Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Socio-economic Commitments by the Developer and Contractors

EIS Section: Chapter 12 pp. 107, 243

Terms of Reference Section: 8 (Deliverables)

Preamble:

It is difficult for the Tłįchǫ Government to assess the comprehensiveness of all socio-economic commitments, given the length of Chapter 12 and associated Appendices, and the wide spread mention of the developer's commitments. In some cases it is difficult to assess the clarity of individual commitments by the developer, or whether a commitment exists at all. For example, the Tłįchǫ Government is concerned whenever it sees statements such as the following on page 12-109:

"Incentives may also be provided to employees interested in volunteering their time for social or cultural programs or activities in their home communities."

This language leaves the question of whether this is a set plan, program or policy of the developer, or an interesting idea it may consider under an unknown set of conditions. Clarification is a necessity on this and any other similarly worded 'commitments'.

Page 12-243 (Table 12.7-4) identifies a developer commitment as "verify that hiring commitments from contractors are met". It is not clear what the full extent of those expected commitments are.

- 18.1 Please provide a table listing all of the developer's commitments related to social, economic and cultural mitigation and monitoring, along with a column identifying where in the text of the EIS this information and the assessment it is based on can be found.
- 18.2 Please reconsider and clarify any 'commitments' that leave unclear whether and how the proposed plan, policy or other action would be implemented.
- 18.3 Please identify what 'hiring commitments' and other human resource management commitments contractors are going to be expected to adhere to, how verification would occur, and what actions would be implemented if contractors do not meet their hiring or any other commitments.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: SEIA Methods, including Impact Identification and Significance Estimation

EIS Section: Chapter 12 pp. 122, 225

Terms of Reference Section: 3.2 (Methods)

Preamble:

Section 12.5.7.2 describes "determination" of significance by the developer. This is not accepted terminology for EIA in the Mackenzie Valley. Determination of significance is a process reserved for the Review Board during environmental assessment, and the Review Panel during an environmental impact review. Regardless, the Tłįchǫ Government has some concerns about the way in which the developer's significance 'estimation' has thus far been conducted.

The Tłįchǫ Government holds that impacts on its citizens cannot be estimated with any confidence without active involvement of the people themselves. This is especially true in the social and cultural realms. As the EIS states at page 12-136, "Familiarization with the socio-economic environment and, if possible, with the socio-economic impacts of other mines in the LSA..." is essential, yet the engagement of residents of the Tłįchǫ portion of the LSA is not evident. The EIS shows little if any inputs from Tłįchǫ citizens in actual impact identification or significance estimation across any impact assessment realm. This is of high concern as it is symptomatic of a lack of meaningful incorporation of Aboriginal perspectives throughout the EIS.

Also of high concern is the 'translation' of traditional knowledge inputs by non-Tłįchǫ citizens. It is a well-established principle that traditional knowledge is held by culture holders themselves, may not be amenable to translation into discrete written documents, and should not be taken out of context by non culture holders. The developer is also advised that the Tłįchǫ Government does not accept terminology such as that used on page 12-225, where the developer states "The project will not have a negative impact on social disparity, cost of living, and social problems." The forward-looking language of environmental impact assessment is that of likelihood and probability, not certainty.

- 19.1 At page 12-122, the developer states that impact pathways were assessed using scientific and traditional knowledge. Please identify which traditional knowledge holders were involved in the identification of impact pathways that may occur from the proposed development or, if Tłįchǫ citizens were not involved, who conducted this impact identification exercise.
- 19.2 Please identify and provide updated revisions to any statements in Section 12 of the EIS where definitive statements (such as that on page 12-225) should be replaced by statements highlighting likely outcomes.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Temporal Scope of Assessment EIS Section: Chapter 12 pp. 15, 59, 276

Terms of Reference Section: 2.2 (Scope of Review)

Preamble:

Mining operations are planned for 11 years (p. 12-15). At page 12-276, the developer states that project interim closure is expected to be completed in 2027. It is important for the level of certainty around mine life to be established during the EA. If operations last for a shorter or longer than original expected time period, this would have implications on the human environment in a variety of potential ways.

- 20.1 Please identify whether the originally predicted mine life spans for Ekati, Diavik, or Snap Lake (from their Application materials) have been extended or reduced, for what reasons.
- 20.2 Please identify what conditions could cause an increase or decrease to the mine life at Gahcho Kue, and the degree of certainty the developer has in the currently identified mine life span.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Socio-economic baseline - General EIS Section: Chapter 12 pp. 26-7, 37, 47, 66

Terms of Reference Section: n/a

Preamble:

Some of the socio-economic baseline material appears dated in comparison with the release date of the EIS. For example, the Tłįchǫ Government notes that at least the 2009 version of the *Communities and Diamonds* report is now publicly available¹ in addition to the 1999 to 2008 reports cited at page 12-27. This is of particular importance because DBCI's own Snap Lake operations are relatively recent and if dated information is used in the EIS, this could mask changes caused or contributed to by this newer development.

In addition, we believe more recent information than 2002 on causes of death in the NWT is not available (p. 12-47), or 2006 on tourism data (p.12-66). The Tłįchǫ Government would ask the developer to provide addendums to the EIS where newer information is available. Please note that the material highlighted here is just examples; the onus is on the developer to reconsider its existing SEIA data in a comprehensive way.

The Tłįchǫ Government is also concerned with statements made on the basis of aggregate data at the NWT level that do not reflect conditions in the Tłįchǫ region. For example, at page 12-37, the developer states "During the past decade there has been an increase in the number of students graduating from high school in the NWT", and elsewhere in the document similar statements are made about improvements in graduation rates. Such statements mask significant issues in places like the Tłįchǫ, where in fact the percentage of population 15 years or older who have completed high school was lower in 2009 than it was in 1994, and shows no sign of a significant upward shift in recent years². For particularly important criteria like education and employment, the Tłįchǫ Government requests the developer revisit, update, and wherever possible dis-aggregate data down to the regional and local levels.

Page 12-26 identifies that between 2007 and 2010, qualitative data collection occurred. It is unclear to what degree Tłıcho citizens, government officials, service providers or business people, among other people with knowledge of issues relating to the diamond mining sector and socio-economic conditions were involved.

- 21.1 Please identify when data collection on the human environment was completed for the EIS.
- 21.2 Please update the EIS with addendums showing more recent data on socio-economic conditions, including but not limited to the 2009 or any more recent version of the Communities and Diamonds reports.

¹ http://www.iti.gov.nt.ca/publications/2010/diamonds/2009CommunitiesDiamondsReport 2010-10-22.pdf.

² As reported in SENES Consultants Limited's 2010 Northwest Territories Environmental Audit Status of the Environment Report, Section 8, available from AANDC.

- 21.3 Please present the most up-to-date data possible on relevant socio-economic and cultural practice indicators, including but not limited to education and employment indices, and ensure they are disaggregated down to the smallest possible geographic scopes.
- 21.4 Please identify all setting in which either qualitative or quantitative data was collected from Tłįchǫ citizens, Tłįchǫ Government officials, Tłįchǫ region service providers, or Tłįchǫ business people.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Developer's Engagement Process, Practices and Plans

EIS Section: Section 12, pp. 125, 129, 133, 198, 305

Terms of Reference Section: 5.3.5

Preamble:

At page 12-305 of the EIS, De Beers suggests the GK Panel will drive the consultation and engagement on this proposed mine through its official EIR process. This raises questions about the adequacy of the limited face-to-face forums envisioned in the Review Panel's Work Plan as well as about the degree of engagement that has been undertaken by the developer on this file since the project was originally planned.

