

April 3, 2012

File: S110-01-08

Chuck Hubert Environmental Assessment Officer Mackenzie Valley Environmental Impact Review Board P.O. Box 938 Yellowknife NT X1A 2N7

Dear Mr. Hubert:

Government of the Northwest Territories - Information Request Responses - Gahcho Kué Project Environmental Impact Review

De Beers is pleased to provide the Mackenzie Valley Environmental Impact Review Board with responses to Information Requests submitted by the Government of the Northwest Territories.

Sincerely,

Vermica Chield

Veronica Chisholm Permitting Manager

Attachment

c: L. Ransom, Environmental Assessment Analyst, Government of the NWT





Information Request Number: GNWT 1

Source: Government of the Northwest Territories

Subject: Regional Scale Monitoring

Preamble

Recent discussions signal a growing interest in coordinating monitoring efforts amongst partners and monitoring at a regional scale. This approach:

- a) recognizes that regional scale monitoring is most appropriate for determining how wide-ranging species are affected by development (particularly if sampling protocols are consistent across the region);
- b) increases capacity to understand how the cumulative effects of disturbance impact wildlife (e.g., Johnson et al. 2005); and
- c) increases the potential to optimize use of resources available for monitoring.

There is existing coordination of monitoring schedules, standardization of sampling protocols and sharing of resources for species like raptors. The ground work for using a similar approach for other species already exists:

- In 2005 and 2006, DBCI collaborated with the GNWT, BHPB, and DDMI to use a standardized DNA hair snagging sampling protocol to monitoring wolverine populations within the Gahcho Kue RSA (Boulanger et al, 2007). The results of this study indicate that a DNA-based approach provides a more extensive and robust data set for understanding how mines affect wolverines than other methods like track counts.
- Following discussions at a 2011 grizzly bear monitoring workshop, DBCI has agreed in principle to participate in a multi-partner, regional DNA hair snagging monitoring study to determine if mine-related activities influence the relative abundance and distribution of grizzly bears over time. This agreement in principle applies to Snap Lake and Gahcho Kue. Other partners have expressed interest in participating in this regional scale monitoring effort starting in 2012.

A regional scale approach is also most appropriate for determining how wolves and barren-ground caribou respond to mine activity. Currently, GNWT-ENR



conducts large-scale wolf den surveys on the tundra and shares this information with the diamond mines. Barren-ground caribou monitoring at other mine sites has been done using a variety of methods, including use of aerial flights and use of GNWT-ENR's collar data.

Request

- 1. To what extent is DBCI willing to participate in ongoing regional wolverine monitoring using a standardized DNA hair snagging protocol in concert with other mines, the GNWT and aboriginal governments and organizations?
- 2. To what extent is DBCI willing to participate in ENR's ongoing large-scale spring wolf den survey (i.e., in terms of data collection and providing resources for data collection)?
- 3. Please describe how DBCI will structure caribou monitoring such that it fits within a broader regional approach and is consistent with monitoring methods at other mines.
- 4. Is DBCI willing to provide support for ongoing raptor nest surveys in its RSA?

Response

De Beers is developing a Wildlife Effects Monitoring Plan that is a component of the broader Gahcho Kué Project Monitoring and Adaptive Management Framework. The Framework provides the proposed structure of site-specific monitoring and mitigation plans, and the approach to broader regional monitoring for caribou, wolverine, wolves, grizzly bears, raptors and species at risk. De Beers expects that engagement and feedback from government and communities will be an important element of completing the Framework, and the associated Wildlife Effects Monitoring Plan.

The most effective regional-scale monitoring approach would involve building on the studies undertaken to date at other diamond mines, which has led to collaboration with government and other industry partners. Such an approach is applicable to caribou, grizzly bear, wolverine, wolves, and raptors. Such an approach is consistent with verifying impact predictions in the Environmental Impact Statement (EIS), which were made at the population level.



De Beers would support a GNWT-ENR initiative to undertake regional monitoring for caribou, carnivores, and raptors. An important component of regional studies would be to identify the response variables (e.g., changes in movement and behaviour and survival) to be monitored and the level of data required to measure changes in those variables. Examples of regional partnerships include:

- supporting GNWT-ENR's Caribou Management Strategy;
- participation, in principle, in a regional wolverine and grizzly bear DNA program with GNWT-ENR, Diavik Diamond Mines Inc. and BHP Billiton;
- support for GNWT-ENR's wolf population and predation study; and
- raptor monitoring to support the Canadian Peregrine Falcon Survey (CPFS).

De Beers supports engagement with GNWT-ENR and the communities to determine and develop the most rigorous approach to regional cumulative effects monitoring for wildlife.



