



Mr. Chuck Hubert
Mackenzie Valley Environmental Impact Review Board
PO Box 938
YELLOWKNIFE NT X1A 2P1
VIA EMAIL

Dear Mr. Hubert,

RE: GNWT responses to information requests for the environmental assessment of Dominion Diamond Ekati Corporation's (DDEC) Jay Project – EA1314-01

The Government of the Northwest Territories (GNWT) is committed to fostering balanced and sustainable land management decisions in accordance with the Land Use and Sustainability Framework, and therefore participates actively in the environmental assessments of NWT resource development proposals. The GNWT has reviewed the information requests (IRs) directed to it, and is pleased to provide the following responses to those IRs.

The GNWT anticipates that these IR responses will assist in informing the Review Board and all parties about the nature and significance of the proposed Jay project's potential impacts on the environment. As the EA progresses the GNWT looks forward to further opportunities to participate. If the Mackenzie Valley Environmental Impact Review Board or any of the parties to the Jay Project EA has questions about the GNWT's IR responses, please contact:

- Lorraine Seale, Manager, Project Assessment, at lorraine_seale@gov.nt.ca or 867-765-6786, or
- Melissa Pink, Project Assessment Analyst, at melissa_pink@gov.nt.ca or 867-765-6784.

Sincerely,

Terry Hall
Director, Land Use and Sustainability

Attachment:

GNWT Responses to Round One Information Requests, Jay Project EA – via ORS



TOPIC: Significance Determinations; DAR Reference: s. 6 Determination of Significance, pg. 6-9

Comment: Several of the valued components (Key Line of Inquiry/Subject of Note) analysed indicate they would be significant if the assessment end point is exceeded. "Results from the residual impact classification are then used to determine the environmental significance from the Project (and other developments) on assessment endpoints." (pg. 6-30). For wildlife and vegetation valued components, the following is described as the assessment endpoint: "Self-sustaining and ecologically effective populations (and communities)". Ecological well-being is an important indicator of the significance of environmental effects for these valued components. However, societal values should play an important role in determining significance of environmental effects. For example, whether an environmental effect violates a law, whether it contradicts a management plan, program or policy for the valued component, or whether it conflicts with Aboriginal plans for use of the valued component for traditional purposes. These do not appear to have been considered in determining the significance of environmental effects for wildlife and vegetation valued components. For the record, the Agency believes that violations of laws or regulations caused by the project (alone or cumulatively) would be a strong indicator that the effect is significant. The Agency believes that contradicting an approved management plan, policy or program, or conflicting with Aboriginal plans for use of the valued component for traditional purposes would also be an indicator that the effect is significant.

Recommendation: For each of the valued components for which the endpoint is "self-sustaining and ecologically effective population", we request that DDEC please provide the following:

1. What laws or regulations provide some protection for this valued component? E.g., the Species at Risk Act for listed species, the *Wildlife Act* of the NWT.
2. What protection is provided in the laws or regulations for this valued component? E.g., Section 32 (1) of the Species at Risk Act: "No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as ... an endangered species or a threatened species."
3. What management plans or equivalent exist that apply to this valued component? These would be available from such sources as Environment Canada, Environment and Natural resources or the WRRB.
4. In view of the results of parts 1, 2 and 3 above, how might one revise the determination of significance for the effects on these valued components? The Agency requests that GNWT-ENR and Environment Canada responds to questions 1-4 above.

Valued components (VCs) under ENR jurisdiction:

- Vegetation
- Wildlife and Wildlife Habitat
- Caribou
- Aquatic life other than fish

Vegetation:

1. What laws or regulations provide some protection for this valued component?

Wildlife Act (NWT)

Northwest Territories Lands Act (NWT)

Mackenzie Valley Resource Management Act (Canada)

Mackenzie Valley Land Use Regulations

Species at Risk (NWT) Act (NWT)

Territorial Parks Act (NWT)

2. What protection is provided in the laws or regulations for this valued component?

While there are no specific laws or regulations that focus specifically on the protection of vegetation, there is the ability under legislation to protect certain aspects of the landscape which encompasses vegetation; generally this is through the protection of wildlife habitat.

Wildlife Act (NWT) – Protection of Habitat - Section 93(1). No person shall substantially alter, damage or destroy habitat.

Northwest Territories Lands Act (NWT) – Section 3. The Commissioner in Executive Council may, where he or she considers it necessary for the protection of the ecological balance or physical characteristics of any area in the NWT, by regulation set apart and appropriate any territorial lands in that area as a land management zone.

Mackenzie Valley Resource Management Act (Canada) – Part 5, Section 115.(1) states in part: “*The process established by this Part shall be carried out in a timely and expeditious manner and shall have regard to: (a) the protection of the environment from the significant adverse impacts of proposed developments;*”

Mackenzie Valley Land Use Regulations – includes a number of conditions that protect vegetation through wildlife and fish habitat; however as stated above, none specifically mention the protection of vegetation. Part of Section 26. (1) states that “*The Board may include in a permit conditions respecting... (h) protection of wildlife habitats and fish habitats*”;

Species at Risk (NWT) Act (NWT) – Part 4 of the Species at Risk act provides protection for pre-listed species, listed species and wildlife habitat. The Act also allows for the ability to make regulations that allow for protection of pre-listed or listed species (151.(1)).

Territorial Parks Act (NWT) – S3(1)(f) allows for the development of a Wilderness Conservation Area to protect a core representative area that contributes to regional biodiversity, such as landforms, watersheds, or wildlife habitats.

3. What management plans or equivalent exist that apply to this valued component?

There are no specific management plans to protect vegetation in general. However aspects of vegetation are protected through wildlife habitat protection measures as noted in the answers to questions 1 and 2 above, and management plans that are developed in order to meet the requirements of the legislation noted above. Listed plant species can be offered protection under the *Species at Risk (NWT)* Act, through their recovery plans.

At the Ekati mine, there are some specific plans that monitor and report on impacts to vegetation:

- **Ekati Wildlife Effects Monitoring Program (WEMP):** includes habitat loss data.
- **Ekati Air Quality Monitoring Program (AQMP):** includes air, snow and lichen sampling.
- **Ekati Mine Interim Closure and Reclamation Plan:** includes observation and tracking of natural colonization of vegetation at the mine.

4. In view of the results of parts 1, 2 and 3 above, how might one revise the determination of significance for the effects on these valued components?

There is no legislation or regulations in place that pertains directly to the protection/management of vegetation, therefore there is no recommended revision to the determination of significance to the VCs in that respect. However, it is recommended that the company include in their Adaptive Management, Compliance Report or in each VC Monitoring Program a section to assess the significance for the effects on these VCs. A measurement indicator that includes human values (i.e. availability of traditional use plants for collection) would also be a valuable component to assessing the impacts.

Aquatic life other than fish:

1. What laws or regulations provide some protection for this valued component?

The *Waters Act* and Regulations are developed to manage the deposit of waste to the environment to protect water and water use by any animal, fish or plant in the NWT (see definition of Waste in *Waters Act*). The *Waters Act* also protects the rights of instream users such as those related to traditional use, other developments, recreation, etc. (*Waters Acts*, Section 27 (2) & Section 63 (1)).

2. What protection is provided in the laws or regulations for this valued component?

The *Waters Regulations* indicate that waste disposal should be such that it does not have the potential for significant adverse environmental effects (*Waters Regulations*, Section 4 (1)). The *Waters Act* specifies that the Board shall not issue a licence unless they are satisfied that the use of waters or the deposit of waste proposed by the applicant would not adversely affect, in a significant way, other use of waters (*Waters Act*, Section 26 (5)). Further, effluent discharge is not to be acutely toxic to aquatic life

and the zone of chronic toxicity is to be limited to the extent possible (mixing zone); see MVLWB Water and Effluent Quality Management Policy, 2011.

3. What management plans or equivalent exist that apply to this valued component?

A water licence has effluent quality limits to protect the aquatic environment; an Aquatic Effects Monitoring Program (AEMP) and Adaptive Management/Management Response Plan.

4. In view of the results of parts 1, 2 and 3 above, how might one revise the determination of significance for the effects on these valued components?

There are no laws or regulations that specifically relate to ecologically effective populations. However, social considerations should be considered in assessment of significant impact to ecological integrity or a change to the aquatic environment that would be considered undesirable from a traditional use perspective.

Barren-ground caribou and wildlife

Barren-ground caribou:

1. What laws or regulations provide some protection for this valued component?

The *Wildlife Act* contains a range of protections applicable to barren-ground caribou.

Neither *Species at Risk (NWT) Act* or the federal *Species at Risk Act (SARA)* apply currently; however both the NWT Species at Risk Committee and the Committee on the Status of Wildlife in Canada will be assessing barren-ground caribou in spring 2016.

2. What protection is provided in the laws or regulations for this valued component?

Barren-ground caribou are designated as big game under the *Wildlife Act*, which means non-Aboriginal rights holders must hold a licence or permit to harvest, and makes the harvest of barren-ground caribou subject to seasons, quotas, tag requirements and other restrictions under the *Big Game Hunting Regulations*.