The apparent lack of meaningful consultation also raises questions as to whether the EIS was developed in such as way that it was informed by active engagement with or involvement in the assessment of, Tłıcho citizens, officials and organizations. Organizations such as the Tłլcho Community Services Agency, among several others, have important information without which a robust and defensible picture of the socio-economic baseline, trends, and causes of change should not be predicted.

The Tłįchǫ Government also notes that in some areas, like family and community cohesion and social disparity, the developer had trouble pinning down what the issues were. For example, at page 12-198, the developer states:

"Neither the Terms of Reference on this key line of inquiry [family and community cohesion] nor the community consultation shed much light on the exact nature of the concerns".

- 22.1 Please identify which Tłįchǫ organizations were consulted during the development of the EIS, when and how.
- 22.2 Please identify which Tł₁cho citizens, representatives, or other Tł₂cho-related individuals were included among the business interviews and the expert subject matter interviews identified at pp. 12-125 and 12-129.
- 22.3 At page 12-133, sources for proposed mitigation include "suggestions from communities". Please identify all of the suggestions from Tłįcho communities for mitigation and monitoring mechanisms to date, when and where they were raised, and how they have been incorporated into project commitments.
- 22.4 Please identify:
- 22.5 Whether DBCI asked the Review Panel for clarification of any socio-economic elements of the ToR, and how any response was integrated into subsequent data collection and assessment.
- 22.6 At what community consultation sessions DBCI sought clarification on the scope of any socioeconomic issues, what those issues were, and how attendees responded.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Incorporation of Northern Aboriginal socio-economic and cultural values, concerns and valued components

EIS Section: Section 12, pp. 24, 40, 48, 57, 115-7, 193, 197-8, 204

Terms of Reference Section: 3.2.4 (Valued Components)

Preamble:

Chapter 12 includes a section on "The right way to live" (see p. 12-198). There is, however, only very limited evidence that the developer attempted to determine what values, norms and laws guide this "right way to live" for Tłįcho people. A search through the entire Section 12 of the EIS finds no mention of the term "Dene Laws". The absence of meaningful consideration of these fundamental cultural values and guiding principles to everyday living among a large proportion of the potentially-affected population in the developer's assessment of socio-economic and cultural baseline and and trends and absence of use of these values as a filter when assessing potential impacts of the proposed development on wellbeing and quality of life is troubling.

The developer appears to have relied upon its own "translation" of the requirements of the Terms of Reference to guide what criteria and indicators it used, rather than actively engaging culture holders in this exercise.

In addition, there is little evidence in this section or any other in the EIS that the developer asked basic questions of Tłįchǫ citizens or representatives such as "How has the diamond mining economy changed your lives?", "What concerns you about this project and engagement in the diamond mining economy?", or "What can we work together on to maximize benefits and avoid impacts in the future"?

The Tłįchǫ Government also noted a lack of reference in the EIS to documents providing a more community-centred understanding of the human environment in which GK Diamond mine is proposed.

- 23.1 Please identify which documents or engagement results were used to identify Tłįchǫ "societal goals" (p. 12-115) or to define from a Dene perspective "the right way to live" or appropriate indicators, and whether any Tłįchǫ citizens or representatives were asked to identify relevant documents. Please identify whether and how the developer considered the incorporation of Dene Laws and values, goal statements, plans or other visioning documents in the identification of valued components, assessment and measurement endpoints.
- 23.2 Please identify whether, when, and how Tłįcho organizations and individuals were involved in the determination or vetting of appropriate valued components, criteria and indicators of what matters most to Tłįcho citizens i.e., the determination of Tłįcho-specific 'assessment endpoints' (p12-116).
- 23.3 Please identify whether it is the developer's contention that all interested and potentially-affected parties share all of the assessment and measurement endpoints identified in Table 12.5-1, and that the list is reasonably comprehensive.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Social Inclusion and Economic Growth

EIS Section: Chapter 12, pp. 218-220 Terms of Reference Section: 4.1.5; 4.1.6

Preamble:

There is a long, economic growth focused discussion on "social inclusion" around pages 12-218 to 220, that provides little in the way of data but does express a very specific and one-sided perspective on what creates and constitutes social inclusion. This portion of the document adds little value to the assessment itself and is both borderline offensive and extremely troubling to read. It states, for example:

"Social inclusion is a somewhat confusing term since it implies a purely social definition when in fact it is largely an economic concern. It is from economic growth that society gains the freedom to choose its social, environmental and even political path. Without the proceeds from economic growth these freedoms disappear." (p. 12-218)

"Economic growth is necessary because it provides society with choices regarding the means to improve human development." (p. 12-219)

While noting on p. 12-219 that there are actually examples where economic growth was achieved at the cost of greater inequality, loss of cultural identity, and over-consumption of resources needed by future generations, the section falls back later to the following statement:

"Experience elsewhere indicates that those who benefit from the economic growth gain a vested interest in seeing it continue... These 'champions' of the new economy will make choices and promote policies that ensure the preservation of their new wealth and that of the economy". (p.12-220)

Somehow, it is estimated that the actions of these self-interested 'champions' will "reduce social disparity and improve social inclusion" and "result in significant political and social progress". The means by which this will occur are unclear from the passage.

Frankly, the material throughout the sub-section on Creating Social Inclusion (pp. 218-220), as well as the Effects Analysis in section 12.6.3.3.2, is jarring, wildly different from the rest of the EIS in tone, almost completely divorced from the Dene cultural context, and appears to be largely opinion rather than useful analysis. It is easily the most disconcerting portion of the EIS.

This economic growth presumption reflects a deeply troubling misreading or ignorance of Tłįchǫ – indeed Dene – history, economic mode of life and culture. It does not respect or reflect many of the fundamental Dene Laws or mode of life on the land. It is important for the Tłįchǫ Government and people to better understand whether DBCI stands behind this ill-suited perspective or is willing to work with Dene people with due respect to their overarching values and worldview. It is also possibly

unrealistic to expect that the main drivers for economic growth currently – non-renewable resource extraction – will be maintainable into the future. And this type of economic growth may also bring with it negative consequences for the previously sustainable Dene mode of life.

- 24.1 Upon further reflection, does DBCI stand behind the assertions made between pp.218-221 of the EIS?
- 24.2 Are the statements in the identified portion of the EIS consistent with DBCI's sustainability policy?
- 24.3 Were any Aboriginal groups consulted when developing DBCl's definition of and prerequisites for "social inclusion"?
- Does DBCI suggest that communities and cultures must achieve economic growth prior to asserting, gaining, or maintaining social, economic and political freedoms?
- 24.5 If DBCI stands by this material, please indicate in a more comprehensible manner the pathways by which economic growth is likely to reduce social disparity and improve social inclusion among the Aboriginal communities in the LSA.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Family and Community Cohesion and Disparity

EIS Section: Chapter 12 pp. 18, 19, 121, 198, 199, 203, 206-9, 215, 217-8, 220-1, 225,

Terms of Reference Section: 4.1.5; 4.1.6

Preamble:

At page 12-19, the developer estimates that "impacts from the project on family and community cohesion and social disparity are expected to be mainly positive and not significant".

