichard et al., 2020; Skarin and Åhman, 2014; Vistnes and Nellemann, 2001; Wolfe et al., 2000). Smaller groups of caribou may also be more impacted by industrial infrastructure disturbance (Cameron et al., 1979; Curatolo and Murphy, 1986; Murphy and Curatolo, 1987; Nellemann et al., 2003). The Elder Donald Suluk (1982) said that smaller groups of caribou will

be visibly disturbed by human activity, but even larger groups of caribou will be impacted negatively even if they do not appear to be, as they move away from disturbances they may fragment into smaller herds.

Avoidance of industrial developments by caribou can reduce the availability of high-quality habitat. Johnson et al. (2005) found mining and exploration activities to impact caribou's access to high-quality habitat during their post-calving phase (see also Nellemann and Cameron, 1996; Plante et al., 2018). Studies also find that caribou have not habituated to oilfield developments in Alaska for over forty years as caribou continue to exhibit avoidance behaviour around such developments (Johnson et al., 2020; Prichard et al., 2020). Low levels of habituation to human disturbance have also been described in regards to other caribou herds in Alaska and Canada (Boulanger et al., 2012; Johnson and Russell, 2014) as well as with reindeer herds in Norway and Sweden (Nellemann et al., 2010; Skarin et al., 2015). Inuit widely recognize that even minor disturbances on the land can impact caribou and divert their movements and stress the importance of keeping the land clean (Bennett and Rowley 2004; ITC, 1979, 1982; Mannik 1998; Steenhoven, 1962; Webster, 2001). Archaeological surveys near Harvaqtuuq (the Kazan River) and associated oral histories reveal that Harvaqtuurmiut Inuit built their camps predominantly on the south side of the river and left the north side relatively undisturbed apart from inuksuit, which were built to guide caribou towards certain river crossings (Keith 2000; Stewart, Keith, and Scottie, 2004).These findings from scientific research and Inuit Qaujimajatuqangit contradict AEM's claim that caribou may have "a familiarity phase" when pipelines are first constructed and "some initial minor delays in crossing."

As ERM (Appendix IR-8, p. 5-6) notes, one study found that some individuals from the Western Arctic Herd in Alaska delayed their migration by an average of 32 days when encountering a road and increased their movement pace after crossing (Wilson et al, 2016). Reindeer in Norway have also been found to demonstrate delayed crossing of roads (Panzacchi et al, 2013). Caribou from the Central Arctic Herd in Alaska have been shown to increase energy expenditure near roads and pipelines and required multiple attempts to cross pipelines when the Kuparuk oilfield was first built (Murphy and Curatolo, 1987; Smith and Cameron, 1985). The KWB does recognize that more recent studies have reported that certain mitigation measures have improved caribou's ability to cross linear infrastructure (Prichard et al., 2020).

Migration is important for caribou to reduce predation risk and to access superior forage quality areas and habitats for critical biological stages (Alerstam et al., 2003; Fryxell and Sinclair, 1988). Linear infrastructure has the potential to create obstacles to caribou migrations that can have serious impacts on caribou populations (Bolger et al., 2008). The disruption of migratory routes can have negative impacts on caribou, especially if they increase energy costs (e.g., by traveling extra distances to avoid human activity) (Leblond et al., 2016; Miller et al., 1972; Plante et al., 2018). Furthermore, the cessation of migratory behaviour has been linked to large declines in caribou herd populations (Bolger et al., 2008). If this were to happen, it would have significant socioeconomic impacts on Kivalliq Inuit who harvest caribou for food, clothing, and other resources . It would also negatively impact other Indigenous hunters outside of Nunavut (see Festa-Bianchet et al., 2011; InterGroup Consultants Ltd., 2008; Vors and Boyce, 2009).

Further, peer-reviewed literature suggests industrial activity and linear developments can have long lasting, regional, negative impacts on caribou. The long-term, cumulative impacts of industrial developments and the pervasive presence of human activity have been shown to have significant cumulative impacts on caribou herds in many places (Johnson and Russell, 2014; Nellemann et al., 2010; Eftestøl et al., 2019). Studies on boreal caribou have reported that industrial activity and developments have been linked to habitat loss, disturbance, and fragmentation, which has had negative impacts on caribou (McLoughlin et al., 2003; Vors et al., 2007). Boreal and mountain caribou have been extirpated from about 60% of the historic extent of their range in Alberta, 50% in Ontario, and 40% in British Columbia (Hummel and Ray, 2008). Many barren-ground caribou herd populations across the Canadian Arctic have declined significantly, particularly in areas where industrial development activities are high (COSEWIC 2016). The KWB is concerned about the cumulative impacts on the Qamanirjuaq herd of this project and potentially others in the future. It is important that cumulative impacts are properly identified and appropriately mitigated. Sometimes this means projects should not be approved.