Information Request Number: GNWT 2 Source: Government of the Northwest Territories Subject: Wolverine mortality EIS Section: Page11.10-160

Preamble

The EIS states that "since 1996, there have been 11 wolverines removed from the SGP population due to direct mine-related mortality, which is equivalent to a mortality rate of 0.204 wolverine per mine per year" (page11.10-160). In response to comments provided by GNWT-ENR that the 10 reported wolverine removals from the existing diamond mines should also be effectively considered as mortalities, DBCI (via Golder) reanalyzed their data to indicate that mortalities may be as high as 0.389 wolverine per mine per year. This result did not change DBCI's assessment that the incremental effect should remain low.

While DBCI's willingness to reassess this information is appreciated, wolverine mortalities at exploration camps and winter road camps also need to be considered in DBCI's analysis. GNWT records indicate that since 1998, there have been 27 wolverine mortalities and/or relocations reported to date in relation to mining activity on the central barrens.

In addition, the significance of the mortality and relocations needs to be examined with respect to predicted effects on population size (e.g., Boulanger and Mulders 2007).

Request

Please reanalyze the impacts of mines on wolverine population size using all available mortality and relocation data.

Response

As noted in the preamble, De Beers has re-assessed the potential rate of direct mine-related mortality to wolverine populations after including relocations at the request of the Government of the Northwest Territories (GNWT). The revised potential annual mortality rate was 0.389 wolverines per mine (or a removal of



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8 to 9 wolverine during the 22 life span of the Gahcho Kué Project). The requested reanalysis using 27 rather than 21 assumed wolverine mortalities does not change the assessment of predicted impacts from the Project on wolverine population size in the Environmental Impact Statement (EIS). The addition of 5 assumed mortalities (one wolverine was recaptured, which is not a mortality) results in the predicted removal of 0.481 individuals per mine per year or 10.6 wolverines over the life of the Project.

Of the 27 wolverine incidents described in Table GNWT 2-1, five were individuals found dead at a camp and assumed to be the result of camp activities. One animal was recaptured, raising the question of whether this individual is counted twice in the total of 27 animals. The recaptured wolverine also weakens the assumption that all relocated individuals should be considered as losses from the population.

In response to Information Request #20 by the Gahcho Kué Panel, the Government Northwest Territories, Department of Environment and Natural Resources presented data on the number of reported carnivore mortalities and incidents associated with mineral exploration camps in the Northwest Territories, Slave Geological Province during 1996 to 2011. These data indicated that zero wolverine mortalities occurred at exploration camps (which included camps associated with Ekati, Diavik and Snap Lake mines). This is one less wolverine mortality than reported in the EIS for Ekati during 1996 to 1999 (see Table 11.10-4 in Section 11.10 of the 2010 EIS [De Beers 2010]).

There have been improvements in best practices for mitigating and managing wolverine interactions at operating mine sites. Improvements have been made to waste management procedures and building design that limit access to food waste and use of buildings as shelter. Of the 26 wolverine mortalities and relocations noted by the GNWT, 3 have occurred since 2006, which produces a rate of 0.167 mine-related mortalities per mine per year (Table GNWT 2-1). Therefore, the original statistic of 0.204 wolverines per mine per year (from 11 confirmed mortalities from all mines since 1996) in the EIS remains an appropriate and conservative estimate of the potential effects from the Project on the wolverine population.



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De Beers is committed to incorporating the lessons learned at other mines in the design and operation of the Project, which includes the mitigation and management policies and practices at the Snap Lake Mine. At the Snap Lake Mine, 2 direct mine-related wolverine mortalities have occurred since bulk sampling began in 1998; a mortality rate of 0.143 wolverines per year from 1998 through 2011 (Table GNWT 2-1).

Year	Location	Incident
1998	Nuna	Killed
1998	Diavik	Relocated
1998	Ekati	Relocated
1998	Ekati	Relocated
2000	Nuna	Killed
2000	Nuna	Found Dead
2001	Misery	Killed
2001	Diavik	Relocated
2001	Misery	Relocated
2001	Diavik	Relocated
2001	Lockhart	Shot
2001	Lockhart	Relocated
2001	Diavik	Shot
2001	Lockhart	Relocated
2001	Diavik	Found Dead
2001	Ekati	Shot
2005	Ekati	Found Dead
2005	Ekati	Relocated
2005	Ekati	Recaptured
2005	Ekati	Relocated
2005	Misery	Relocated
2005	Misery	Relocated
2005	Misery	Killed
2005	Kennady Lake	Found Dead
2008	Diavik	Killed
2009	Snap Lake	Killed (vehicle)
2011	Snap Lake	Found dead but assumed mine- related

Table GNWT 2-1 Summary of Wolverine Incidents Associated with Mining Activity in the North Slave Region, NWT, 1998 to 2011



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References

- De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.
- Government Northwest Territories, Round 1 IR Response # 20, EIR0607-001, Gahcho Kue Diamond Mine Project, March 8, 2012.