Section 52 states: *Subject to section 17, no person shall, unless authorized by a licence or permit to do so (a) engage in an activity that is likely to result in a significant disturbance to big game or other prescribed wildlife; or, (b) unnecessarily chase, fatigue, disturb, torment or otherwise harass game or other prescribed wildlife.*

Part of Section 54 states: *Subject to the regulations, no person shall waste, destroy, abandon or allow to spoil (a) the edible parts of prescribed wildlife.* Caribou are prescribed for the purposes of this section in the *Wildlife General Regulations*.

Methods of harvest are prescribed in sections 60 – 62 to ensure humane harvest.

Section 62(1) requires a wait time before harvesting caribou after flying into a prescribed area.

Section 65 prohibits the feeding of big game.

Section 67 prohibits capturing or keeping big game captive without a permit.

Section 68 protects big game from harassment by domestic animals or captive wildlife.

Section 75 prohibits the commercial harvest or trafficking in the meat of big game.

Section 95(1) reads as follows:

A developer or other person or body may be required, in accordance with the regulations, to prepare a wildlife management and monitoring plan for approval by the Minister, and to adhere to the approved plan, if the Minister is satisfied that a development, proposed development, or other activity is likely to

- a) result in a significant disturbance to big game or other prescribed wildlife;
- b) substantially alter, damage or destroy habitat;
- c) pose a threat of serious harm to wildlife or habitat; or
- d) significantly contribute to cumulative impacts on a large number of big game or other prescribed wildlife, or on habitat.

Section 95(2) reads as follows:

A wildlife management and monitoring plan must include

- a) a description of potential disturbance to big game and other prescribed wildlife, potential harm to wildlife and potential impacts on habitat;
- b) description of measures to be implemented for the mitigation of potential impacts;
- c) the process for monitoring impacts and assessing whether mitigative measures are effective; and
- d) other prescribed requirements.

Regulations for Section 95 have yet to be developed.

Section 97 requires the Minister to make a submission to the responsible body when a development proposal may affect big game.

3. What management plans or equivalent exist that apply to this valued component?

Barren-ground caribou: The GNWT's Barren-ground Caribou Management Strategy provides the overall guidance on GNWT's caribou management actions.

Bathurst – There are no current management plans that apply to this herd. There is a collaborative process underway arising out of the Tłı̄cho Agreement to develop a formal mechanism to manage the Bathurst herd for all groups that harvest this herd.

There is also a collaborative process underway to develop a Range Plan for the Bathurst Herd that will provide recommendation for managing disturbance on the range of the Bathurst herd. In addition, GNWT-ENR and the Tłı̄cho Government have worked together on a series of joint proposals to the Wek'èezhìi Renewable Resources Board (WRRB) for management of the herd.

Beverly – The Beverly Qamanirjuaq Caribou Management Board is a formal, inter-jurisdictional body that provides recommendations for conservation of these herds. They have released the Beverly Qamanirjuaq Caribou Management Plan to guide management actions.

Grizzly Bear:

1. What laws or regulations provide some protection for this valued component?

The *Wildlife Act* - Grizzly bears are designated as big game and fur-bearers

Neither the *Species at Risk(NWT) Act* or the federal *Species at Risk Act* apply currently to grizzly bear. Grizzly bear will be assessed by the NWT Species at Risk Committee (SARC) in December 2016. Grizzly bear has been assessed as a species of Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and is currently under consideration for addition to Schedule 1 of SARA.

2. What protection is provided in the laws or regulations for this valued component?

Grizzly bears are designated as big game and fur-bearers under the *Wildlife Act*, which means non-Aboriginal rights holders must hold a licence or permit to harvest, and makes the harvest of grizzly subject to seasons, quotas, tag requirements and other restrictions under the *Big Game Hunting Regulations* and the *Trapping Regulations*.

Section 51.2 of the *Wildlife Act* states “Subject to section 17, no person shall, unless authorized by a licence or permit to do so, break into, destroy or damage a den, beaver dam or lodge, muskrat push-up or hibernaculum”

Part of Section 54 states: *Subject to regulations, no person shall waste, destroy, abandon or allow to spoil...(b) raw pelts or hides of prescribed fur-bearers.* Bears are listed as prescribed fur-bearers for the purposes of this section in the *Wildlife General Regulations* unless they are harvested for food.

Section 56(2) and *Wildlife General Regulations* require a grizzly bear killed in defence of life or property to be accounted for and included in the quota system.

Section 66.1 “No person shall deposit, place or leave in, on or about land or premises food, food waste or another substance, if there is a reasonable likelihood that it could attract big game or other prescribed wildlife to the land or premises and endanger a person, domestic animal or wildlife.”

Section 63 and *Wildlife General Regulations* require grizzly bear parts to be certified before a person can possess them without a licence.

Also Sections 52, 60 – 62, 65, 67, 68, 95 and 97 of the *Wildlife Act* (see under caribou) apply.

3. What management plans or equivalent exist that apply to this valued component?

No applicable management plans

Wolverine

1. What laws or regulations provide some protection for this valued component?

Wolverine are designated as big game and fur-bearers under the *Wildlife Act*, which means non-Aboriginal rights holders must hold a licence or permit to harvest, and makes the harvest of wolverine subject to seasons, quotas, tag requirements and other restrictions under the *Big Game and Trapping Regulations*.

SAR Legislation: Neither *Species at Risk (NWT) Act* or the federal *Species at Risk Act* apply currently to wolverine. Wolverine has been assessed as not at risk in the NWT by the NWT SARC. Wolverine has been assessed as a species of Special Concern by COSEWIC and is currently under consideration for addition to Schedule 1 of SARA.

2. What protection is provided in the laws or regulations for this valued component?

Wildlife Act: Section 51.2, 52, 54, 60 – 62, 65, 66.1, 67, 68, 95 and 97 (see above)

Regulations issued annually under the *Wildlife Act* also provide protection related to harvest.

3. What management plans or equivalent exist that apply to this valued component?

No applicable management plans

Grey Wolf

1. What laws or regulations provide some protection for this valued component?

Wolves are designated as big game and fur-bearers under the *Wildlife Act*, which means non-Aboriginal rights holders must hold a licence or permit to harvest, and makes the harvest of wolves subject to seasons, quotas, tag requirements and other restrictions under the *Big Game Hunting Regulations* and the *Trapping Regulations*.

2. What protection is provided in the laws or regulations for this valued component?

Wildlife Act: Section 51.2, 52, 54 (b), 60 – 62, 65, 66.1, 67, 68, 95 and 97 also apply to wolves.

3. What management plans or equivalent exist that apply to this valued component?

No applicable management plans

Raptors

1. What laws or regulations provide some protection for this valued component?

2. What protection is provided in the laws or regulations for this valued component?

Wildlife Act: Section 51(1): “No person, shall unless authorized by a licence or permit to do so, destroy, disturb or take (a) an egg of a bird; (b) the nest of a bird when the nest is occupied by a bird or its egg; or (c) the nest of a prescribed bird”

Section 51.2, 52, 66.1, 95

Section 63 and *Wildlife General Regulations* require birds of prey parts and eggs to be certified before a person can possess them without a licence or permit.

Captive Birds of Prey Regulations govern the capture and treatment of gyrfalcons.

Peregrine Falcon, Short-eared Owl are territorially managed species that have not been assessed in NWT, but which are both and are both listed as Special Concern under Schedule 1 of the federal SARA. Prohibitions in that Act do not apply to species of Special Concern, although the Act requires that a management plan be prepared for these species.

4. In view of the results of parts 1, 2 and 3 above, how might one revise the determination of significance for the effects on these valued components?

Response for barren-ground caribou and wildlife:

GNWT agrees that societal values should play a role in determining the significance of impacts of development. Providing protections under the law, regulations or plans is one way that societal values are codified; however, it has to be recognized that not all valued components are valued equally. The existence of protections under the law in and of itself does not necessarily indicate that society values one VC above all others nor does it spell out what levels of change in a VC are acceptable. Big game including caribou, grizzly bear and wolverine are given protection under the *Wildlife Act* for a number of reasons, including conservation so that people can continue to use them. In looking at the impacts of human activities on wildlife VCs, project specific assessments must consider acceptable limits of change. What is acceptable is in part value based. Ideally, acceptable limits of change in, for example, abundance and distribution and/or levels of disturbance on a species' range are best agreed upon and determined outside of the EA process. This is why GNWT-ENR is undertaking a process of Range Planning for the Bathurst herd to develop guidance to aid in the determination of significance of individual project impacts. The Range Planning Process looks at the spectrum of values on the landscape and acknowledges the trade-offs involved in various undertakings. Until those acceptable, agreed-upon limits are in place, explicitly incorporating key societal values into the assessment endpoints for those

VC that are most valued (i.e. KLOIs) would be one way incorporate societal values into the EA process, and as such, there may be a need to revise the methodology or the choice of assessment endpoints (see question MVEIRB 77) to ensure that these can be captured.

MVEIRB 77

Topic: EA Approach-ToR s. 4.1 Significance determination factors; DAR s.6.2.2, Table 6.2-1 Assessment endpoints and measurement indicators; 6.7 Residual Impact Classification and Determination of Significance; 8.7.1.2 Determination of Significance (water quality); 9.1.3 Fish and Fish Habitat-VC

Comment: The developer has provided its framework for significance, in terms of assessment endpoints for the Key Lines of Inquiry (eg. p12-129 for caribou; p.8-4 and 8-448 for water quality; p.9-6 and table 9.1-2 for fish; 14-6 for community benefits and impacts). These are summarized in column 3 of Table 6.2-1 (. p6-8). This helps the Review Board to understand what is meant when the DAR describes the developer's views on the potential significance of project impacts.