At page 12-225, the developer states unequivocally:

"Although not directly linked to the Project, De Beers is committed to addressing some of the root causes of social disparity".

The developer does not convincingly support either of the above statements in Section 12. The developer identifies that in some communities, including Tłįchǫ communities, there is anecdotal evidence that in general volunteering is reducing (p. 12-45), and that "reciprocity within the community is narrowing" (p.12-198), and provides specific evidence of a decline in volunteer firefighters. In fact, a good portion of p. 12-199 refers to negative effects of rotational work and increased incomes on communal cohesion.

The developer goes on to make additional statements referring to "conventional indicators" and "standard measures" of family and community cohesion, and how they support a finding of a positive contribution of the development to social cohesion. It is difficult to understand the logic behind finding a specific impact direction (beneficial/positive) in light of a variety of contrasting evidence depending on the indicators used.

It is also unclear whether the developer looked deeper into social disparity issues that can be hidden behind macro-economic statistics related to average income, such as increasing disparities between those deeply engaged in the wage economy and those less likely to take advantage – for example women, elders, and dedicated traditional harvesters. As noted at page 12-208 of the EIS, approximately one in four Tłįchǫ families still have incomes lower than \$25,000, and increasing social disparity between them and mine workers are of concern to the Tłįchǫ Government in terms of community cohesion and the effects of the creation of "haves" and "have nots" on close knit Tłįchǫ communities.

- 1. In DBCI's opinion, what are the most important criteria and indicators of social cohesion? Are they the same in Aboriginal vs. non-Aboriginal communities?
- 2. The developer states at p. 12-198 that "by all standard measures, family and community cohesion should be improving", referring to statistics that mine employees are making good lifestyle choices (such as moderating alcohol intake and participating in traditional activities). Please identify:

- a. How it was determined that moderate alcohol intake and traditional activities constitute "all standard measures" of family and community cohesion or, if there are other indicators that support this assertion, please provide them.
- b. All the data sources the developer relied on in making the above-noted estimation about family and community cohesion.
- **3.** At page 12-204 of the EIS, it is stated that "by all conventional indicators..." family and community cohesion is improving. The document earlier refers to a correlation between the diamond mining economy and increasing proportions of single family dwellings.
 - a. How are the statement noted reconciled to increasing proportions of single family dwellings?
 - b. What are conventional indicators of family and community cohesion?
 - c. Whose conventions are being used? Are they reflective of Dene values and criteria for community cohesion?

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Criteria and Indicators of Community Well-being

EIS Section: Chapter 12, section 12.3.4.4.6

Terms of Reference Section: n/a

Preamble:

No mention is made in Section 12 to the Determinants of Health and Population Health conceptual models promoted by Health Canada (http://www.phac-aspc.gc.ca/ph-sp/). These models suggest that there are a lot more factors than "economic growth" (see pages 12-218-220) that determine individual and community well-being. It is not clear whether the developer considered culture group specific criteria and indicators of well-being and quality of life.

- 1. Were the same criteria and indicators of community well-being and quality of life used to assess potential impacts of the proposed development on different culture groups and community types? If so, how does the developer justify this as an appropriate approach?
- 2. Please identify who, how and when Tłįcho representatives and citizens were engaged in order to identify relevant indicators of community well-being, or any documents related to the Tłįcho region that were used to identify culture-group specific criteria and indicators of community well-being.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Culture – General

EIS Section: Chapter 12 pp. 95, 200, 285-6, 294, 299, 302, 341, 351-2

Terms of Reference Section: 5.3.4

Requests:

1. Please identify all methods and instances, other than TK studies, by which primary data on Tłycho culture was collected.

- 2. Please identify all documents reviewed in the collection of cultural information about Tłįcho citizens, laws and values.
- **3.** At page 12-200, the developer states "De Beers will also continue to support communities with their cultural programming". Please identify:
 - a. What specific Tłįchǫ cultural programs De Beers has supported to date.
 - b. What level of financial support De Beers has provided for cultural programs to date.
- **4.** Will DBCI commit to contribute to initiatives to protect the values to "keep the story on the land alive" of important cultural areas identified by the Tłįchǫ in proximity to the Gahcho Kue proposed mine site?
 - a. How and when will engagement on areas of cultural importance to the Tłįchǫ be initiated?

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Accommodation of Traditional Culture at the Minesite

EIS Section: Chapter 12 pp. 105, 108, 110-3, 199, 201

Terms of Reference Section: 5.3.4

Preamble:

In the Tłįchǫ Government's experience, one of the major adverse influences on Tłįchǫ employee retention at various diamond mine sites has been cross-cultural conflict and misunderstandings, and lack of flexibility with respect to Dene cultural priorities among mine management.

In addition, cultural accommodation in the form of respectful treatment of Dene culture at the minesite may prove to make the work environment more inviting to Dene workers.

- 1. Please identify what cultural accommodation or cross-cultural issues have been raised by Dene (where possible, Tłįchǫ) workers at the Snap Lake mine site, which are most common and most serious, how this information is gathered, and how DBCI has reacted to the raising of these concerns.
- **2.** Please identify any sources other than DBCl's own direct experience that were examined when looking at minesite cultural accommodation issues.
- **3.** Please provide additional clarity to what specific commitments the developer is making, and limits to same, when at page 12-105 it is stated that "Traditional pursuits of Aboriginal employees will be accommodated within work schedules, in balance with the operational requirements of the Project where practicable and with appropriate notice".
- **4.** Please provide DBCl's policy toward communal bereavement leave and how the cultural responsibilities of several workers from the same community would be accommodated in a communal bereavement scenario.
- **5.** Please identify what specific type of programming for cross-cultural awareness is and will be provided to incoming workers and management (i.e., does the training focus on actual issues that may emerge at the worksite?).
- **6.** Please identify DBCI's planned complaint, grievance and dispute resolution mechanisms for conflicts that occur at the minesite between workers and between workers and management, including any specific plans, policies and programs for cross-cultural conflict resolution.
- 7. The Tłįcho Government has seen recent success in setting up a "listening post" where concerns of Tłįcho mineworkers can be raised directly with a Tłįcho Government representative, who can

then act as an advocate or intermediary between the worker and DBCI. Does DBCI have plans to incorporate such a system at Gahcho Kue?

- **8.** Please identify whether DBCI has plans, policies or commitments to any of the following cultural accommodation measures at the mine site:
 - a. Increased Dene language signage.
 - b. Incorporation of additional Dene names into the industrial complex.
 - c. Increased visits from elders and family members of Dene mine workers (it is unclear who would be invited to attend the minesite on page 12-113, section 12.4.16).

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Traditional Economy

EIS Section: Chapter 12 pp. 19, 38-9, 102, 186-7, 192, 203, 220, 293, 339

Terms of Reference Section: 4.1.7 (Long term social, cultural and economic effects)

Preamble:

The developer identifies that traditional cultural practices of northern Aboriginal mine workers continue, which was not an expected outcome in early EIA predictions for previous diamond mines (e.g., at p. 12-186). If this is true, this is beneficial for cultural retention. However, it is unclear whether existing information sources delve deeper than asking merely whether people still hunt and fish. Practice of the traditional economy is a complex set of activities, which a simple yes or no answer to a single question cannot examine in any depth. More information on the type, frequency, success, and other factors of traditional practices would be required before making any definitive statements about the effects working in the diamond sector has or hasn't had on traditional practices.