Information Request Number: GNWT 3 Source: Government of the Northwest Territories Subject: Waste Management and Wildlife EIS Section: 11.9.2.6.2, Section 7.0 Appendix I, 119.3

Preamble

The Waste Management Plan outlined in the EIS indicates that food waste will be placed in sealed plastic bags that are stored in sealed wildlife-resistant containers and transported to an incinerator storage area for incineration. After incineration, ash will be transported to the inert solid-waste landfill. Each step in this multi-stage process is subject to human error and the process itself may not eliminate all odors. The TOR states that "the EIS must include a discussion of alternatives to the proposed waste management plan that have been considered and any adaptive management options". Discussion of such factors as the location of the incinerator, the effectiveness of different models of wildlife resistant containers, and design features of the storage and incineration facilities is not complete enough to assess the effectiveness of the Waste Management Plan.

Furthermore, the EIS (Section 11.9.2.6.3) refers to Ekati and Diavik using adaptive management processes to transition toward enclosed incinerators and incineration storage facilities; however, neither the Wildlife Effects Mitigation and Management Plan (Section 7.0 Appendix I) nor the Waste Management Plan (Section 119.3) specifies whether a fenced or an indoor (enclosed) incineration and storage facility would be used. Either option will have different implications for wildlife attraction to waste.

Request

- 1. What alternative waste management options has DBCI considered to minimize food odors and how were the proposed options selected?
- 2. Please provide a description of the sealed containers to be used for storing food waste awaiting incineration and elaborate on what is known with respect to their effectiveness.

GNWT 3-1



- 3. Has DBCI followed up with the other mines on the effectiveness of enclosed incineration facilities on wildlife incidents and considered this information in its choice of storage and incineration facilities?
- 4. Has DBCI subsequently settled on whether it intends to proceed with either a fenced or enclosed storage/incineration facility, and if so, what was the rationale for the choice?
- 5. Is DBCI prepared to work with the GNWT to develop its Waste Management Plan?

Response

- The selected waste management alternative of immediate incineration of food wastes using an adequately sized incinerator (two dual-chamber incinerators) located within an enclosed building was selected based on lessons learned from other operating mines in the Northwest Territories (NWT) and Nunavut. This includes De Beers' own experience at the Snap Lake Mine, which has proven to be effective in minimizing wildlife attraction and habituation to site.
- 2. Similar to Snap Lake Mine, storage of food waste will be minimized and not require sealed containers. Rather, in accordance with De Beers experience and protocol, it is much more effective that food waste be transported directly from the collection area at the accommodation complex on a frequent basis using clear heavy duty garbage bags so that food waste bags are readily identified. The bags will be transported directly to the incinerator on a flat bed truck (no stops permitted) for immediate incineration. The truck will be washed regularly to further reduce odours. This waste management protocol is outlined in the Wildlife Effects and Monitoring Plan provided in Appendix 7.1 of Section 7 in the 2010 EIS (De Beers 2010).
- 3. In developing the above waste management protocol, De Beers reviewed the effectiveness of waste management practices at other mine sites.



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- 4. De Beers confirms that the incinerator will be housed in an enclosed preengineered building.
- 5. De Beers anticipates further discussion with Department of Environment and Natural Resources (ENR) regarding waste management.

Reference

De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.



Information Request Number: GNWT 4 Source: Government of the Northwest Territories Subject: Monitoring winter road access

Preamble

Winter roads can negatively impact wildlife populations by increasing access to harvesters. Other road-related impacts can include disturbance and increased vehicular mortality. Consequently, winter roads must be included as part of the cumulative effects of development.

The Gahcho Kue winter access road is situated within the restricted hunting area that was put in place by the GNWT in 2010 to protect and conserve the Bathurst barren-ground caribou herd. The GNWT has imposed new regulations in this area and jointly developed and implemented agreements with aboriginal organizations to help the Bathurst herd recover. The size and health of surrounding herds (Bluenose East (BNE) and Beverly/Ahiak) are also monitored to avoid similar situations.

The *Tibbitt to Contwoyto Winter Road Joint Venture*, to which DBCI is a partner, prepared a Q & A relating to caribou and the winter road on November 24, 2006.

"When the caribou winter near the Tibbitt to Contwoyto Winter Road, the road provides public access to the animals. Caribou hunting by both residents and Aboriginals along the winter road is the single largest road related effect on caribou. To better understand the potential effects of hunting along the winter road, the Joint Venture, which operates the winter road, contributes to ENR's wildlife check point at Ross Lake. The check point data is available from ENR. This effect could be largely mitigated by the control of public access to the winter road."

In undertaking a response to the MVEIRB on December 15th, 2011, with regards to "Uncertainty of effects from harvesting on caribou due to increased access



from the project winter access road," DBCI stated that it would support additional engagement and consultation with ENR and communities to develop and define appropriate monitoring (e.g., check stations) to evaluate predictions and address uncertainties associated with the potential effects of the winter access road on the abundance and distribution of caribou.