Recommendation:

To all parties: For each of the Key Lines of Inquiry (except Alternatives), please state your views on Dominion's choice of assessment endpoints for characterizing significant impacts.

Response:

Water Quantity and Quality

Water Quantity

No assessment endpoint is included for water quantity/hydrology. It is a KLOI and therefore it should have been included. Potential impacts or the significance of impact to the narrows between Lac du Sauvage and Lac de Gras should be described.

Water Quality

The assessment endpoints are high level (e.g. healthy and sustainable aquatic and terrestrial ecosystem and ecological function is maintained). The assessment endpoints apply to a large area which includes Lac du Sauvage and Lac de Gras (local extent is referring to the outlet of Lac de Gras). This is troublesome given the size of these two lakes. It is unclear, with the proposed approach, if a change to a particular component of the aquatic environment within Lac du Sauvage or Lac de Gras would be considered significant or whether the approach assesses impacts and significance to any one of the proposed measurement indicators (i.e. localized water quality, localized aquatic biota, localized fish species, etc.). It seems like this is not the case as the DAR states, "The key drivers to determining environmental significance are magnitude, duration and geographic extent, with moderate to high magnitude effects generally leading to significance if it occurs over a large area (i.e., regional in geographic extent) and are long-term or permanent in their duration" (Section 8.7.1.2 p 8-446).

Further, two of the proposed assessment endpoints are contradictory:

- maintenance or suitability of surface water quality for healthy and sustainable aquatic and terrestrial ecosystems, and

- aquatic life is not impaired

Note it is possible to have impairment to aquatic life (i.e. chronic toxicity) and still maintain an aquatic ecosystem. Ensuring no impairment to aquatic life would mean that no measurable effects/impacts occur or no change. The degree or magnitude of impairment would be considered a true assessment endpoint (e.g. 10% or 20% impairment to aquatic biota within Lac du Sauvage). Another example of a potential assessment endpoint which has been used for other projects is to maintain trophic status of Lac du Sauvage. This endpoint is used to address issues associated with high nutrient inputs and eutrophication effects.

Caribou

GNWT-ENR considers the assessment endpoint for caribou of “self-sustaining and ecologically effective caribou populations” to be operationally ambiguous, not conducive to measurement or modelling and an inappropriate departure point for evaluating impacts given the current status of caribou populations. There is no common understanding of at which point a population ceases to be self-sustaining or ecologically effective, nor is there a clear picture of the extent to which the current status of the herd fall within the natural range of variation. For example, an ecosystem may still be able to function “effectively” at very low levels of caribou abundance, but people’s ability to use and benefit from caribou may be affected because of the laws in place to protect that species (see response to IEMA #52 for wildlife VCs). The ambiguity of this endpoint makes the exercise of drawing a link between any of the measurement endpoints and the assessment endpoint almost entirely speculative. The definition provided by DDEC in Section 6.2.2 (p. 6-7) indicates that assessment endpoints are not necessarily quantifiable, but that they could be affected by changes to the measurement endpoints; however, no clear methodology for extrapolating changes to the assessment endpoint from quantifiable changes in measurement indicators is provided. As GNWT-ENR is not aware of any guidance or definitions provided to EA practitioners or reviewers for developing or evaluating assessment endpoints in the context of environmental impact assessment in the NWT, the value of the concept of an assessment endpoint, as defined by DDEC, for evaluating impacts on caribou is unclear.

Community Benefits and Impacts

GNWT agrees with the choice of endpoints.

YKDFN 7

Topic: To GNWT: DAR section 7

Comment: The project has submitted a proposal that will see it exceeding guidelines for 90% of the year.

Recommendation: 1) The Land and Water Board’s of the NWT has been clear that air quality enforcement and regulation is something that is within the GNWT’s mandate (particularly since Devolution). Please indicate what GNWT will do to regulate and enforce the air quality aspects of the project.

2) In the Gahcho Kue file, the project and GNWT indicated that they would conclude a Memorandum of Understanding to govern their air emissions. It is YKDFN's understanding that this STILL not complete and is not enforceable to begin with. Please provide the Review Board an update on the commitment that was made during the Gahcho Kue Environmental Assessment and whether we should expect a similar response for this project?

3) On May 7th, 2013, the GNWT responded to YKDFN's concerns regarding the lack of air quality regulations. In this response they indicated that they working to develop and implement the new national Air Quality Management System. Bearing in mind that this project has a projected lifespan of 10 years, please indicate if GNWT expect this management system to be implemented prior to closure?

a. If so, when does GNWT commit to having this system in place?

b. If not, please indicate how the GNWT intends to enforce the commitments, guidelines or regulations?

RESPONSE:

1) The GNWT recognizes the opportunity for developing appropriate legislative tools for regulating and enforcing air emissions associated with industrial operations. Therefore the GNWT has been actively developing an air quality regulatory framework to ensure potential impacts from industrial air emissions are appropriately monitored and mitigated. In the interim, the GNWT will continue to work with all project stakeholders to identify potential air quality concerns and reduce associated impacts.

2) The Gahcho Kue project air emissions Memorandum of Understanding (MOU) has been drafted and sent to De Beers for review. There are no plans to create a similar MOU between Dominion Diamond Corporation and the GNWT for the proposed Ekati mine expansion, as the GNWT will be focusing on developing regulations to address air quality concerns.

3) The GNWT has been actively implementing the Canadian Council of Ministers of the Environment (CCME) Air Quality Management System (AQMS) since the Minister of Environment and Natural Resources' formal commitment to this initiative in 2013. For example, the new Canadian Ambient Air Quality Standards were adopted into the GNWT's Guideline for Ambient Air Quality Standards in the NWT in January, 2014. As was mentioned above, the GNWT is developing an air quality regulatory framework, in which appropriate components of the AQMS will be incorporated. Air emissions from waste incineration have been identified as a high priority and therefore the GNWT is developing legislative tools to effectively manage this emission source. The AQMS is an ever evolving management system; however, the GNWT will continue to adopt standards as they are developed and therefore, significant components of the AQMS will be implemented prior to mine closure.

YKDFN 30:

Comment: The project notes that PM2.5 will return to NWT guidelines in less than a kilometer surrounding the minesite. However, there is no discussion on the measured values of PM2.5 versus the background, nor is there any discussion on how this may be one of the causal mechanisms driving the zone of influence.

Recommendation: 1) PM2.5 has been theorized as one potential driver behind the zone of influence. Please provide a description on any work that the GNWT has done to understand the causal mechanisms behind this avoidance.

2) To YKDFN, it feels that ZOI now has a general acceptance from western science. Avoidance was predicted by Elders and landusers. Please provide why GNWT allowed almost two decade to pass before the idea was accepted – when traditional knowledge and western science are supposed to be complimentary rather than one subservient to the other.

RESPONSE:

1. GNWT recognizes that causal mechanisms behind the observed caribou zone of influence (ZOI) around the Ekati and Diavik mines are unknown and considers this to be a research gap. In 2014, GNWT initiated a Zone of Influence Technical Task group to develop guidance on when and how ZOI monitoring by industry should occur. Statistical work undertaken by this group and the recommendations provided in the draft document can help to advance research in this area in several ways:

- The recommendations in the document are meant to support collection of quality data for measuring ZOI that can support more efficient use of resources and investigations into causal mechanisms.
- The draft document contains recommendations for industry operators to ensure that they are undertaking monitoring of possible measurable covariates (including dust) to support these investigations in future.
- The draft document provides a survey of work to date on this question as a starting point for operators or researchers interested in tackling this question.
- Analyses undertaken by John Boulanger, a biologist hired to analyze the recommendations arising from the Task Group allowed for the development of a new method for calculating ZOI in a more computationally efficient manner, which may allow ZOI to be calculated within a single year. This can allow temporal changes to be detected more readily which has the potential to support certain directed approaches into this question.

In addition, GNWT-ENR currently has staff in an advisory capacity on research proposals which seek to address aspects of this question.

2. Predictions by elders and land users that caribou would avoid a developed area have never been disputed by the GNWT. In the context of environmental assessment, predictions are meant to be tested. Testing predictions and refining our understanding of the extent, magnitude and implications of the effect is what takes time.

YKDFN 21

Comment: As this process (likely) represents the only consultation that YKDFN will receive regarding the impacts of Aboriginal and Treaty Rights, it is important to understand the GNWT's understanding of YKDFN's view of the impacts that have occurred since the initial Ekati mine.

Recommendation:

1. Please provide a summary of what the GNWT currently believes the impact of development in the YKDFN's traditional territory to be.

2. Beyond this level, please describe what impacts that the GNWT have understood as asserted but that they have discounted as incorrect.