As the developer notes at page 12-19, while the number of people who say they hunt and fish has not recently declined, "The reliance on hunting and fishing as a source of food has decreased with the growth of the formal economy and greater access to store-supplied goods." This raises questions not only about the intensity of harvesting but also about Aboriginal health-related issues given the different qualities of country vs. store-bought food, and associated fitness, recreation, and cultural benefits of country food production. It would also seem important to the determination of how important an economic contributor country food and the land-based economy is to resident Aboriginal people.

At page 12-220, the developer states that "history... shows that access to the wage economy has resulted in a revival of traditional skills (Hill et al. 1998)." The Tłįchǫ Government has not reviewed this single reference but is aware of a variety of other documented evidence, some of which supports the beneficial link between the wage and traditional economies, and some of which finds adverse outcomes. It is clearly context dependent and not worthy of definitive statements like the one noted above. While the Tłįchǫ Government will likely bring forward additional balanced evidence in its own submissions, we would like the developer to provide a more comprehensive literature review on this important subject.

- Please provide a copy of the data collected on mine worker practice of traditional culture in any studies the developer has reviewed, such as the studies referred to at page 12-339 (section 12.8.5) and at page 120-190, and please discuss the strengths and limitations of the data, such as:
 - a. Whether surveys of mine workers ask about harvesting levels, number of days spent on the land (in total, and per trip), areas utilized, and/or distance travelled.
 - b. Whether Aboriginal workers and northern non-Aboriginal workers were separated out from non-Aboriginal workers in the analysis, and more details on northern Aboriginal worker results.
 - c. Whether data was collected on levels of sharing of food among community members of

harvested materials.

- 2. At p. 12-199, the EIS states that while taking care of your own family has become more important than communal sharing, "some mine employees do share the largess of the hunt especially with elders". Please identify what source or sources this conclusion is drawn from and place it/them on the public record.
- 3. Please identify any discussions with Tłįchǫ citizens or representatives the developer has had related to the issue of the quality and quantity of traditional harvesting, and how this may have changed in recent years.
- 4. Please identify and summarize the results of any surveys or other research that has attempted to quantify the value of country food production among communities in the LSA.
- 5. Please identify all sources the developer reviewed when looking at the relationship between increased wage economic activity and traditional Aboriginal harvesting practices, and provide a summary of the results of these studies.
- 6. Please identify whether and how the developer considered research into the population health implications of reduced reliance on country food for northern Aboriginal peoples, and whether "greater consumption of store-bought food" (p.12-102) was considered as a potential impact pathway associated with the proposed development.
- 7. It is not clear which culture groups and communities are represented by the areas identified in Figure 12.7-7 (Historical Traplines, Historical Camps/Cabins and Recent Traplines). Please clarify and if Tłįcho traditional land use patterns are not described, please provide additional data on this or a rationale for not including it.
- 8. Please identify whether and how the developer suggests traditional harvesting data among the mine worker cohort should be collected in future monitoring systems, and what information would be valuable to better understand the relationship between mining jobs and traditional cultural practices.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Lessons Learned from Other Diamond Mines EIS Section: Chapter 12 pp. 20, 99, 103, 133, 190, 356

Terms of Reference Section: 4.1.5

Preamble:

The developer identifies in a couple of locations surveys that separate out diamond mine workers from the overall populace. With the diamond mining sector resident in the NWT for the better part of two decades, the Tłįchǫ Government would hope that enough data has been collected to distinguish socioeconomic characteristics of diamond mine workers in comparison with the NWT in general and the Tłįchǫ region in particular. In order to make an independent determination of the comprehensiveness of available survey and other information where diamond miners are separated from the general population, the Tłįchǫ Government requires additional information.

Given that DBCI already has an existing diamond mine in the NWT (Snap Lake) and another in northern Ontario in an area primarily populated by Aboriginal people. These two established ventures provide ideal case studies for socio-economic effects, mitigation and monitoring for the currently proposed development. The Tłįchǫ Government is seeking more information from the developer on socio-economic issues and outcomes from the Snap Lake and Victor mines.

- Please identify the commitments made and measures required on socio-economic and cultural issues by DBCI for the Snap Lake and Victor diamond mines, and report on whether and how these commitments have been adhered to by DBCI, and any issues with their implementation and effectiveness.
- 2. Please identify all efforts made by the developer to understand worker, family and home community issues for Aboriginal workers at its Snap Lake and Victor diamond mines, such as surveys or interviews, that were used to help understand social, economic and cultural issues that might be faced at the proposed Gahcho Kue development.
- 3. Please identify and place on the public record all available research over the past (approximately) 15 years which focuses on the NWT diamond mine worker cohort, and provide a more robust demographic portrait of the NWT diamond mine worker cohort, by itself and in comparison to the NWT population as whole (e.g., age, sex, education and training profile, community and culture group of origin, current residence, average years of service, annual wage, etc.).
- 4. Please identify, place on the public record, and provide an analysis of, any research identifying similarities and differences and changes over time between northern Aboriginal diamond mine workers, non-Aboriginal resident diamond mine workers, and non-resident diamond mine workers in the NWT diamond mining sector.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Women in Workforce

EIS Section: Chapter 12 pp. 16, 70, 98, 107, 216

Terms of Reference Section: 5.3.1

Preamble:

The developer place some emphasis in the EIS on challenges to women entering the diamond mining workforce and mitigation proposed to overcome these barriers. However, information seems sparse in the document on the actual experience of the work environment for female mine workers (existing and previous), retention and advancement rates, and other key considerations that would add to an understanding of barriers and how they can be overcome.

- 1. Please provide additional information on the following, with special emphasis on the existing DBCI Snap Lake mine:
 - a. How many women work in the NWT diamond mining sector.
 - b. What types of jobs they have.
 - c. Issues current and former female mine workers have raised with their work and home environment.
 - d. Rates of turnover among female employees versus male employees, and issues raised by outgoing female mine workers that have led to them leaving the workforce.
- Where gaps in available information about female mineworkers exist, please identify how the developer's proposed monitoring system for the Gahcho Kue Mine will attempt to overcome these limitations.
- 3. Please identify how results of female participation initiatives such as those identified at page 12-107 will be reported on and assessed for effectiveness by the developer to interested parties.
- 4. At page 12-216, the developer notes that among other factors, a lack of child care support is a constraining factor for women entering the diamond mining workforce. The EIS at page 12-70 also identifies that community child care placements are effectively already 100% full at this time. Please identify any plans, policies or programs the developer has or suggests other parties consider to overcome this barrier to employment for women.
- 5. Please identify which groups the developer has engaged with on this topic (e.g., any groups like the NWT Status of Women Councils, Mines Training Society), and what suggestions for improvement have been provided by these groups.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Expected Employee Numbers

EIS Section: Chapter 12 pp. 20, 56, 74, 99, 102, 142, 144, 178, 245, 327, 356;

Terms of Reference Section: 5.3.1

Preamble:

At page 12-327, the EIS estimates 137 of 365 direct operations level jobs will be held by "locals" (NWT residents), and that all told, an estimated 554 full-time equivalent jobs will be created annually during operations (page 12-20). It is estimated that 26.5% of the construction workforce will be "local". Both estimates of "local" employment ratio appear to be based solely on the percentage of "local" employment that occurred or is currently occurring at the Snap Lake Mine. If the developer has conducted the required assessment of the local, regional and NWT-wide labour pools identified in section 5.3.1 of the ToR, a qualified estimated of the percentage of the workforce that is likely to come from different regions and demographics would be possible. No such estimate is provided in the EIS.