Request

- Would DBCI be willing to work in collaboration with ENR, communities and Aboriginal governments and organizations to jointly develop and implement a Road Access Management Plan to proactively address uncertainties about wildlife mortalities, harvest and other issues as they arise along the Gahcho Kue Winter Access Road?
- 2. Please identify any specific involvement DBCI has had so far with respect to monitoring and mitigation efforts along the Tibbitt to Contwoyto Winter road.

Response

- De Beers is willing participate collaboratively with Department of Environment and Natural Resources (ENR), communities and Aboriginal governments and organisations on the development of a Management Plan for the Gahcho Kué Project winter access road.
- 2. De Beers is currently a partner in the Tibbitt-to-Contwoyto Winter Road Joint Venture. De Beers understands that the joint venture currently provides funding to ENR to support monitoring along the winter road, and the program may be applicable to the Project winter access road. ENR's experience with monitoring existing portions of the winter road will be helpful in assessing possible monitoring and mitigation options.



Information Request Number: GNWT 5 Source: Government of the Northwest Territories Subject: Wildlife Effects Monitoring Plan EIS Section: 11.10.10, Appendix 7.1

Preamble

More detailed information on the Wildlife Effects Monitoring Plan (WEMP) is required to assess the effectiveness of proposed mitigation measures and management plans and to determine how impact predictions will be tested. This includes discussion on how DBCI will take an adaptive approach to monitoring and impact mitigation/management (see Section 11.10.10 in the EIS).

Request

- 1. Provide an outline of the proposed WEMP. For each species to be monitored (i.e. barren-ground caribou, wolverine, wolves, grizzly bears, raptors, and species-at-risk), include:
 - a. Specific impact predictions to be tested for each phase of the project, including the temporal or spatial scale at which they will be investigated, proposed methods/sampling protocols, potential partnerships and roles of partners in monitoring.
 - b. Which mitigations outlined in the Wildlife Effects Mitigation and Management Plan (Appendix 7.I) will be evaluated and how they will be evaluated, including methods, potential study designs and the way in which the information generated will be used to minimize impacts to wildlife.
- 2. Provide greater detail on how DBCI will structure wildlife monitoring in an adaptive manner as (i) results from existing WEMPs are analyzed; and (ii) new methods and research emerge. Please include information on how will WEMPs be evaluated and adapted, who will be involved in this process, and how often will this occur).

GNWT 5-1



Response

1. De Beers is developing a Wildlife Effects Monitoring Plan that is a component of the broader Gahcho Kué Project Monitoring and Adaptive Management Response Framework (AMRF, *in preparation*). The Framework provides the proposed structure of site-specific monitoring and mitigation plans, and the approach to broader regional monitoring for caribou, wolverine, wolves, grizzly bears, raptors, and species at risk. De Beers expects that engagement and feedback from government and communities will be an important element of completing the Framework and the associated Wildlife Effects Monitoring Plan.

The preferred monitoring approach is to build on research undertaken to date at other diamond mines, which has led to the approach of undertaking monitoring on a more regional scale via a collaborative approach with government and other industry partners. Such an approach is applicable to caribou, grizzly bear, wolverine, raptors, and wolves. While local site-specific monitoring will take place on an opportunistic basis when animals are present (with the involvement of community monitors) to inform site management decisions, De Beers plans to investigate regional partnerships to support monitoring that is led by government at the population level. Such an approach is consistent with verifying impact predictions in the EIS, which were made at the population level. Examples of regional partnerships include ENR's Caribou Management Strategy; the regional Grizzly Bear DNA program with ENR, Diavik and Ekati; ENR's wolf population and predation study; and raptor monitoring. It is anticipated that the regional partnership programs may provide meaningful data while reducing the intensity of sitespecific monitoring and thus reduce wildlife disturbance in the region.

2. Monitoring programs and results will be evaluated according to the process that is being developed as part of the AMRF. The AMRF envisions a decision matrix process, which would be initiated when unexpected monitoring results trigger action. The AMRF will run through the adaptive management process, including activation of a monitoring response plan (MRP) followed by mitigation or monitoring efforts, as appropriate.



Information Request Number: GNWT 6 Source: Government of the Northwest Territories Subject: DBCI October 26 & 27, 2011 EIS Workshop

Preamble

During the EIS Workshop (October 2011) the proponent stated that they intend to have employees share sleeping quarters at the mine site. As per the *Public Health Act: General Sanitation Guidelines* section 11(1) any sleeping quarters must provide, at a minimum, 11 m³ of free airspace per employee. Note: free airspace is any unoccupied space in a room (e.g. you would have to subtract the volume of the furniture from the total volume of the room).

Request

- 1. Please provide details of the dimensions for the sleeping quarters and the furniture.
- 2. How many people will be staying in each room?
- 3. How many toilets will be available?
- 4. What will the rate of ventilation be in the sleeping quarters?