RESPONSE:

To begin, the GNWT has a duty to consult with respect to any GNWT decisions that might negatively affect asserted or established Aboriginal and/or Treaty rights. The GNWT relies on Board environmental assessment and regulatory processes to fulfill some of the procedural aspects of consultation but still maintains responsibility for the substantive elements of discharging the duty to consult. As such, the GNWT monitors and tracks all input that Aboriginal Governments and Organizations (AGOs) provide during the EA and regulatory processes. The GNWT reviews all the input provided throughout the process prior to a final decision and makes an assessment of what issues raised during the EA and regulatory processes relate to section 35 consultations (e.g. the input raised relates to potential negative effects AGOs asserted or established Aboriginal or Treaty rights) and whether these issues have been adequately addressed. Any issues which the GNWT deems to be outstanding would be subject to further consultation and, if appropriate, accommodation.

The GNWT is responsible for ensuring that it has met its duty to consult with respect to activities within its jurisdiction. Like the Government of Canada through its Northern Projects Management Office (NPMO), the GNWT will rely primarily on the consultation procedures of the Mackenzie Valley Environmental Impact Review Board (MVEIRB) and the Land and Water Boards, as well as proponent engagement, to assist in fulfilling the GNWT's duty to consult. Throughout these processes, the GNWT will carefully monitor and track Aboriginal government and organizations' statements of any potential negative effects on Aboriginal and/or Treaty rights.

Canada also has some consultation obligations relating to this project. To the extent possible, the GNWT and Canada will look to coordinate their consultation approach and efforts to minimize the burden of consultation on AGOs.

The GNWT encourages AGOs to participate in MVEIRB and post EA processes for the proposed project. In particular, the GNWT encourages AGOs to:

- clearly indicate, in as much detail as possible, whether any potential negative effects on AGOs asserted or established Aboriginal and/or Treaty rights are anticipated as a result of the Project; and, if so,
- clearly indicate the specific right(s) that may be affected, the specific effects(s) on those right(s), how those effects can be mitigated, as well as any evidence that will help in understanding those impacts; and,
- support the Review Board in understanding the evidence, including traditional knowledge, with respect to both potential impacts and mitigations.

The GNWT also encourages AGOs to work closely with the Project developer to identify negative effects on rights that the developer may mitigate. The project developer is the best source of information on the proposed Project and best positioned to listen to and address concerns relating to the Project.

1- With reference to the first question, the GNWT cannot provide an AGO with information as to what negative effects development has had or may be having on the ability to exercise asserted or established Aboriginal and/or Treaty rights in their traditional territory. The YKDFN would be best placed to speak to any negative effects that they feel they have experienced as a result of the Ekati project or other development on their traditional territory.

Monitoring the effects of individual developments is the responsibility of project proponents within the requirements of their regulatory authorizations and other instruments. In terms of the Ekati mine specifically, Dominion Diamond Corporation is required to regularly report on its monitoring activities and any potential impacts to the environment through several venues including the Water Licence and the Environmental Agreement. The review of all of these reports is an open process where many parties, including the YKDFN, are invited to provide input and recommendations.

Monitoring the effects of multiple projects in a region is the responsibility of the GNWT, as described in Part 6 of the *Mackenzie Valley Resource Management Act*. To this end, one of the objectives of the GNWT's Cumulative Impact Monitoring Program is to monitor the effects of multiple development projects in a region. For example, in the Lac de Gras region, the GNWT is conducting an analysis of the cumulative effects of Diavik and Ekati mines on water quality in Lac de Gras. The GNWT is also developing a Cumulative Effects Assessment, Monitoring and Management Framework for Bathurst Caribou and is working with its partners to standardize wildlife monitoring amongst government and industry so that cumulative effects analyses can be undertaken. As part of this Framework, the GNWT is undertaking a collaborative process to develop a range plan that will provide recommendations for managing human disturbance on the landscape within the annual range of this herd. The YKDFN have been invited to participate in this process. Documents produced will be publicly available when they are complete. The GNWT will file relevant documents on the public registry if they are ready prior to the closing of the record.

The GNWT continues to work to be able to better collect, analyze, and disseminate information about the cumulative impacts of development in the NWT. Determining the regional impacts of development in an area is a large and complex question, but all of the information collected through the initiatives noted above informs the GNWT's participation and input in the Jay environmental assessment and other processes.

2 - In reference to the second question, the review, approval and monitoring of development projects is a public process that includes input from many different parties, including AGOs. In either determining its position or making decisions for each file, the GNWT comprehensively considers input from all parties, including the YKDFN. The GNWT also considers its ongoing responsibilities in implementing its mandate under environmental legislation and weighs all of this information carefully in EA and regulatory processes. Land management decisions are made in the context of sound environmental stewardship which is set through legislation, agreements, regulatory review, permitting, and various programs and services. If the YKDFN would like to discuss how the GNWT has addressed specific concerns that YKDFN has brought forward in the past, please advise the GNWT.

IEMA 34:

Topic: (To ENR–GNWT): Clarification of the effects of mining on Bathurst caribou numbers

Comment: Adamczewski et al. (2009: pg. 3, 69) indicated that effects from previous and existing mines are limited and unlikely a major contributing factor in the recent decline of the Bathurst caribou herd. This statement is repeated in the DAR (pg. 12-135). Adamczewski et al. (2009: pg. 68-69) provide a limited literature review to back up their assertion.

Recommendation: ENR–GNWT should provide more details backing up their assertion that effects from previous and existing mines are limited and unlikely a major contributing factor in the recent decline of the Bathurst caribou herd. ENR–GNWT should also clarify whether they believe the Jay Project could contribute to a further decline in herd abundance.

RESPONSE:

The report from Adamczewski et al. (2009) was an overview of the Bathurst herd's decline to that point, with an examination of some of the factors that may have contributed to the herd's decline. The following paragraph was a summary of the available information on the diamond mines and their likely effects on the herd: "Overall, the studies to date of the effects of the diamond mines on the Bathurst herd show a clear avoidance of the active mines to a distance of 14 km or possibly at longer distances, but this affects only a small proportion of the herd's current summer range. Behavioural effects on caribou feeding or energetics have been limited, in large part because caribou avoid the mines and are on the move when they are most likely to be near the mines. Although the disturbance effects of the mines on the Bathurst caribou herd appear thus far to be limited, they should not be trivialized: human infrastructure can at some scale of intensity lead caribou or reindeer to abandon an area altogether (Nellemann et al. 2003, Cameron et al. 2005). The greatest effect of the mines in recent years has been increased road access for hunters." The quote provides a more complete picture of the assessment by Adamczewski et al. 2009. Some additional context is provided here. Abundance of the Bathurst herd, and of other herds, has varied widely over time (Gunn 2003, Zalatan et al. 2006, Bergerud et al. 2008), based on both biologists' surveys and Aboriginal Traditional Knowledge. Previous historic periods of low Bathurst numbers and high numbers occurred when there were no mines. In addition, at least two other herds (Bluenose-West and Cape Bathurst) declined rapidly from 2000 to 2006 (Adamczewski et al. 2009) at about the same time as the Bathurst herd; and there are no mines on the annual ranges of these herds. The Central Arctic caribou herd in Alaska (along with other Alaskan herds) increased in the 1970s while the large Prudhoe Bay oil-field was built on its range (Cronin et al. 1998), although Cameron et al. (2005) provided evidence of demographic effects of the oil-field development on the herd. These results highlight the difficulties of clearly identifying the demographic effects of development on caribou in the context of a highly variable natural environment (Wolfe et al. 2000, Cameron et al. 2005). ENR considers that a large part of the Bathurst herd's decline since its last peak in about 1986 is the result of a natural cycle that has occurred many times in the past; this cycle most likely reflects large-scale weather patterns and natural factors (Gunn 2003, Joly et al. 2011). When the herd is at low numbers and has a declining trend, its resilience is low and its vulnerability to additional stresses and sources of mortality is high. Additional mines have been built since 2009 and further mines have been proposed in the Bathurst range. The relative contribution of Jay, a project expansion in an already disturbed area that is known to be avoided by caribou, is likely to be small. The cumulative effects of all current and proposed development on the Bathurst range have the potential to contribute to a further decline in the herd in its current highly vulnerable state. The extent to which the herd can sustain even minimal additional stress in its present vulnerable state is unclear.

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MVEIRB 107

Topic: To GNWT Caribou DAR Adequacy Response Table 14.2 & 14.3 Loss of preferred habitats after 2014 fire season and thresholds for range planning

Comment: The incremental and cumulative reduction of preferred habitats from 2014 fires is predicted to be 0.1% and 12.5% and 1.5% and 17.4% on the fall and winter ranges, respectively (DAR Adequacy Response Table 14-2 & 3). In addition, postcalving and fall ranges have contracted and fall range is shifting further north of the treeline and the cows arriving later to the treeline (4 days later/year).

Recommendation: To GNWT: Please describe whether the 8% additional cumulative loss of winter range from the 2014 fire season to a total of a projected 17.4% cumulative loss is close to any interim or final proposed thresholds for range planning.

RESPONSE:

The Bathurst Range Planning Working Group is currently considering cumulative disturbance, and fire is a component of that; however, as of yet, there are no proposed interim or final thresholds.