- 1. Please identify whether original predictions of expected worker numbers at the existing three NWT mines (for both construction and operations) were accurate, low or high, and what lessons learned from expected versus actual employee numbers were incorporated into the predictions of expected workforce for the Gahcho Kue mine.
- 2. Please provide a breakdown of how many of the developer's current employees at Snap Lake and at the Gahcho Kue site are northern Aboriginal, Tłıcho citizens, and residents of each Tłıcho community. If this data is not being collected, please identify why not and whether the developer is committed to collecting it in the future.
- 3. Given increasing demands on employment from other sources and concerns raised that most of the available mine-ready "local" labour pool is already gainfully employed elsewhere (page 12-237), both issues raised by the developer in the EIS, please identify how DBCI justifies its estimate that about 37% of direct operations and 26.5% of direct construction workforce will come from the NWT. If these estimates are not justified, please reconsider them in light of the above-noted factors.
- 4. Please break down the estimated construction and operations "local" workforce into northern Aboriginal and northern non-Aboriginal.
- 5. Please identify, based on NWT Bureau of Statistics data and any additional labour pool analysis conducted by the developer, what the size of the current excess labour pool is in the following areas:
 - a. The NWT
 - b. The North Slave and South Slave regions
 - c. At the individual community level within these regions

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Tłįchǫ Workforce and Barriers to Employment

EIS Section: Chapter 12 pp. 31, 36, 97, 108, 151, 155, 175, 221, 224, 230, 234, 237-8, 328

Terms of Reference Section: 5.3.1

Preamble:

The developer identifies several barriers to employment in the NWT in the EIS (e.g., at page 12-36).

The Tłįchǫ Government is very concerned about the potential for diminishing employment prospects and declining employment numbers from the diamond mining sector for Tłįchǫ citizens. The EIS does little to assuage those concerns, given that it does not identify changes over time in the number of Tłįchǫ citizens or even northern Aboriginals in the the NWT diamond mining sector. The EIS thus fails to identify trends in this critical indicator of how much benefit the mining sector brings against which to assess environmental impact tradeoffs the Tłįchǫ citizenry faces with industrial development on its traditional land base.

Despite the fact the developer indicates that "education and skill levels of NWT residents have greatly improved over the past 10 to 15 years" (page 12-99), Tłįchǫ graduation levels remain low, a major barrier to employment in the mining sector. The creation of additional hurdles (e.g., credit checks) would likely exacerbate these existing barriers and lead to lower Tłįchǫ engagement in the diamond mining economy.

- 1. Is De Beers aware of any issues raised by communities, Aboriginal workers, or Aboriginal governments about gaps in the recruitment, retention and advancement of northern Aboriginal workers? Currently, how would such issues be raised at Snap Lake for example; what mechanisms are in place for organizations like the Tłįchǫ Government to raise issues on behalf of its citizens?
- 2. The EIS (page 12-108) identifies that "credit checks" will be included in the screening process for potential workers, alongside criminal record checks. Please identify on what basis this is justified and enumerate what effect this may have on northern Aboriginal employment if implemented.
- 3. At page 12-155, Table 12.6-8 identifies reasons NWT residents gave in 2004 for not looking for employment. Please identify:
 - a. Whether there is any more recent data of a similar nature available.
 - b. Whether Table 12.6-8 refers only to Aboriginal people or all NWT residents, and if the latter, whether Aboriginal-specific data is available.
- 4. At page 12-175, the EIS commits the developer to "identifying opportunities for gathering information and addressing barriers to successful employment". Please clarify:
 - a. What "opportunities" have been identified from DBCI's Snap Lake experience.
 - b. What specific plans, policies and programs for gathering information on employment

barriers DBCI will commit to, and given the importance of prior preparation of a mine ready workforce, when these systems will be implemented.

5. The developer raises but does not delve into the fact that the NWT labour force is limited due to structural and frictional unemployment issues (page 12-234). Please identify with a more detailed labour pool analysis how these unemployment issues affect the ability of primarily Aboriginal communities and the Tłįchǫ region to engage in the diamond mining sector in general, and the Gahcho Kue Mine in particular.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Education and Training Needs and Developer's Initiatives

EIS Section: Chapter 12 pp. 36, 72, 98-100, 109, 118, 150, 228, 234-5, 237-8, 240, 355

Terms of Reference Section: 5.3.1

Preamble:

Section 5.3.1 of the ToR requires the developer to "assess the current capacity of training programs and of Aboriginal and northern people to engage in these training programs. The developer is encouraged to present its views on how the development can address the issue in conjunction with existing or possible future government programs.

In several places (e.g., at page 12-36), the EIS refers to an existing trained labour pool gap facing the NWT, of as many as 5000 skilled, semi-skilled and professional workers. The developer also makes some rather vague statements about training specific to the project such as:

"The Project requires a training program to address the shortage of trades people in the NWT. Maximizing skills development for employees required for the Project cannot be predicted with high certainty. How many people will need to be trained or how effective the training will be is unknown." (page 12-238)

In the opinion of the Tłącho Government, the developer can and should – based on requirements of the ToR, identify with a great deal more specificity what type of training should be focused on and how many NWT people should be trained in order to maximize "local" engagement in the Gahcho Kue Project. This can be accomplished by comparing Gahcho Kue's construction stage and operations stage labour requirements against the skills available in the existing NWT labour pool and existing training programs available in the NWT or available in other jurisdictions to NWT residents.

The Tłįchǫ Government recognizes that regional, territorial and federal governments all also have a role to play in development and implementation of successful training initiatives and will likely ask for additional information from the territorial and federal governments on this issue during the course of the environmental impact review.

- 1. Please identify how much funding DBCI has provided toward MTS and other training programs in the NWT annually and in total to date, and what those training programs have focused on.
- Please identify how many "mine ready" workers MTS has generated, annual training completion
 rates broken down between northern Aboriginal and northern non-Aboriginal trainees, and any
 issues identified with MTS' ability to supply the required workforce to date and initiatives to
 overcome any gaps.
- 3. Please identify any recommendations DBCI has made to the federal or territorial government or the MTS or other training programs, related to priority training needs for the NWT workforce to

be "mine ready".

- 4. At page 12-109, the developer identifies that it has developed a specific training approach for its northern operations, which includes "conducting a training needs assessment to identify existing educational and/or skill levels of Aboriginal community members and other NWT residents who apply for positions". Please identify how often this type of training needs assessment has been conducted by DBCI and results of this/these training needs assessment(s) to date, specifically related to educational and/or skill levels of Aboriginal community members.
- 5. Please identify why there are not measurement endpoints for employment and training identified in Table 12.5-1 at page 12-118. Is it not essential to determining the impacts of the project and success of mitigation to define indicators to measure and goals (e.g., increased northern Aboriginal tradespeople) against which progress can be measured?