Response

- The camp design criteria requires adherence to all applicable building codes. Based on preliminary designs, the dimensions of each of the individual sleeping quarters planned is 3.4 x 3.1 x 2.5 m for a total of 26 m³ of space. Each room would have: (2) lockable storage closets each at 1.1 m³, (2) open frame beds; and one (1) open style desk and chair. Free air space will meet the 11 m³ amount per person.
- 2. The permanent camp will have 216 rooms (De Beers 2010, Section 3.10.2.2). Occupancy capacity during the construction phase is 432 people and there are expected to be 2 people per room. For the operational phase single occupancy per room is expected.
- 3. The camp design criteria for the number of toilets provided will adhere to all applicable building codes. Based on preliminary designs, there are 16 toilets per dormitory wing consisting of 36 rooms. Additional toilet facilities are



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located in common areas, connected office complexes, and elsewhere in the camp.

4. The camp ventilation design criteria will adhere to all applicable building codes. Each modular bedroom unit, consisting of six bedrooms will have its own furnace-ventilation network. Every room will have in-floor registers and return ducts.

Reference

De Beers (De Beers Canada Inc.). 2012. Environmental Impact Statement Supplemental Information Submission for the Gahcho Kué Project. Submitted to the Mackenzie Valley Environmental Impact Review Board. April 2012.



Information Request Number: GNWT 7 Source: Government of the Northwest Territories Subject: Sustainable Development EIS Section: Section 12, MPD Report Terms of Reference Section: 3.1.2, 4.1.7

Preamble

The Terms of Reference (TOR) Section 3.1.2 asks the developer to provide economic information, including total expected revenues (at current market values for diamonds). Section 3.2.6 also requires a reasonably detailed analysis of alternatives the developer considered, such as different extraction rates that would extend the life of the mine.

The TOR Section 4.1.7 notes the developer is proposing to extract a resource at a time when northerners may not be in a position to fully benefit because they will already be working at other mines. That resource may not be available when communities may be in a better position to benefit from such a development. The geographical scope for this Key Line of Inquiry includes all communities in the Tlicho and Akaitcho regions and the Northwest Territories (NWT) overall. Currently, De Beers intends to commit to only 137 full time equivalents for NWT residents.

A report issued by Mountain Province in 2011 indicates the Gahcho Kué Project is expected to produce 49,000,000 carats over its 11 year life. The price per carat in this sample valuation averaged \$185 with a base case scenario of \$122.

This information is important, as the GNWT's Sustainable Development Policy requires it to equally weigh conservation and economic development in any decisions regarding the use of non-renewable resources.

Request

1. Please indicate the anticipated market value of the total forecasted resource for the Gahcho Kué Project.



- If the value of the Gahcho Kué resource significantly changes, what adjustments is DBCI prepared to implement in the design of the Gahcho Kué Project? Specifically, what changes would DBCI introduce to:
 - employee transportation arrangements (both own-force and contractors' employees);
 - b. rotation cycles (e.g., 2-week versus 1-week rotation schedules) for ownforce and contractors` employees;
 - c. the rate of extraction;
 - d. De Beers Corporate Social Responsibility programs operating in the NWT?
- 3. At what point(s) would the above changes be triggered?

Response

The Environmental Impact Statement (EIS) predictions for participation by Northwest Territories (NWT) residents in the labour workforce for the Gahcho Kué Project were based on the actual local participation record from the construction and operations phases of the Snap Lake Mine. These predictions are not employment commitments or targets. De Beers will aim to recruit and employ as many NWT Residents as possible, building on its experience with recruitment, training and development and retention strategies, implemented for the Snap Lake Mine.

National Instrument 43-101 section 2.3(c) prohibits the disclosure of the "gross value of metal or mineral in a deposit".

In 2010, Mountain Province Diamonds disclosed the results of the Definitive Feasibility Study in an NI 43-101 compliant Technical Report. The financial modelling results presented in this Study rely on the average of diamond revenue estimates provided by De Beers Canada Inc. and WWW International Diamond Consultants Inc. The financial modelling takes into account reasonable costs for development, operations, closure and marketing, but all numbers reported are estimates which may change as conditions in the economy and market evolve.

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1. In 2011 Mountain Province Diamonds Inc. released the results of an independent evaluation of the Gahcho Kue diamonds. In the press release Mountain Province stated that the average value of the parcel of 8,317.29 carats was \$185/carat. The announcement further notes that the parcel included two very high value diamonds and reasonably large diamonds. Recovery of such diamonds from drill hole samples is unusual and they are generally considered to be statistical outliers. To account for these outliers, diamond revenues are typically modelled using the most likely distribution of diamond qualities that will be mined during production. It is these modelled results that are used for financial modelling of the Project.