Recommendation/Request

The KWB makes the following recommendations in regards to this issue:

- AEM (2020:80) notes the "waterlines will be installed outside of sensitive times of the year for caribou and caribou migrations." If the project is approved, the KWB recommends that this commitment be followed. Construction should not occur during the caribou migration season. Furthermore, if construction work is halted for the migration, any barriers that might impact the migration should be mitigated and minimized (e.g., layed down pipes should be buried at the time of migration).

- Preferably closer to 90% of the pipelines should be covered rather than 80%. AEM should distribute the map of where the pipeline will be covered and uncovered to the people of Rankin Inlet so they can offer any potential concerns with the plan.

- Based on insight from hunters, the KWB is concerned that noise and vibrations are affecting wildlife near the mine. Noise monitoring should be occurring every year and reporting of the monitoring should be done as scheduled.

- The scientific literature emphasizes that the scale of study is incredibly important when reporting disturbance effects from industrial activity (Skarin and Åhman 2014; Vistnes and Nellemann, 2008). Studies focused only on the local scale miss effects at the regional scale, and a lot of the scientific literature emphasizes that impacts on caribou are often at the regional scale. The KWB recommends that, if the proposed amendment is approved, the Government of Nunavut's Regional Biologists work with the KWB on a regional and cumulative impact assessment of the project over the life of the project to better understand regional and long term impacts on caribou.

Technical Comment on Potential Impacts from Spills into the Terrestrial Environment and Freshwater Ecosystems

Review Comment Number

KWB-TC-2

Subject/Topic

Spill Mitigation and Management for the Terrestrial Environment and Freshwater Ecosystems

References

2020 FEIS Addendum
- Plain Language SummarySummary, pg. ii
- Section 3, Sub-Section 3.4.6, pgs. 26-27
- Section 5, pg. 38
- Section 8, Sub-Section 8.1.2, pgs. 79-80

2020 FEIS Addendum, Appendix C: Spill Contingency Plan
2020 FEIS Addendum, Appendix D: Roads Management Plan

Agnico Eagle Responses to Information Requests
- Response to CIRNAC-IR-9-11, pgs. 14-18
- Response to KWB-IR-14, pg. 96
- Response to NIRB-IR-8, pgs. 121-123
- Response to NIRB-IR-025, pg. 143

Summary

There is a possibility that the proposed pipelines could fail and treated groundwater effluent could spill onto the tundra. AEM notes that the effluent “is treated groundwater that is like ocean water” and that “it would still be safe” if the pipeline or diffuser had a leak. The KWB disagrees with AEM that the treated groundwater would “be safe” for the terrestrial environment and freshwater ecosystems. AEM notes that a spill could result in vegetation loss but that they would result in only minor or localized changes. They have not accounted for impacts that spills could have on freshwater ecosystems along the length of the pipeline.

The impacts of different spill scenarios into the terrestrial environment and freshwater ecosystems need to be properly assessed. These scenarios should include varying volumes of effluent based on varying time lapses between the start of a spill and pump shutoff as well as where spills occur along the waterline and how much effluent could spill after the pump shutoff. Scenarios where spills could drain into fish bearing freshwater ecosystems are particularly important to assess. This includes rivers as well as lakes downhill from the proposed pipelines.

Importance of Issue to Impact Assessment

Potential impacts on the terrestrial environment and freshwater ecosystems have not been properly integrated into the Spill Contingency Plan making assessment not possible.

Detailed Review Comment

The proposed pipelines will run in relatively close proximity to lakes used by fishers of Rankin Inlet. There are many locations along this route where a spill could happen. With the daily volume of effluent that AEM has proposed to convey to the discharge location, a failure of the pipeline could result in a major spill quickly. Any spill could have significant impacts on terrestrial vegetation and wildlife as well as freshwater systems and freshwater marine life.

Recommendation/Request

The KWB recommends the following:

- Potential impacts from spills into the terrestrial environment and freshwater ecosystems need to be included in the spill contingency plan;
- Robust mitigation measures need to be developed in order to ensure impacts from a spill into the terrestrial environment and freshwater ecosystems are minimized.