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Aboriginal Hiring Targets

EIS Section: Chapter 12 pp. 60, 106, 239, 243, 245

Terms of Reference Section: Table 7.5 (Community Wellness Issues)

Preamble:

Given the mine-ready workforce shortages expected in the NWT in coming years (as reported at pages 12-98, 150, and 242 of the EIS), it would seem to the Tłįchǫ Government that increased focus on maximizing the training and hiring of Aboriginal northerners who represent a large and growing portion of the NWT's population would be a primary goal of the GNWT and all would-be mine developers in the NWT. While this goal is evident in the terminology of the EIS, the developer does not identify any specific northern Aboriginal hiring targets. This is disconcerting to the Tłįchǫ Government because it effectively means that the developer does not want to be held accountable to meeting a specified goal for northern Aboriginal hiring.

- 1. Please summarize available data on the demographic structure of the NWT diamond mine workforce over time in order to give parties a sense of how (for example) the percentage of northern Aboriginals in the overall workforce has changed over time.
- 2. Please identify why the developer does not provide a specific northern Aboriginal hiring target in the EIS.
- 3. Please identify how, in the absence of a northern Aboriginal hiring target:
 - a. The developer would be accountable to northern Aboriginal groups and the GNWT on the issue of northern Aboriginal recruitment and retention.
 - b. The developer and other parties would determine the success or failure of initiatives to maximize northern Aboriginal hiring.
- 4. Please identify what percentage of GK mine workers is expected to be northern Aboriginals, including identification of what assumptions the prediction is based on.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Mining Workforce – Direct vs. Contractor

EIS Section: Chapter 12 p. 102 Terms of Reference Section: 4.1.7

Preamble:

At page 12-102, the EIS estimates that the Project will employ and average of about 372 full-time equivalents per year. It is unclear whether these are all direct employment for DBCI or includes a contractor workforce.

- 1. Please identify the expected number of contract workers versus salaried employees at the GK site during operations, over the life of the mine.
- **2.** How does this expected employee: contractor ratio compare to reality at Snap Lake and the other diamond mines?
- 3. Please identify what factors DBCI considers when determining whether to hire direct employees versus hiring contractors to fulfill tasks at its operations.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Aboriginal Recruitment into Mining Workforce EIS Section: Chapter 12 pp. 106, 108, 130, 221-2, 239

Terms of Reference Section: Table 7-5 (Community Wellness Issues)

Preamble:

Minimum hiring requirements and the recruitment process, as well as Tłįchǫ citizen's perspectives on working in diamond mining, are important factors in the level of Tłįchǫ recruitment in diamond mining.

- 1. To what does DBCI attribute the decline in willingness of NWT residents, and in particular residents of Tłįcho communities, to rotational work in recent years, as reported in Table 12.6-7 (page 12-151)? Has this issue been raised in community engagement by the developer with more information being sought to clarify reasons behind this declining interest in rotational work?
- 2. Please clarify DBCl's minimum educational requirements for hiring. At different points in Section 12, Grade 10 (page 12-130) or grade 12 are identified as minimum entry requirements to work at the mine.
- 3. Please identify and provide for the public record any studies accessed by the developer or completed by the developer that identify northern Aboriginal perspectives toward working in the diamond mining sector, and what issues related to recruitment (desire to work in mining) have been raised by northern Aboriginal people.
- 4. Please identify how, as identified in section 12.4.3 (Staffing), DBCI "identifies Aboriginal people who meet the minimum entry-level qualifications for hiring preference" (page 12-106). Please identify whether Tłįcho Government departments or other local or regional liaisons are used to assist in identifying Aboriginal people who may be a good fit for the diamond mining sector.
- 5. Please identify what specific criteria are used "on a case-by-case basis" to identify whether to hire workers who do not meet the minimum education requirements" (page 12-108).

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Aboriginal Employee Retention Issues EIS Section: Chapter 12 pp. 106-7, 151, 154

Terms of Reference Section: 5.3.1

Preamble:

The Tłįchǫ Government remains concerned about turnover rates among Tłįchǫ citizens at NWT diamond mines, but this issue is not treated in any quantitative way in the EIS, and only limited discussion occurs on potential factors behind workforce turnover.

- 1. What has been the workforce annual turnover rate at Snap Lake and (where information is available) the other mines, broken down between northern Aboriginal, northern non-Aboriginal, and non-northern employees?
- 2. Figure 12.6-8 (page 12-154) identifies "Aboriginal employment at the Northwest Territories Diamond Mines, 1997 to 2007". Please identify:
 - a. Whether these numbers including only northern Aboriginal or all Aboriginal and if the latter, whether additional breakdown is available.
 - b. Whether similar data is available for any of the years 2008 to 2011, and what the original source material is for the graph by Impact Economics.
 - c. What percentage of total diamond mine employment these Aboriginal numbers represented in any given year.
 - d. If the absolute percentage of Aboriginal workers in the diamond mine workforce is or has dropped, what factors may have led to this occurrence.
- 3. Please identify issues that have been raised in relation to employee turnover at Snap Lake or any other diamond mines in northern Canada, including DBCl's Victor Mine.
- 4. Please identify the results of dialogue between Tłıcho Government representatives and DBCI representatives about Snap Lake workforce issues since the mine opened, including what issues have been raised and how DBCI reacted.
- 5. Please identify whether DBCI has an exit interview process for employees leaving its workforce in northern Canada (including Victor) and if not, why not.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Issues and Supports for Aboriginal Workers, Families and Communities

EIS Section: Chapter 12 pp. 32, 55, 99, 110, 184-5, 201, 204

Terms of Reference Section: 5.3.1

Preamble:

The EIS argues that the development is likely to have a positive (beneficial) effect on community and family cohesion and that the developer has systems in place to support mineworkers and their families.

- 1. At page 12-203 of the EIS, the developer states that *divorce* [rate] is unchanged or declining". Please:
 - a. Provide the data used to support this contention.
 - b. Identify whether divorce rates are consistent across the NWT (e.g., are their identifiable differences between Yellowknife, smaller communities, and regional centres).
 - c. Identify whether divorce rate date is available for the NWT diamond miner cohort.
 - d. Reconcile the above-noted finding on divorce rates versus the finding elsewhere in Section 12 that diamond mining has been correlated to increasing single-parent families in select communities in the LSA.
- 2. Please identify what sort of money management training programs DBCI offers to its workers.
- 3. Please identify any "home community" supports the developer provides to mineworkers' families, how these are advertised to both workers and families, and the level of uptake on available counselling and other services using the Snap Lake experience.
- 4. Please identify whether in preparation of the EIS, DBCI sought to interview portions of its Snap Lake workforce and their families to identify potential family cohesion issues. If not, please identify why the availability of this "captured cohort" was not taken advantage of to confirm or refute impact estimations made by the developer on this issue.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Aboriginal Employee Advancement EIS Section: Chapter 12 pp. 111, 240, 359

Terms of Reference Section: 5.3.1

Preamble:

The advancement of Tłıcho workers from unskilled into semi-skilled, skilled, and professional occupations within the diamond mining workforce is an important goal – not only for the individual, but for future economic sustainability for the Tłıcho region beyond the life of the mine.