MVEIRB 104

Topic: To GNWT Caribou Section 12.7 Caribou Protection Plan

Comment: Dominion proposes to amend the existing Ekati WEMP for Jay pit. Under the NWT 2014 Wildlife Act, a Wildlife and Wildlife Habitat Protection Plan is required. In the 2013 Report of

Environmental Impact Review and Reasons for Decision for the Gahcho Kue Diamond Mine, a measure to prepare a caribou protection plan was required to ensure that impacts to caribou and caribou habitat were not significant. This measure included an adaptive management framework linking the Wildlife Effects Monitoring Program and the Wildlife and Wildlife Habitat Protection Plan. Protection plans are used elsewhere for caribou. For example, in BC, an Environmental Assessment Certificate for the Roman coal mine required a Caribou Protection Plan which followed the hierarchy of avoid, minimize and offset.

Ref: Report of Environmental Impact Review and Reasons for Decision, EIR0607-01, Gahcho Kue Diamond Mine, July 19, 2013http://www.reviewboard.ca/upload/project_document/EIR0607-001_Gahcho_Kue_Diamond_Mine_Project_Report_of_EIR.PDF

Ref: BC Environmental Assessment Certificate 12-02 for the Roman Coal Mine Project.[Link](#)

Recommendation: To GNWT: Please provide a template for a caribou protection plan which integrates the Wildlife and Wildlife Habitat Protection Plan and Wildlife Environmental Monitoring Plan relative to herd and range planning. This plan will describe how mitigation can be reduced or intensified and the monitoring required to modify mitigation.

RESPONSE:

Under the Wildlife Act that came into force in November 2014, DDEC is required to complete a Wildlife and Wildlife Habitat Protection Plan (WWHPP) and an updated Wildlife Effects Monitoring Program (WEMP) for the Jay project (see GNWT IR 65) that will describe monitoring and a framework for how mitigation can be adjusted according to the monitoring results. GNWT does not feel that requiring the proponent to create a third plan in addition to a WWHPP and WEMP will improve the level of protection for caribou. GNWT has issued draft guidelines for the development of Wildlife and Wildlife Habitat Protection Plans and Wildlife Effects Monitoring Programs by proponents and operators which together provide a comprehensive approach to avoiding, mitigating, monitoring and adaptively managing impacts to all wildlife valued ecosystem components, including caribou. Public review of this document recently closed and GNWT is currently incorporating recommendations that will improve this document. As the range planning process evolves, opportunities for offsetting may be identified and their incorporation into the WWHPP/WEMP guidelines will be one option available for implementation. In the meantime, GNWT has been regularly providing industry guidance on priority information gaps and opportunities for partnership funding of activities that support development and implementation of initiatives that make up the Cumulative Effects Assessment, Monitoring and Management Framework (CEAMMF) for the Bathurst Herd (see responses to MVEIRB 105 and YKDFN 20). A diagram representing the draft CEAMMF has been provided with our IR responses to the registry. A supporting written document will be posted to the registry upon finalization.

MVEIRB 105:

Topic: To GNWT Caribou Section 1.2; DAR Adequacy Response 2015 Herd and range planning

Comment: The GNWT and its co-management partners are currently preparing a Bathurst Range Plan.

Recommendation: To GNWT: Please describe the planning initiatives for the Bathurst Range Plan with the timelines for completion and implementation of the Plan. Please discuss whether, in its opinion, interim steps are needed to protect the Bathurst herd and its habitat prior to Plan completion.

RESPONSE:

The Bathurst Caribou Range Plan is being developed collaboratively with partners from Nunavut, NWT and northern Saskatchewan. It will develop recommendations for managing habitat on the range of the Bathurst caribou herd and may consider approaches such as cumulative disturbance limits, seasonal activity restrictions, offsets, and access management. A Steering Committee and Working Group have been established to guide development of the plan through regular meetings, one on one interviews and conference calls.

To date the Working Group has established:

- management objectives;
- influence diagrams;
- evaluation criteria and indicators;
- a cumulative development scenario;
- preliminary management/mitigation strategies; and
- a dataset comprised of cultural, economic and ecological information.

The timeline for completion is currently March 2017. However, this may be extended to March 2018 if ENR is successful in our funding proposal submitted to the Canadian High Arctic Research Station. The increased funding would support enhanced community engagement activities.

In the interim, the GNWT is taking steps to protect the herd and its habitat through the use of:

- mobile conservation zone;
- wolf harvest incentives;
- engagement in project specific assessment in NWT and Nunavut to ensure appropriate mitigation and monitoring of impacts to Bathurst caribou;
- support of Government of Nunavut's submissions to Nunavut Planning Commission on protection of key habitat on calving ground;
- letter to Nunavut Planning Commission regarding importance of protecting calving and post-calving habitat; and
- letter to GN Minister of Environment on the importance of collaborative management of the Bathurst herd with respect to harvest, calving ground protection and range planning.

MVEIRB 106:

Topic: To GNWT Caribou DAR Adequacy Response 8.1 Adult and calf survival and vulnerability

Comment: The 2012-2014 decline of the Bathurst herd raises a question about if and how the accelerated decline is a time of particular sensitivity to potential impacts, and increased need for designing adaptive management. The Bathurst herd's vulnerability (as the sum of adaptive capacity and potential impact of landscape changes) has changed. Adult and calf survival, age structure, movements and environmental trends may have changed the context for assessing industrial development.

Recommendation: To GNWT: If the GNWT has conducted a vulnerability analysis for the Bathurst caribou herd, please provide it. If not, please discuss the applicability of a vulnerability analysis for the Bathurst caribou herd, and indicate if the GNWT would consider conducting one. If so, could it be done prior to the Technical Sessions in April?

RESPONSE:

GNWT has not conducted a vulnerability analysis for the Bathurst herd and does not have an established methodology for performing such an analysis. In its 2014 management plan for the Beverly and Qamanirjuaq caribou herds for 2013-2022, the Beverly and Qamanirjuaq Caribou Management Board (BQCMB) outlined a process for assessing vulnerability of the herds. BQCMB' approach involves allocating scores for various monitoring indicators on a scale of vulnerability from very low (1) to very high (5); however, criteria for rating each indicator had not yet been developed, and to date the board has not rated the herds' vulnerability. Indicators included seasonal distribution and range use, population size and trend, herd productivity, herd health, harvest, range quality, quantity and availability, predators and insects, human-caused disturbance, and weather and climate. The BQCMB approach to assessing herd vulnerability needs further work before it can be applied to other herds, and therefore it will not be possible for GNWT to provide such analysis before the Technical Session. ENR would suggest that the Bathurst herd's declining trend, low numbers relative to historic highs, and relatively low calf recruitment would on their own indicate that the herd's vulnerability to further decline and to additional stressors is very high.

YKDFN 19

Comment: YKDFN was not provided the 2012 Caribou Census until 2014. Given the critical status of the Caribou herd, it is tremendously important that this information is provided to this process. There is another census scheduled for 2015.

Recommendation: 1. When can parties expect this information to be provided? 2. Can GNWT commit to providing the preliminary and final reports to the registry as soon as possible, with sufficient time to be reviewed prior to the hearing (and ideally prior to that point)

RESPONSE:

1. Parties can expect preliminary results of the 2015 Bathurst herd population survey to be provided as soon as they are available, likely early fall 2015.

2. While preliminary and final survey results will be provided to the registry soon as they are available, GNWT cannot guarantee that they will be available prior to the Public Hearing, which at present is scheduled to occur in September 2015.

YKDFN 20

Comment: Previous environmental assessment efforts have required GNWT to develop a cumulative effects management framework. This was a mitigation designed to mitigate the onset of significant effects – but it remains outstanding while Gahcho Kue is being built.

Recommendation:

1. Please provide a discussion when this framework will be completed.
2. Please provide a description of the authority that this framework will have to regulate development.

RESPONSE:

1. GNWT has developed a Cumulative Effects Assessment, Monitoring and Management Framework and is currently finalizing a draft for public distribution. The framework has been discussed at many meetings and workshops, the most recent being the Regional Wildlife Monitoring Workshop held March 9-10, 2015. It provides a conceptual representation of how various management pieces fit together to ensure cumulative effects and project specific effects are adaptively managed. It will be provided to the

Registry upon its finalization.

2. The framework relies on the authority of already existing legislation and policy. This includes the Mackenzie Valley Resource Management Act, Wildlife Act, Territorial Lands Act, Tłı̨cho Agreement, and others. While many components are already in place, some of the cumulative effects and assessment components are under development. As these are developed (e.g. the Bathurst Caribou Range Plan) they may draw on legislative tools such as land use planning, protected areas strategy, and policy directives to become enforceable.

YKDFN 23

Topic: To GNWT, Caribou Management Actions, 12.3.2.2.3

Comment: GNWT has previously believed that there was an important caribou herd that calved away from the coast. The Beverly Herd has almost completely disappeared, with only a few animals calving in this area at present. Current thinking is that the remainder of the herd has moved elsewhere, but we can use this as a learning opportunity. Moreover, this is an opportunity to consider the management framework that underlays the setting for the impact assessment and the predictions that are made. It is likely that the parties to this agreement cannot expect any additional mitigation from governments (there are no additional harvesting limitations that GNWT can undertake).