Technical Comment on Potential Impacts on Hunting and Inuit Land Use

Review Comment Number

KWB-TC-3

Subject/Topic

Hunting and Inuit Land Use

References

2020 FEIS Addendum, Appendix D - Road Management Plan
Section 10.2, pg. 44

Summary

AEM states that they will consult with the KWB for the "establishment of a no-shooting zone (1 km wide) on either side of the road." This has not been discussed with the public in any of the consultation events that AEM has held in Rankin Inlet.

Importance of Issue to Impact Assessment

The creation of a 1 km no-shooting zone on either side of the AWAR would mean the loss of approximately 60-80 square km of prime hunting land use area. This has not been discussed in any way with the membership of the Kangiq&iniq Hunters and Trappers Organization (K-HTO).

Detailed Review Comment

The creation of a no-shooting zone is equivalent to a non-quota limitation of harvesting rights. The K-HTO would have to agree to creating a non-quota limitation under 5.7.2 (a) which would have to go through an HTO/ Kivalliq Inuit Association by-law creation process. While the KWB recognizes that the process AEM has identified involves "consultation" with the KWB, the people most impacted would be the hunters of Rankin Inlet.

Recommendation/Request

Being that the impact of a no-shooting zone around the AWAR would be felt by hunters in Rankin Inlet, in order for the KWB to agree to the proponent's proposed no-shooting zone, the KIA and the KHTO would need to hold a public meeting in Rankin Inlet. The meeting should be treated as a by-law creating meeting where the proponent must:

- Provide the HTO membership 28 days notice that the meeting will happen;
- Provide clear maps of proposed no hunting zone;
- A quorum of at least 75 members is required in order to pass the by-law in accordance with the K-HTO by-laws.

General Comments

Technical Review Process

The KWB is concerned about events that have happened during the technical review process. These are explained here along with recommendations on how to proceed in the future.

The KWB and NTI expressed concern that additional time was not provided to intervenors to prepare Information Requests when the finalized scope of the project was adjusted and finalized two days before information requests were due. NIRB did not allow any additional time to parties or the public when this happened. Yet, they did provide an opportunity for AEM to request more time to prepare responses to information requests. This occurred after AEM attempted to limit public participation in the hearing process. The KWB recommends that the NIRB should better define their own assessment and hearing timeline expectations for all parties, the public, and proponents and that the finalized scope of projects should be defined well in advance of submission deadlines.

The KWB finds the letters from AEM's legal counsel (Brad Armstrong of Lawson Lundell LLP) to limit public participation in the technical review process to be very concerning. The KWB strongly supports that interested members of the public are allowed to participate in the technical review assessment, including the technical meeting, community roundtable, and pre-hearing conference. The KWB agrees with the NIRB that they have an obligation under the *Nunavut Agreement* to promote public awareness and public participation in these processes. The KWB recommends that AEM cease attempting to limit public participation in these processes.

The KWB is concerned that some of its information requests to NIRB received no response. For example, the NIRB provided no response to clarification on how the "potential alternative options" should be considered during the technical review (KWB-IR-2) or any clarification on their monitoring responsibilities or the repercussions of breaches of regulations and terms and conditions (KWB-IR-19). The KWB recommends that NIRB responds to Information Requests and does so according to the timelines that they set.

Other Concerns with Technical Aspects of the Project

There are aspects of the project which the KWB is concerned with but is unable to provide specific comments on. These are commented on here along with recommendations that they be discussed at the technical hearing.

The KWB notes that the models predicting groundwater inflows have been adjusted multiple times throughout this project (Response to KivIA-IR-8; Response to NIRB-IR-030, pg. 149;

Appendix IR-10). The original predictions were closer to what is currently modelled, yet a lower predicted inflow was presented when the original trucking and discharge amendment was proposed. Presently, the predicted groundwater inflows are higher than what was presented in 2018. While AEM notes that the models have been updated to better incorporate new data sources, it is unclear whether other groundwater experts find this modeling to be robust. The KWB would appreciate a discussion on this issue at the technical hearing and insight from groundwater modeling experts (including some who are not employed or contracted by AEM) on whether there are any issues or concerns with AEM's current modeling predictions.

The KWB is very concerned about whether the saline effluent treatment plant can actually treat the groundwater to the levels that meet requirements. AEM has overestimated the performance of their technology in previous assessments (Response to CIRNAC-IR-2; Response to NIRB-IR-2-August27). AEM mentions the possibility of having an intermediate pond between the treatment plant and the pumping station (Response to NIRB-IR-028). This might be one way to ensure that the treated groundwater effluent meets requirements before it is fed to the pumping station and ultimately to the marine environment. The KWB would appreciate a discussion on this issue at the technical hearing and insight from water quality treatment engineers (including some who are not employed or contracted by AEM) on whether there are any serious issues or concerns about the proposed technology. If this technology cannot be proven to perform as expected and there are likely to continue to be ongoing issues with treatment, the KWB recommends this project not proceed because it would be too much of a risk to the marine environment as well as the terrestrial and freshwater environment if a spill were to occur.