- 1. Please identify how appropriate candidates among the Aboriginal workforce are identified for "fast tracking" or other promotions (e.g., to team leader positions).
- 2. Please identify whether each northern Aboriginal employee at DBCI operations has a mentor and a training and career path plan and if so, how often these plans are revisited.
- 3. Please identify what percentage of each category of employee at Snap Lake is northern Aboriginal:
 - a. Unskilled
 - b. Semi-skilled
 - c. Skilled
 - d. Professional
 - e. Managerial
- 4. At page 12-359, DBCI identifies that in 2010, it had its first apprentice achieve journeyman status.
 - a. It is not clear whether this apprentice was a northern Aboriginal employee; pleas clarify.
 - b. Please identify how many apprenticeships have been entered into by Snap Lake northern Aboriginal workers, their success rate to date, and any issues with completion rates identified by DBCI or other parties.
- 5. Please identify how DBCI currently reports on Aboriginal employee advancement at Snap Lake and what reporting systems it proposes to use at the Gahcho Kue mine, should it proceed.
- 6. Please identify any publicly available documents that show trends in skill development at the NWT diamond mines over the years, and summarize the relevant results.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Aboriginal Business Procurement Issues

EIS Section: Chapter 12 pp. 16, 68, 98, 113-4, 129, 164-5, 232-3, 323, 357

Terms of Reference Section: 5.3.1

Preamble:

Maximizing business procurement accruing to Tłįchǫ-owned and operated companies is another important way for the Tłįchǫ citizens to benefit from the diamond mining sector.

- 1. Please identify why Tłįchǫ-community based businesses would be treated with a lower preference than Yellowknife-based businesses.
- 2. Please identify which Tłįchǫ-based businesses were involved in interviews for the EIS, and what issues those Tłįchǫ-based businesses raised in terms of procurement opportunity availability and preference.

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Cumulative Effects Assessment

EIS Section: Chapter 12 pp. 307, 309, 312, 322, 327

Terms of Reference Section: 6.1.2

Preamble:

At page 12-307, DBCI states:

"Cumulative effects also include changes from natural processes in the socioeconomic system and cultural environment that are not related to industrial development. One example would be the effects of climate change on wildlife habitat, which in turn could affect hunting, trapping, and fishing activities."

Requests:

- 1. Is DBCI asserting that climate change is "not related to industrial development"? Please clarify.
- Please clarify whether the following assumptions from page 12-253 of the EIS still apply or whether they should be updated in the assessment of reasonably foreseeable future winter road traffic:

"In forecasting winter road usage, it is necessary to look at other potential developments along the route including the following:

- a. Jericho Diamond Mine has ceased operations;
- b. Peregrine Diamonds has scaled back exploration activities; and
- c. BHP Billiton Inc. has re-evaluated its use of the winter road and as a result has reduced the tonnage of freight hauls by truck to site."

Source: Tłįchǫ Government **To:** De Beers Canada Inc.

Subject: Socio-economic Monitoring and Adaptive Management

EIS Section: Chapter 12, pp. 24, 124, 200, 224, 254, 363

Terms of Reference Section: 3.2.7

Preamble:

One of the key differences between an environmental assessment and an environmental impact review under the MVRMA is the specific reference in section 134(2) to the Panel's right to include in its conclusions "a follow-up program". This is understood by the Tłįchǫ Government to include the setting up of any number of different monitoring systems to track the development and its effects as it proceeds.

The Tłįchǫ Government is aware of concerns that have been raised in relation to previous socio-economic monitoring agencies, most notably the Diavik Communities Advisory Board (DCAB). Critiques appear to centre around the lack of ability for these monitoring boards to actually have their recommendations implemented when an issue is identified. Monitoring agencies that have little capacity to require that adaptive management be put in place are not, in our opinion, best practice, and lessons learned from gaps in the current link between monitoring and action should be incorporated into the development of a more effective monitoring system for Gahcho Kue.

The Tłįchǫ Government suggests it is important for the developer to start the dialogue about the type of monitoring systems that should be put in place for the proposed development, should it proceed. Nonetheless, the EIS refers only to environmental and not socio-economic, monitoring systems.

- 1. Please identify why monitoring costs for the Gahcho Kue mine are identified as a negative impact in the EIS, when their function is to confirm the human and biophysical environments are being appropriately protected.
- 2. Please identify which aspects of socio-economic and cultural monitoring the developer expects to bear versus those likely to be borne by governments and taxpayers.
- 3. Please provide further details on what the developer envisions as the structure and function of socio-economic and cultural monitoring related to the Gahcho Kue mine.
- 4. Is De Beers aware of any critiques of the indicators and monitoring systems for the human environment for other diamond mines in the NWT?
 - a. If so, what has the developer designed into its data collection and monitoring plans to overcome current issues?

- 6. Diamond mines have been operating for well over a decade now, including several years for the De Beers owned Snap Lake mine. Please identify:
 - a. How data is collected on human resources and community relations issues at these existing mines.
 - b. Whether in DBCI's opinion there are gaps in the current monitoring system, and how these gaps will be overcome in the Gahcho Kue environmental monitoring systems.
 - c. Whether any of the monitoring systems/programs developed for the diamond mines identified systemic issues that merit closer attention and adaptive management steps to improve socio-economic outcomes.

Source: TłjchQ Government

To: DeBeers Canada

Subject: Cumulative Effects for Bathurst Caribou

EIS Section: 7.5.2, 7.5.4

Terms of Reference Section: 4.1.1, 6.1.2

Preamble:

The cumulative effects assessment for the Gahcho Kue Project was conducted at several seasonal range scales but did not include an overall assessment at the annual range scale of the Bathurst herd. However, in the Talston project "cumulative effects from development were defined by the annual home range of the Bathurst caribou herd" (Deze Energy 2009; Section 12.1.3.1). The rationale provided by Deze Energy was that "using the annual home range to define the area beyond RSA is appropriate because this area includes all of the natural factors, human activities, and additional developments that can produce cumulative effects on the Bathurst caribou herd." Recently, Fortune Mineral's DAR for its NICO project conducted a cumulative effects assessment, but it was spatially restricted only to the winter range of the Bathurst herd.

There appears to be an important inconsistency among the three project-specific EIAs. The current seasonal range approach is inconsistent with the Gahcho Kue Terms of Reference which stated that the following specific information need <u>must</u> be included in the caribou-specific impact analysis: "the identification of all cumulative effects of other past, current, or reasonably foreseeable future developments within the range of each potentially affected caribou herd in combination with individual components or activities of the proposed development and its effects on other environmental components such as predators as well as the overall effect of the proposed development."

Request:

44.1: The request is for a supplementary cumulative effects assessment at the annual range of the Bathurst herd for the Gahcho Kue Project, with careful consideration to foreseeable projects that occur within Nunavut and are under review by the Nunavut Impact Review Board.