Recommendation:

- 1) Please provide examples of the type of management actions that GNWT undertook as they watched the decline and disappearance of the Beverly Herd.
- 2) Should the Nations that depend on the Bathurst Caribou expect GNWT to undertake any meaningful management actions other than prohibiting harvest?
- 3) YKDFN have repeatedly sought to see other parties sacrifice in addition to themselves, yet GNWT continues to force only the Dene to sacrifice their lifestyle. Given that harvesting limitations themselves are not enough to produce positive population growth (Boulanger and Gunn 2007) - At what point will GNWT take action in areas other than harvesting?
- 4) The Bathurst herd has declined in excess of 90% already and continues to show negative trends and disturbing demographics, including a 50% reduction in numbers over the last 3 years. Can the YKDFN expect this herd to be considered for Species at Risk protection prior to its disappearance, or is another Beverly herd approach – with almost complete lack of action (other than harvesting restrictions) - acceptable to GNWT?
- 5) Given that the information on predation was identified as a limiting factor in 2011, please identify what programs GNWT initiated to remedy this and provide a listing on their objectives and how they will help parties understand what is driving the decline of Caribou.
- 6) Please provide a thorough rationale as to why the YKDFN's constitutional rights have been suppressed for 5 years while industry continues unabated and GNWT has commenced direct support for exploration and industry. Why is GNWT content to use only a single significant management action?
- 7) The project has stated "...the Jay Project is expected to result in a minor change to the harvest of caribou...". If the project were to delay the recovery of the Bathurst herd by a single year, would GNWT consider this to be a minor effect? Would a 5 year delay in the restoration of harvesting be considered a minor effect? Please provide a discussion on how the GNWT evaluates the magnitude of caribou harvesting restrictions on the impacted communities.
- 8) Action to ease pressure on Caribou has been a matter of focus for a decade in the NWT, with two focus points at the 2007 Inuvik Caribou Summit and the 2010 Wek'ezhii Renewable

Resource Board recommendation report. Both of these processes issues reports with recommendations – many of which remain outstanding. Given the ongoing caribou emergency, it seems that Government action on these recommendations should be evaluated in concert with additional development as any mitigations arising from these reports are important to understand the context that Ekati is moving forward within. So for each of these reports please provide a list of the recommendations and what GNWT has done in response.

RESPONSE:

GNWT is of the opinion that this question's content reaches beyond the scope of providing information that will aid in the determination of impacts of the Jay Project on barren-ground caribou.

- 1) GNWT acknowledges that between 1994 and 2007 monitoring of the Beverly herd was insufficient to provide a strong basis upon which management actions could be applied in a timely manner. It is considered a learning opportunity and has highlighted the importance of monitoring all caribou herds, particularly those that are in decline or at low numbers. GNWT has been the lead on monitoring of the Cape Bathurst, Tuktoyaktuk Peninsula, Bluenose-West, Bluenose-East and Bathurst herds, with population surveys every 3 years in addition to other demographic monitoring and use of satellite radio-collars. GNWT contributes to monitoring and management of the Porcupine herd led by Alaska and Yukon, and shares monitoring of Beverly and Ahlak caribou with the Government of Nunavut.
- 2) Please see the answer to questions MVEIRB 105 and YKDFN 18-2c.
- 3) Please see the answer to questions MVEIRB 105 and YKDFN 18-2c.
- 4) Please see the answer to IEMA 52 for "Caribou".
- 5) GNWT continues to undertake and support research and monitoring activities that address information gaps related to predators and predation on caribou. Most of GNWT's research and monitoring initiatives are related to wolves, a main predator of caribou, and wolverine, an occasional predator on caribou. GNWT also supports coordination of collaborative monitoring initiatives conducted by the mines and academic researchers on grizzly bear.

Wolves:

GNWT annually conducts wolf den occupancy surveys in spring, followed-up by pup survival surveys in late summer. In recent years, fewer den sites have remained active in late August compared to 10-15 years ago when caribou were abundant. As the pup recruitment survey cannot distinguish between total litter loss or site relocation, GNWT supported a research study by graduate student Mike Klaczek from the University of Northern BC to deploy GPS radio-collars on breeding female wolves in 2013. Klaczek's thesis, which will be defended in mid-April 2015, validated the trend observed in previous wolf den site occupancy and pup recruitment surveys (that wolf numbers have declined numerically as barren-ground caribou numbers have declined (perhaps with a 1-2 year lag)), and their interpretation by GNWT-ENR (in this one prey/one predator

migratory system, wolf numbers track caribou numbers such that wolves decline when caribou decline).

ENR has attempted, but has not yet been successful, to determine the impact of wolf predation on barren-ground caribou. To do so is logistically demanding and expensive. An attempt to evaluate wolf predation in winter on the Bathurst caribou range was conducted in March 2012 when 24 radio-collars were deployed on the breeding pair of wolves from 11 packs. Unfortunately, many of those radio-collars failed prematurely and therefore there was not enough data to estimate predation rate. Enhancements in GPS radio-collar technology (e.g., reliability, video cameras, accelerometers) may help address some of the logistic issues in future attempts to fill this information gap.

The GNWT conducts a territory-wide wolf harvest incentive program to aid in the recovery of caribou. The wolf carcass collection program did not adequately address wolf reduction objectives in targeted areas. As many of the carcasses submitted were obtained early to mid-winter, prior to the wolf breeding season, analysis of potential reproductive effects on wolves from the decline in caribou was precluded. Incentive payments for prime fur were increased this winter but it is too early to assess its effectiveness.

Wolverine:

GNWT undertakes collaborative wolverine monitoring programs with the diamond mines, including Ekati, with the objective of “providing estimates of wolverine abundance and distribution in the study area over time” and is developing standardized protocols for wolverine (and grizzly bear) DNA hair snagging.

GNWT continues to seek opportunities to support research that will further the collective understanding of predation dynamics on the range of the Bathurst herd.

Grizzly Bear

GNWT supports efforts by the NWT diamond mines, including Ekati, to coordinate regional grizzly bear monitoring programs, with the objectives of “providing estimates of grizzly bear abundance and distribution in the study area over time” and is developing standardized protocols for DNA hair snagging of grizzly bear. GNWT also has had staff providing input into academic research being undertaken by the University of Calgary in collaboration with DeBeers to look at grizzly bear dynamics in the Slave Geological Province.

6&7) For more information on actions being taken to address the status of the Bathurst herd, please see the answer to IRs MVEIRB 105 and YKDFN 18. Restricting harvest is not the only management action that is being taken to address the status of the Bathurst herd nor is it one that is applied lightly. The GNWT acknowledges the hardships experienced by communities who are unable to partake in caribou harvesting activities and is working very hard in collaboration with partners to put actions, plans and processes in place to support the recovery of the herd.

One of the four stated priorities of the current 17th Legislative Assembly is to “build a strong and sustainable future for our Territory” which involves supporting a range of social, economic, cultural and environmental values. Part of the rationale behind the Bathurst Range Planning process (see response to MVEIRB 105) is that recommendations for managing disturbance on the land will be made by collaboratively looking at the spectrum of values on the landscape and explicitly considering some of the trade-offs involved in various undertakings on the land. The Jay Project is one of the undertakings currently being evaluated in the context of a spectrum of societal values through this EA process. In the meantime, as an institution of public government with a mandate for sustainable development, the GNWT supports activities to ensure that there are opportunities for future undertakings that can be evaluated in the same light. (http://www.assembly.gov.nt.ca/sites/default/files/17th_assembly_caucus_priorities.pdf2).

8) While the GNWT acknowledges that some understanding of the wildlife co-management context can provide insight into the assessment of impacts of the Jay project, GNWT is of the opinion that the EA process is not the appropriate forum for a detailed point-by-point review of the 118 management actions recommended in the 2010 Wek'èezhii Renewable Resources Board (WRRB) Joint Proposal nor the 32 priority actions in the 1997 Inuvik Summit report. Evaluation of progress on the WRRB's recommended management actions included in the 2010 Joint Proposal is completed by the Caribou Technical Working Group (CTWG) which meets regularly and is composed of representatives from the WRRB, Tlicho Government and GNWT. It is the role of this group to assess progress on the recommendations. GNWT uses this information to guide its annual research and monitoring programs. Many of the 118 actions in the 2010 Proposal are joint responsibilities for which GNWT does not have exclusive lead, are ongoing, or, due to changing circumstances and adaptive management, may no longer apply or be appropriate. GNWT continues to work with partners to ensure that recommended management actions that will support recovery of caribou herds are implemented.

YKDFN 27

Comment: The project has provided information that the Bluenose Herd is stable or increasing. However, GNWT recently exercised emergency powers to further limit harvesting, bypassing the comanagement route – suggesting that this herd is in decline such that emergency actions to address a ‘caribou crisis’.

Recommendation: Please provide an update on the Bluenose East Herd, contrasted to the project description, and explain the basis for emergency actions.

RESPONSE:

The GNWT is of the opinion that this question is out of scope of this review. Section 7.3.3 of the Terms of Reference for the Jay Project requires a discussion of impacts from the project to caribou herds that interact with the Project and a number of Project sources. The range of the Bluenose East herd is not within, or near, the Project area.