The KWB is also concerned with potential impacts that the discharge of treated groundwater effluent could have on the marine environment and wildlife. Inuit use areas at or near Melvin Bay for fishing, seal hunting, beluga whale hunting, geese hunting, mussel collecting, and eider duck egg collecting. It is very important that this project presents no health risks to these animals or to humans who consume them. The KWB would appreciate a discussion on this issue at the technical hearing and insight from marine environment and wildlife experts (including some who are not employed or contracted by AEM) on whether there are any serious concerns about impacts of the treated groundwater on the marine ecosystem and marine animals and sea birds. This discussion should include whether there are any concerns with the MDMER regulations and whether there might be adverse environmental impacts even if the regulations are met. For example, while the regulations might pass acute toxicity tests, are there concerns about chronic toxicity and long-term impacts on marine life? If the project is approved, the KWB recommends that monitoring test results of the treated groundwater that indicate the treated groundwater is out of compliance results in immediate shutdowns of the discharge system and that no discharge into Melvin Bay should occur until AEM can prove that they can treat the water to required levels. The KWB also recommends that the monitoring of the marine environment include monitoring of shellfish and mussels to determine if any contaminants increase in them over time.

Enforcement

The KWB wants assurances that license requirements and the Terms and Conditions of the project certificate can actually be enforced. With their NWB water license certificate, AEM sought an emergency amendment to change TDS limits related to water quality discharge (200324 2AM-MEL1631 Water Licence Amendment Application-IMLE). The NWB approved their request, and essentially allowed for AEM to propose a permanent change to the water quality regulations (200515 2AM-MEL1631 Emergency Amendment No. 1 Approval-OCHE; 200827 2AM-MEL1631 Amendment-MainApplicationDocument-August2020-IMLE). The KWB finds this an unacceptable way to regulate the mine. Regulators should be firm about regulations, and if AEM is unable to meet regulations, they should face consequences, such as fines and potentially shut downs. The KWB recommends that the regulators hold AEM to the standards of existing legislation, license requirements, and terms and conditions of project certificates.

Summary of Recommendations

The KWB has provided both general comments and specific technical comments on technical issues in the 2020 FEIS Addendum and associated documents.

In summary, the KWB's recommendations based on the specific technical comments include:

- Recommendations from the technical comment on caribou:
    - Construction should not occur during the caribou migration season. Furthermore, if construction work is halted for the migration, any barriers that might impact the migration should be minimized (e.g., layed down pipes should be buried at the time of migration);
    - Closer to 90% of the pipelines should be covered rather than 80%;
    - Noise monitoring should occur every year and be reported in a timely fashion;
    - Impacts on caribou from the proposed project should be studied at the regional scale rather than the local scale and should be done by the Government of Nunavut in partnership with the KWB;
- Recommendations from the technical comment on impact from spills into the terrestrial environment and freshwater ecosystems:
    - Include potential impacts to the freshwater ecosystems in the Spill Contingency plan;
    - Develop robust mitigation measures for potential spills into the terrestrial environment and freshwater ecosystems;
- Recommendations from the technical comment on potential impacts on hunting and Inuit land use:
    - Work with the membership of the Kangiqliniq Hunters and Trappers Organization to determine whether or not the no-shooting zone should be developed as a by-law.

The KWB's general comments include:

- There have been issues with the way NIRB has handled the process of this technical review that need to be avoided in future technical reviews.
- AEM should not be trying to determine who can or cannot participate in the technical review process, and they should not be trying to limit public participation in the process.
- NIRB should respond to information requests directed at them.
- There should be a discussion at the technical hearing to help determine whether there is any concern from experts and other organizations about the reliability of the current modeling provided by AEM.
- There should be a discussion at the technical hearing to help determine whether there is any concern from experts and other organizations about the effectiveness of the Saline Effluent Treatment Plant.

- There should be a discussion at the technical hearing about the impacts of the treated groundwater into the marine environment and whether there could be any long term negative impacts on marine life.
- Monitoring of the marine environment should include monitoring of shellfish and mussels to determine if any contaminants increase in them over time.
- Regulators should hold AEM to the standards of existing legislation, license requirements, and terms and conditions of project certificates.

Stanley Adjuk

Chair

Kivalliq Wildlifeboard

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