Source: TłįchQ Government

To: DeBeers Canada

Subject: Habitat Quantity and Fragmentation – effects from winter roads

EIS Sections: 7.5.2.2, 7.5.3.1.2

Terms of Reference Section: n/a

Preamble:

DeBeers Canada states that there is potential for access roads to 'represent a partial barrier to caribou and lead to some fragmentation of the population within the winter range (p. 7-95).' And 'it is projected that during the two-year construction period, up to 25 trucks are anticipated to be on the Winter Access Road in a 24 hour period (1,500 to 2,000 truckers per year per 12 week period). Traffic is anticipated to decrease to 14 trucks and three trucks per 24 hour period on the Winter Access Road during operations and initial closure (two year period), respectively (p. 7-101).' 'Traffic associated with the Project along the Tibbitt-to-Contwoyto Winter Road (from Tibbitt Lake to MacKay Lake) and the Winter Access Road is predicted to affect the behaviour and movement of caribou, which may influence vital rates (p. 7-164).

Given the potential for roads to affect behaviour and movement of caribou, and the traffic volumes associated with the different phases of construction, operations and initial closure, it will be important to document any interactions between caribou and transport vehicles.

Request:

45.1: Has DeBeers considered a monitoring program through its wildlife effects monitoring program (WEMP), to specifically document and describe the influence of road traffic on caribou behaviour and movements? If so, would it provide details on the monitoring program?

Source: Tłįcho Government

To: DeBeers Canada

Subject: Effects on population viability

EIS Section: 7.5.4,

Terms of Reference Section: Section 4.1.1

Preamble:

The Gahcho Kue EIS uses a population viability assessment (PVA) model to evaluate incremental effects of the Project and cumulative effects of human land-use and natural disturbances on the viability of the Bathurst caribou herd. DeBeers states that population persistence of caribou and the continued opportunity for traditional and non-traditional use of caribou are the important assessment endpoints. The emphasis on population persistence is based more on an appraisal of extinction probabilities, which may be a familiar concept to conservation biologists, but does not reflect a Tłįchǫ perspective, which is focused more on sustainable hunting of healthy caribou populations that live on resilient landscapes. Furthermore, DeBeer's emphasis on population persistence does not well reflect the Terms of Reference which specifically highlight that "the EIS must address how changes to abundance, health, distribution, and behaviour of caribou may affect the social, cultural, and economic well being of residents of the Mackenzie Valley, particularly Aboriginal communities in the regional study area. This must also include an evaluation of possible contamination of country foods, and of possible impacts on hunting (Gahcho Kue ToR, p. 23).

The PVA analysis does not well reflect how management decisions will be made over the duration of the Project's lifespan and how decisions will be made regarding tradeoffs between anthropogenic and natural factors that affect Bathurst caribou. For example, in the PVA modeling scenario a constant rate of high or low harvest was applied for each timestep of the model for an entire 30 year run. In reality, harvest levels for Bathurst caribou will be revisited every 3-6 years based upon the most recent population surveys and assessments of herd health, productivity, population size and trend. Also, once Projects are formally approved, then its incremental impacts on the herd become integrated into the overall performance of the caribou population for the life of the project; project-specific effects will combine with natural environmental stresses, e.g.: insect harassment from warm summers and poor calf survival from severe winters and wolf predation. Given the current low status of the Bathurst herd, it is likely that if management action is required then a potential outcome will be a continued or further reduction in harvesting. From this perspective, probability of persistence of caribou populations is not very useful because it is not as sensitive an indicator as one tied to population abundance or sustainable harvest levels.

Request:

46.1: Request an evaluation of the potential impact of the Gahcho Kue mine development, operation, and closure on the potential for recovery of the Bathurst herd and associated harvest levels.

Source: Tłįcho Government

To: DeBeers Canada

Subject: Population Viability Analysis (PVA) summaries

EIS Section: 7.5.4, Tables 7.5-18, 7.5-19, Pages 7-133, 7-138

Terms of Reference Section: n/a

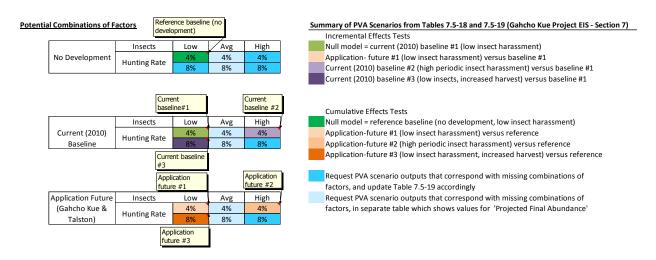
Preamble:

Section 7.5.4 of the Gahcho Kue EIS describes the methods, results and conclusions from a population viability assessment (PVA) scenario modelling approach that DeBeers used to evaluate incremental effects of the Project and cumulative effects of human land-use and natural disturbances on the viability of the Bathurst caribou herd. Table 7.5-18 describes the seven scenarios that were run and Table 7.5-19 summarizes comparisons of those scenarios against a 2010 baseline and a no development baseline. The comparison of scenarios is 'unbalanced' relative to the number of factors and levels that were used to conduct the Incremental and Cumulative Effects Tests. We would like to review the full range of outputs from the PVA analysis so that we may better understand the full comparison of the three factors including level of development, insect harassment rate, and hunting rate.

Request:

47.1: We request the PVA scenario outputs that correspond with the missing combinations of factors highlighted by the bright blue cells (in the table below) along with an updated version of Table 7.5-19

- Please provide an additional column titled 'Projected Final Population Abundance' with corresponding values for total population size that includes males and females.
- 47.2: We request PVA scenario outputs that correspond with the missing combinations of factors highlighted by the light blue cells in a separate table which shows values for 'Projected Final Abundance'.



Source: TłįchQ Government

To: DeBeers Canada

Subject: Availability of Caribou

EIS Section: 7.5.5.2, p. 7-140 Terms of Reference Section: n/a

Preamble:

With respect to availability of caribou for human use, the proponent concludes that the "addition of the Project is not expected to result in a detectable change in encounter rates between caribou and people relative to current (2010) baseline conditions" (p. 7-140). However, it is unclear what is meant by encounter rates in this section, because it is not quantified to the same extent as when encounter rate is used to describe the interaction between caribou and a zone of influence. With respect to encounter rate as it applies to caribou and humans, there does not appear to be any clear definition or quantitative examples, which would allow an independent reader to critically evaluate the proponent's conclusion.

Request:

48.1 Please provide additional background information to clarify whether this conclusion is qualitative, or whether there is a quantitative rationale and assessment in the EIS that links distribution and abundance of caribou with humans through a measure of encounter rate.

Source: Tłycho Government

To: DeBeers Canada

Subject: Insect Harassment Index

EIS Section: 7.5.3.2.2, Tables 7.5-13, 7.5-15, Pages 7-119, 7-126

Terms of Reference Section: n/a

Preamble:

An Insect Harassment Index (IHI) was developed primarily to estimate disturbance from primarily oestrid flies and was based on potential harassment days having mid-day temperatures > 13 degrees Celcius and wind speeds less than 6 m/s. Table 7.5-13 describes the mean, SD, and range of values for the Insect Harassment Index (IHI), and Table 7.5-15 establishes the IHI values that were considered low, average, and high respectively.

Given that climate change scenarios have real implications to arctic ecosystems, it would be useful to understand how the range in IHI values used by DeBeers compares to general climate change predictions for temperature.

Request:

49.1: Request DeBeers provide a comparison of its low, average, and high IHI values to climate change predictions from the most relevant models for climate change that would apply to the study area.