The modelling undertaken for the independent evaluation concluded that the possible range of values for the parcel was between \$109 to \$161/ carat, with a base case value of \$122. Mountain Province states this represents a 41% increase on the WWW revenues used in calculation of the average diamond revenues used on the 2010 Definitive Feasibility Study. The 2010 Definitive Feasibility Study concluded that the project could generate net present values ranging from C\$135.9M at 15% discount rate to C\$650M at 5% discount rate. The Technical Report provides a sensitivity analysis of the Net Present Value (NPV) as a function of diamond price.

- 2.
- a. If there is a significant change in resource value De Beers may adjust transportation plans as determined by operational requirements. In general because De Beers and contractors employees will have similar transportation arrangements they would be impacted in a similar way. In order to position itself competitively and sustainably the factors De Beers would consider in determining its transportation arrangements, are the cost of charter flights, the cost and schedule of commercial flights including their ability to connect with direct charter flights to the mine site, the point of origin for employees and contractors who need transportation to and from the mine. In taking these factors into account, De Beers may, for example, make changes to the frequency or the capacity of flights as required to ensure the viable operation of the mine and remain competitive. Operational flexibility is necessary so that the company can adapt its transportation plans as required. In addition,

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when evaluating its transportation alternatives De Beers would consider its human resource strategy to optimize the matching of NWT workers with the right skills to the available job opportunities at the mine.

- b. In the event there is a significant change in diamond revenues, this will cause the company to re-examine its operations in order to optimise operational viability. The selection of the rotations for mine employees during operations will be based on attraction and retention of a skilled workforce to ensure mine viability, and optimizing NWT employment. Currently the rotation of 2-week-in and 2-weeks-out is a rotation that De Beers is running at both of its two Canadian operations. The De Beers' human resources department determines the optimal rotation in order to recruit and retain the skilled workforce needed given the existing labour market conditions and has identified that a two-and-two rotation is appropriate for the Gahcho Kué Project at this point in time. There will be a four-days-in and three-days-out rotation for management and supervisory employees based in Yellowknife. This is consistent with the Snap Lake Mine, De Beers' other NWT mine.
- c. The rate of extraction from the open pits varies according the depth of the pits and is dependant on the waste tons to be moved. In the event that diamond revenues change significantly this could cause De Beers to re-examine it's operations in order to optimise operational viability. Increases in diamond prices, for example, might indicate that the extraction rate might be changed. Changes to the extraction rate would need to be considered in the context of other constraints and impacts, such as treatment plant constraints and total revenue changes, in order to optimise the mines viability.
- d. De Beers would first like to confirm that it is committed to fulfilling the commitments made in the context of its Corporate Social Responsibility programs. De Beers' Corporate Social Responsibility programs will not be budgeted for based on resource value. Rather, De Beers' involvement in these programs will be appropriate for the level of De Beers' activity in the NWT and will also be influenced by the needs of local communities.



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3. De Beers would monitor changes in diamond revenues and review the impact on a continuous basis. As diamond prices change, other factors such as costs and availability of labour, for example, are also likely to change. In the event that these changes were deemed to be significant, De Beers would consider their impact, taking into account all the relevant factors, and then take the appropriate response.



Information Request Number: GNWT_8 Source: Government of the Northwest Territories Subject: Geographic Scope of Economic Impact (employee transportation) EIS Section: 12.6-8, EIS Analysis Session, IRR 2.5.53 Terms of Reference Section: 5.3.1, 3.2.7, 3.1.2, 3.2.6, 4.1.5

Preamble

Sections 5.3.1 (p.43) and 3.2.7 (p.20) of the Terms of Reference (TOR) require DBCI to state where the likely labour pool "draw" is going to be from for this development. This must include an assessment of the available labour pool, at varying geographic scales, to meet the direct mine labour requirements, including: individual communities and the Akaitcho and Tlicho Regions as a whole, territorial, and beyond the Northwest Territories (NWT).

The TOR also requires DBCI to report on arrangements for transportation to work and alternative transportation and rotation arrangements, and to describe its planned actions with respect to maximizing the proportion of direct mine employees that are NWT residents (TOR 3.1.2, 3.2.6, 4.1.5).

Access to industrial work sites from remote communities can be a significant barrier to employment for NWT residents. A clear understanding of the steps a developer will take to eliminate this barrier through the developer's transportation arrangements is therefore very important.

DBCI stated in its November/December 2011 Environmental Impact Statement (EIS) session that the project had been designed so that there would be no barriers to employment. However, DBCI has not yet provided details on transportation arrangements for its employees and its contractors' employees.

Both the Mackenzie Gas Project and Canadian Zinc Prairie Creek Project have committed to pay the full transportation cost for all project employees living in the NWT, which the GNWT views as an industry best-practice. BHP Billiton has committed to pay full transportation costs for its Ekati Diamond Mine employees



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living in 13 NWT communities, including communities in the Beaufort-Delta and Sahtu Regions.