The reviewer was correct in detecting the error in the sentence provided in the Jay DAR (Vol 6, page 2-22) on the status of the Bluenose East (BNE) herd. According to GNWT calving ground photo survey results, the BNE herd declined from more than 100,000 in 2010 to around 68,000 animals in 2013. Less intensive calving ground reconnaissance surveys conducted in 2013 and 2014 suggest that the BNE herd continues to decline.

The reviewer was incorrect in stating that emergency actions were taken in response to the survey results. The GNWT did not exercise emergency powers to limit harvesting on the Bluenose East herd. Harvest management measures were put in place to implement recommendations made through the co-management process.

YKDFN 18

Comment: The Tibbett to Contwoyto winter road (TCWR) is the source of significant impacts and a particular concern to YKDFN and is effectively absent from the DAR despite the clear direction in the ToR. The Scope of Development must include all “project components, activities of structures that are required to undertake the development of the Jay kimberlite pipe that have not been previously assessed as part of the NWT Diamond Project Report of Environmental Assessment dated June 1996 or the Report of Environmental Assessment on the Proposed Development of Sable, Pigeon, and Beartooth Kimberlite Pipes February 2001”. YKDFN does not believe that either of these Reports assessed the impacts of the winter road. The discussion provided as part of the DAR relates only to direct impacts – running over animals. This is not, nor has it ever, been the primary concern. YKDFN are reasonably sure that the project will object to this request, stating that the TCWR is not part of the listed components that they were required to address. However, we call their attention back to section 3.1: “In the Developers Assessment Report, the developer is required to fully describe all required facilities and activities for the development, including any not listed in Appendix A”. Furthermore, the TCWR is explicitly included in the Geographic Scope (Section 3.4). As the TCWR has never been previously assessed and is essential for this project to proceed, it must be included in as part of the project’s submission.

Recommendation:

To

GNWT:

1. Please indicate what monitoring and management actions the GNWT requires of the TCWR joint Venture.
2. The GNWT, contrary to the majority view of Traditional Knowledge holders, has asserted that the impact of mining on caribou has been minor and have principally been associated with access provided by the winter road:
 - a. Please indicate what GNWT has done to manage access on the TCWR
 - b. Given that harvesting has been virtually eliminated over the last 5 years and the Bathurst Herd continues to dwindle, does GNWT still continue to argue that the primary driver behind the decline is aboriginal harvesting?

c. If not, what are the primary drivers behind the decline and what actions has GNWT taken

RESPONSE:

1. The TCWR, authorized by a Licence of Occupation issued originally in 1990, is inspected by Lands Inspectors 6-8 times during the Jan-March winter road season. TCWR is required to respond to requests related to the terms and conditions of the Licence of Occupation, spill management, environmental concerns, etc. during these inspections and must address any comments or recommendations made by the Inspector. Further, the Licence of Occupation requires annual reporting to the Department of Lands related to usage, traffic and operating costs of the TCWR. The Department can also request updated restoration plans for the winter road at any time during the term of the licence.

The MVLWB may have additional requirements under the terms and conditions of the Land Use Permits associated with the spur roads off of the main TCWR. These are also monitored and inspected by GNWT Department of Lands Inspectors. Reporting and monitoring requirements for these are under the jurisdiction of the MVLWB.

During the period of operation for the TCWR, GNWT also sets up the ENR/YKDFN joint check station at Gordon Lake with support from the Joint Venture, including road clearing and lodging if required. TCWR Joint Venture and GNWT exchange information throughout the year regarding wildlife sightings, road conditions, incidents, statistics including the volume of trucks, expected closure date and any other concerns that may arise during the period of operation.

ENR has been working collaboratively with communities and organizations since the early 1980s to build partnerships that would assist in the monitoring of the TCWR. Some of the monitoring activities include the above mentioned setting up of an ENR/YKDFN joint check station at Gordon Lake in order to monitor annual traffic and harvesting activities along the TCWR. ENR has hired and trained local wildlife monitors annually to help maintain a presence on the TCWR and surrounding area and also provide public education to users of the TCWR.

2a. The GNWT does not restrict public access to the TCWR; the public can use the winter road at their own risk. The TCWR is authorized via a licence of occupation, held jointly by Dominion Diamond Corporation, Diavik Diamond Mines, and DeBeers Canada Inc. The Licence of occupation does not give the Joint Venture exclusive access to the land. That only comes in the form of land tenure such as a surface lease. The TCWR and winter roads in general are publicly accessible. Companies holding leases, which are a form of land tenure, can control access to the tenured/leased land but not a winter road that is off their lease.

2b. GNWT has never argued that Aboriginal harvesting is the primary driver in the Bathurst herd's overall decline. Much of the decline is likely part of a natural cycle that has occurred many times in the past and is driven by natural factors. Between 2000 and 2006, a succession of poor years of calf recruitment in the Bathurst herd was a clear indication of a natural declining trend. When a herd drops to lower numbers and has a declining natural trend, harvest can significantly add to the decline and impede recovery, particularly if the herd is easily accessible and the harvest is large in relation to herd size (Boulanger et al. 2011).

2c. As noted above, ENR considers that a large part of the Bathurst decline since 1986 is the result of a

natural cycle that has occurred frequently in the past. These cycles are driven by natural factors and related to large-scale weather patterns like the North Atlantic Oscillation (Gunn 2003, Joly et al. 2011). For a caribou herd at relatively low numbers and with a declining trend like the Bathurst herd, active management options are generally limited to restricting human harvest and human activities on the landscape, and predator management. Weather-related factors can be monitored but are difficult to control. Actions taken to date by ENR in collaboration with co-management partners include reducing the harvest in 2010 and closing it in 2014, working toward a range management plan for the Bathurst herd and engagement in all assessment processes for development proposals in the Bathurst range, and increased incentives for wolf harvest.

LKDFN 21

Topic: Removal of IEMA board members. Directed to GNWT, Project Proponent, implicated Government of Canada departments.

Comment: The Northwest Territories government, Dominion Diamond Corporation and the federal government are removing three long-time members of the board responsible for monitoring Dominion's Ekati mine.

Given that these board members have been working with IEMA for a substantial amount of time, LKDFN finds it curious that they would be removed now, in the middle of the environmental assessment process for the Jay Project, when their input is most needed. LKDFN does not question the justification, but the timing. If it wasn't a problem for their initial appointment and the time they have served, then it should not be so pressing an issue to act now in the middle of the environmental assessment process.

Recommendation: LKDFN requests justification for the timing of this removal. LKDFN also requests that the board members be retained until the environmental assessment process for the Jay Project is completed and suitable replacements can be instated immediately afterwards.

RESPONSE:

The GNWT notes that this question is out of scope of the current environmental assessment and not related to the information put forth in the Developer's Assessment Report. Concerns about appointments to the Independent Environmental Monitoring Agency (the "Agency") should be raised in a separate venue. As outlined in the Ekati Environmental Agreement, Article 4(a)(ii), the GNWT, jointly with Canada and Dominion Diamonds, and in consultation with the Aboriginal Peoples, appoints three members to the Agency. A letter was sent to Chief Felix Lockhart on February 11, 2015 requesting any comments on our proposed appointees, and none have been received to-date.

Both the Environmental Agreement and the Agency's by-laws allow for the appointment of board members at the discretion of those making the appointments. The GNWT and its appointment partners have replaced two board members with northerners and have extended the Chair's appointment until December. The GNWT, along with its appointment partners, is committed to ensuring northern boards are comprised of members who are experienced, technically competent, and whenever possible, northern-based. Some of the Board members were replaced to better suit those priorities. Although this change will require an adjustment, the Agency should still be able to meaningfully participate in this environmental assessment. The Agency still has full quorum on its board and competent staff to support the board's work.

LKDFN 22

Topic: New Impact Benefit Agreement; References - Section 14, Directed to GNWT, Project Proponent

Comment: The Jay Pit is a new development not covered under the current IBA with LKDFN. The DAR does not mention the plan for the way forward in terms of an IBA. LKDFN is curious to know the views of the project proponent and the GNWT in terms of what is viewed as the best way forward in terms of an IBA.

Recommendation: LKDFN requests some information on planning for a new IBA, if this is the intent of the proponent. LKDFN would appreciate GNWT's views on this subject as well.

RESPONSE:

Impact Benefit Agreements (IBAs) are between the developer and the Aboriginal communities and the GNWT is not a party to those agreements.

TłıCHO 29

Topic: IR29: Changes in Board Members at the Independent Environmental Monitoring Agency, IR to the GNWT

Comment: The Agency informed the Tłıcho about changes made in the IEMA composition. The Government of the Northwest Territories, the Government of Canada and Dominion Diamond Ekati Corp. jointly appoint three of the seven Directors, following consultation with the appropriate Aboriginal governments. The three Directors jointly appointed by these parties (Bill Ross, Laura Johnston and Kim Poole) were notified on February 9, 2015 that their appointments would end in March 2015. Consultations have begun on replacements and it is expected that new appointments will be made soon.

Recommendation: Please advise on how the long term capacity that was held between these three scientists will be made up for in future agency developments. Please also advise on the thinking behind loss of three key individuals who have great respect and authority on the topic at the time of critical change occurs within the EA process for Jay Pipe. Why were all three let go at once, rather than staging the exit? How will the gutting of this expertise be made up for in future work?