In addition to the cost of transportation, the length of rotation has also been identified as a factor in creating viable employment opportunities for NWT residents. The Avalon project, for example, is proposing a one-week rotation in order to attract more NWT residents to its workforce. During the environmental assessment for the Snap Lake Mine, De Beers also noted that a 1-week rotation schedule was more attractive to NWT residents than a 2-week rotation schedule (Information Request Response (IRR) 2.5.53). A 1-week rotation schedule has been the industry standard in northern Saskatchewan, and De Beers reported this had been confirmed as the preferred rotation schedule of Saskatchewan workers (IRR 2.5.53).

DBCI is currently taking certain steps with regard to training, recruitment and employee transportation at its Snap Lake Mine. Based on the success of those measures at Snap Lake, DBCI is predicting the Gahcho Kué Mine will result in a modest 137 full-time equivalent positions in each of its 11 years of operation. This prediction assumes the Ekati and Diavik mines will not be operating and that trained employees from those mines will be recruited to work at Gahcho Kué.

The predicted 137 person years of NWT resident employment during operations represents less than 38 percent of the operations workforce. In contrast, DBCI's *2010 Report to Society* stated that about 40 per cent of its workforce at the Victor Mine was Aboriginal (p. 31). Direct employment alone at Attawapiskat represented 78 persons1(p. 57). At Snap Lake, in 2010 the largest concentration of NWT resident employees (apart from those living in Yellowknife) was 28 person years from Hay River. There were 16 person years of employment from Behchoko (Snap Lake 2010 Socio-economic Report).

As of December 2011, 10,000 NWT residents over the age of 15 years were either unemployed or not working. This represents 31 percent of the NWT labour force. EIS Table 12.6-8 would indicate that a large proportion of those 10,000 residents want to have a job.



Request

Given the above factors please provide the following.

In addition to the measures being taken for the Snap Lake Mine:

- 1. Plans that will be put into effect by DBCI, or others with the support, financial or otherwise, of DBCI, to ensure that a higher number and proportion of the Aboriginal and NWT population can meet the standards of employment at the mine.
- 2. How such plans will be implemented to ensure greater participation by Aboriginal and NWT people at the mine.
- 3. Describe what contractors' and sub-contractors' commitments will be for hiring priorities, recruitment and retention strategies, and training.
- 4. Describe when direct transportation from a community would be feasible, including the following information and any other information necessary to make a careful assessment of potential project effects:
 - a. Explain what criteria were used to decide whether transportation is feasible.
 - b. Describe what conditions would be needed for DBCI to provide direct transportation to and from each community that can supply workers for the Gahcho Kué Diamond Project.
- 5. Provide an analysis of the feasibility of a 1-week rotation schedule during operations.
- Verify whether all contractors and sub-contractors will use the same rotation cycle as DBCI. If not, provide details of the probable rotation cycles for all mine site employees.
- 7. Describe what incentives DBCI will put in place to assist employees wanting to move to the NWT.
- 8. Describe what policies will be in place to monitor whether employees continue to reside in the NWT.



9. Describe what alternative measures will be used in cases where a proposed mitigation does not produce the anticipated results (TOR 3.2.7).

Response

 De Beers notes that the available labour force supply in Yellowknife is for the most part, already working. The situation is similar for communities such as Hay River, Fort Resolution, Fort Smith and other communities in the South Slave administrative region, where the pool of available workers is small. With both Yellowknife and the non-Aboriginal communities having high participation levels, the potential to employ a local northern labour force lies primarily in the Aboriginal communities where high school completion rates average around 39%.

While the Government of the Northwest Territories (GNWT) seems focused on transportation as a barrier to employment for NWT residents, De Beers believes the key barrier is the low completion of high school that results in lack of literacy skills and an inability to access training programs. It is important to note that entry requirements for most training programs require a high school diploma. If the available, but non-participating members of the Aboriginal community labour forces are to become employed, secondary school completion rates will have to increase. Increasing the proportion of the NWT population that can meet the standards for employment at the mine will depend on improved high school graduation rates. While secondary education completion rates are increasing, results will not occur instantaneously.

De Beers also notes the recent draft of the Northern Minerals Workforce Development Strategy, Northern Jobs – Canadian Prosperity (March 2012, *in preparation*). It identifies that the following items are the critical barriers to employment and training that must be considered in developing appropriate and targeted capacity building programs:

- a) Social Conditions (Addictions and Mental Health, Housing and Accommodation Issues);
- b) Life, Job and Essential Skills;
- c) Education and Literacy Skills;

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- d) Technical and Trades Capacity;
- e) Community Awareness and Engagement;
- f) Access to Appropriate Training;
- g) Scope of Training Needs; and
- h) Retention and Advancement Issues.

De Beers is visiting high schools in the Tlicho and Akaitcho communities annually to promote the importance of literacy, staying in school and pursuing post secondary education in either the trades or at college or university.