RESPONSE:

The GNWT notes that this question is out of scope of the current environmental assessment and not related to the information put forth in the Developer's Assessment Report. Concerns about appointments to the Independent Environmental Monitoring Agency (the "Agency") should be raised in a separate venue. As outlined in the Ekati Environmental Agreement, Article 4(a)(ii), the GNWT, jointly with Canada and Dominion Diamonds, and in Consultation with the Aboriginal Peoples, appoints three members to the Agency. A letter was sent to Grand Chief Edward Erasmus on February 11, 2015 requesting any comments on our proposed appointees, and none have been received to-date.

The GNWT and its appointment partners have replaced two board members with northerners (effective March 13, 2015) and have extended the Chair's appointment until December 2015. Despite the change in members, the Agency should still be able to meaningfully participate in this environmental

assessment or in future work. The Agency still has full quorum on its board and competent staff to support the board's work.

Both the Environmental Agreement and the Agency's by-laws allow for the appointment of board members at the discretion of those making the appointments. The GNWT, along with its appointment partners, is committed to ensuring northern boards are comprised of members who are experienced, technically competent and, whenever possible, northern-based and we have made a change to the board's membership to better reflect that priority.

Tłı̨cho 21

Topic: IR21: Pathways with No Linkage (Barren-Ground Caribou) IR to both the GNWT and to DDC
DAR Section: 12.3.2.2.1

Comment: Local and traditional knowledge have identified dust as a concern for caribou food, particularly effects on lichens (Section 12.2.3). Construction and operation of the Project will generate air emissions such as carbon monoxide (CO), oxides of sulphur (SOx includes sulphur dioxide [SO₂]), oxides of nitrogen (NOx), particulate matter (PM_{2.5}), and total suspended particulates (TSP). Air emissions such as SOx and NOx can result from the use of fossil fuels in generators, vehicles, machinery, and explosives. There is lack of information on detailed mitigations around these concerns regarding the protection of caribou food and habitat.

Recommendation: Please provide detailed mitigation measures to decrease impacts on caribou food and surrounding habit. 22.2 IEMA has for years reviewed the caribou mitigation strategies, and in particular, Kim Poole has provided sound independent judgment and advice. How will independent review of this particularly sensitive VEC be ensured in this time of crisis?

RESPONSE:

Detailed mitigation measures for dust suppression are project specific and up to the Proponent to provide in their Wildlife and Wildlife Habitat Protection Plans and/or other related plans. Independent review and advice on barren-ground caribou and other VECs will continue to be provided by the Independent Environmental Monitoring Agency.

YKDFN 16:

Comment: The GNWT has an agreement with the project in which the project commits to providing certain benefits to the North in terms of hiring and contracting.

Recommendation: 1) Please provide an evaluation of the developers identification of addressing social and community wellness issues related to the Project
2) Please discuss proposed initiatives to address potential social impacts;
3) Please provide a discussion on any government initiatives and plans designed to mitigate the social and community wellness impacts observed since the start of diamond mining and complicated by the collapse of the Bathurst Caribou herd.

RESPONSE: A number of initiatives underway with Education, Culture and Employment (ECE) are meant to build a skilled and job ready workforce in the NWT. ECE is leading the Skills 4 Success (S4S) Initiative, which is taking a systematic look at our adult and postsecondary education, and skills training programs,

supports, and pathways. We want to improve employment success for NWT residents, close skill gaps for in-demand jobs, and more effectively respond to employer needs. This initiative is driven by labour market evidence, best practice research, and informed stakeholder input and feedback

The Education Renewal and Innovation initiative will create a change in approaches to teaching and learning. It will encourage partnerships, improve relationships between communities and schools and focus on helping children develop a strong sense of identity. It will support educators and life-long learning, renew learning experiences inside and outside the classroom and develop effective assessment tools that measure this learning.

The Canada-Northwest Territories Job Fund is an agreement between the Government of Canada and the GNWT (signed August 12, 2014) that provides funding for training. There are three streams Canada-Northwest Territories Job Grant, Employer Sponsored Training, Employment Services and Supports. Organizations can access funds to deliver community and regional activities aimed at engaging underrepresented groups in the labour market through community initiatives.

The Schools North Apprenticeship Program (SNAP) is an opportunity for high schools students in the NWT to earn credit and pursue a career in trades. Students gain valuable practical experience on an employer's worksite while continuing their high school education and preparing for post-secondary studies. SNAP provides students with the essential skills and work place experiences either, on a part-time or full times basis. SNAP students can accrue time for credits both during the school year and through summer and weekend employment.

Adult Literacy and Basic Education (ALBE) is community based programming that promotes learner success and contributes to a strong Northwest Territories. Adults require opportunities for learning that are flexible and meet their unique needs. A system of adult basic education and literacy is necessary to give adults the opportunity to increase skills and therefore increase educational and employment opportunities.

To meet the needs of NWT residents, the Department of Health and Social Services (HSS) has undertaken considerable work to improve the way we support children and families, the way we support those with addictions or mental health issues and the way we address suicide prevention in both community and professional settings.

This year HSS released a Child and Family Services action plan that focuses on reaching more youth, in all communities, as early as possible. The action plan focuses on prevention and early intervention, rather than reacting to issues after they have occurred. Additionally, to ensure that all youth who require services have equal access, the plan extends services to youth aged 16-19.

HSS also updated the existing Mental Health Action Plan to better reflect what we heard from Northerners during community consultation of the Minister's Forum on Addictions and Community Wellness. The Department will focus on promoting understanding and acceptance of mental illness and addictions, as well as increasing awareness in the NWT about mental health and addictions issues. Through community feedback and input, the Department will continue to improve programs such as the community counseling program (CCP) and support initiatives designed by communities, for communities; this support includes funding for the development of community-led Community Wellness Plans (CWP's) and On the Land programming.

YKDFN 17

Comment: The GNWT has an agreement with the project whereby they commit to providing certain benefits to the North in terms of hiring and contracting.

Recommendation: Please review the agreement and provide a year by year assessment which evaluates if the project has succeeded in meeting the commitments and promises that they agreed to. For each of those years that the project has not succeeded in meeting their promises, please indicate what enforcement, remedial actions, and punitive measures that the Government have used to try to bring the project into conformity with their commitments. Please provide an analysis of the project's predictions and a description of the confidence that the GNWT has with regard to the project meeting its future promises and commitments given their past behaviour.

RESPONSE:

The GNWT provides a publically available annual report regarding socio economic impacts of the operating diamond mines, Community and Diamonds. This report measures the socio economic impacts using previously identified and measured indicators. The raw data comes from a variety of sources including but not limited to the Government of the NWT (GNWT), the RCMP, NWT Bureau of Statistics, Statistics Canada and accompanies the report. The GNWT and the developers continue to work together to address challenges and identify areas of and methods for improvement that will create and maximize employment and education opportunities for Northerners.

Percent of person-years of employment for the Ekati Mine. Green denotes years where the commitment was met.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative
Aboriginal (% of Northern)	34%	48%	51%	49%	49%	48%	52%	52%	55%	59%	57%	53%	51%	49%	54%	56%	52%
Northern	91%	70%	64%	62%	58%	58%	65%	61%	60%	59%	49%	53%	56%	54%	52%	50%	58%
Other	9%	30%	36%	38%	42%	42%	35%	39%	40%	41%	51%	47%	44%	46%	48%	50%	42%

Data: Dominion Diamond 2013 Socio-Economic Agreement Report, pg 44 Table 11A

Under the Ekati Socio-Economic Agreement, the Northern resident employment commitment (including contractors) was 62% when operating under 18,000 tpd, and 72% when operating above 18,000 tpd. The Aboriginal employment commitment was 50% of the Northern resident employment. Based on person-years worked, the Northern resident employment target of 62% was met in five of the 16 years. This commitment has not been met since 2004, nor is it being met cumulatively over the operational lifetime of the mine. The aboriginal employment target of 50% of the northern resident employment has been met in 10 years, as well as being met cumulatively over the operational lifetime of the mine. However, given that the Northern resident employment commitment is not being met, the actual aboriginal employment numbers are lower than would be expected.

Percent of dollars spent on goods and services at the Ekati Mine. Green denotes years where the local business commitment was met.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative
Total Northern	42%	79%	82%	85%	85%	85%	78%	79%	83%	81%	83%	67%	60%	60%	67%	62%	75%
Other	58%	21%	18%	15%	15%	15%	22%	21%	17%	19%	17%	33%	40%	40%	33%	38%	25%

Data: Ekati SEA Reports

The commitment made in the Ekati SEA for business development was that at least 70% of the total annual value of goods and services purchased during operations would be from local businesses. This commitment was met for 10 years, and has been met cumulatively over the life of the mine. In the table, the green denotes years in which the stated commitment was met.

Socio-economic agreements establish a collaborative framework that allows for dialogue and creates a working- and senior-level relationship between the GNWT and Ekati. Through recent initiatives such as the 2014 employee survey conducted by the Bureau of Statistics at all three mines, changes to Education, Culture and Employment programming such as the Schools North Apprenticeship Program which provides an opportunity for high schools students in the NWT to earn credit and pursue a career in trades, and initiatives within Health and Social Services, such as its Mental Health Action Plan, the GNWT is confident that collaboration with Ekati will continue to benefit NWT residents.