De Beers will continue to work with external agencies such as Aurora College, the Mine Training Society, the NWT Literacy Council, the GNWT Department of Education, Culture and Employment, high schools and individual community employment offices to identify and plan training opportunities for NWT residents, including those opportunities that help more NWT residents to meet minimum qualifications for positions at the mine.

De Beers will also continue to provide onsite training for employees and contractor employees who wish to further their education while on site, so as to assist them in meeting qualifications for higher-level positions within the mine.

De Beers will continue to work with the GNWT to support the achievement of the goals articulated in the 2011 NWT Labour Force Development Framework.

2. De Beers will continue to maintain contact with communities close to the mine and with external organizations that provide employment and training services to Aboriginal and NWT residents. De Beers will provide information regarding the job opportunities and training opportunities available at the mine and will also actively communicate the Company's policies with respect to the support provided to NWT apprentices. Training opportunities will be developed with input from the communities close to the mine and in



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partnership with organizations such as the Mine Training Society. De Beers will invest in training programs based on measureable returns specific to the success of the Gahcho Kué Project. Specifically, De Beers will provide training placements, mentorships and job assurances for successful participants in the programs we have partnered in. De Beers has recently committed to providing funding to the NWT Mine Training Society (MTS) in partnership with the GNWT and other NWT industry organizations to enable the continued operation of the MTS into 2012 and 2013 and the development of the Northern Minerals Workforce Development Strategy.

- 3. De Beers contractors and subcontractors are expected to adhere to key De Beers policies related to human resource management, safety, health and protection of the environment. The requirement to meet these commitments are outlined in the provisions of the contracts De Beers establishes with service providers. De Beers views its contractors as an important partner in developing NWT and Aboriginal business and skill capacity and will encourage its contractors to achieve the goal of maximizing the training of NWT and Aboriginal employees in accordance with De Beers hiring priorities.
- 4. The are a number of factors considered in making decisions about how to transport workers to the mine site and from where. These are noted in Section 12.4.2.5 on the 2010 EIS (De Beers 2010). The basis for the decision is to manage our resources wisely, ensuring the most economical way of transporting, while positioning the Company for competitive recruitment and retention in a highly competitive market. Many factors are considered including the mine's business plan and related project economics, the residency location from which we are drawing our employees and contractors, the number of employees and/or contractors coming to the mine from any one location, the cost of a competitive mileage allowance that provides employees an opportunity to obtain and arrange transportation to pick up points, the costs of commercial flights and charters, the ability of aircraft to supply the Company's needs including mine rotations and related schedules.
 - a) When the cost of chartering directly from an identified point of pick-up is greater than the cost for the Company using regularly scheduled



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commercial flights for its passengers (employees and/or contractors) who are travelling from that community, the Company will choose the most economical transportation alternative that meets rotational schedules. The Company does examine the schedules of commercial airlines and does factor in connecting passengers from commercial airlines to points of pick-up where the Company has charter transportation in place. The number of travellers from points of pick-up throughout the NWT are monitored on an ongoing basis as part of scheduling employee and contractor travel to and from site, so that the most cost effective way of transporting employees is achieved.

- b) The conditions that would need to be in place for the Company to implement a direct charter to and from a community to the mine site would be that the charter is the most economical alternative for the Company, and that the aircraft is available to consistently meet the schedule requirements of the mine. It is important to note that De Beers has employees who prefer to be transported to pick-up points using either commercial airlines or travel allowances, to give them flexibility at the end of their rotations to stop and shop in the larger centres as a cost saving measure.
- 5. Section 12.6.2.2.2 of the 2010 EIS (De Beers 2010) explains rotation alternatives De Beers considered for the Gahcho Kué Project. The rotation of De Beers' employee based at the Gahcho Kué Project will be consistent with the practices at other mines, including the Snap Lake Mine. The 2X2 rotation schedule remains cost effective and competitive for attracting and retaining employees to the Snap Lake Mine based on the recruitment and retention of Snap Lake Mine employees and the Company's review of other industry organizations in Canada competing for many of the same human resources. De Beers is not considering a 1X1 rotation at this time, however will continue to review options during the life of the mine so that the Company can continually adjust its competitive positioning to attract skilled labour.
- 6. Permanent contractors (long-term) generally have the same 2x2 and 4x3 rotations as De Beers' employees. Some short term contractors may have



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other work rotations such as $4x^2$ or $3x^1$, depending on the work being done and length of the contract (i.e. winter road project).

- 7. De Beers has and will continue to promote the NWT as a great place to live and work to all prospective employees, offering relocation services to employees who are interested in relocating from the south to the NWT. De Beers also has an attractive NWT residency benefits package that is provided as an incentive for employees who choose to reside in the NWT. This allowance is aimed at assisting our employees in offsetting the higher cost of residing within the NWT. The Company has also implemented an incentive plan for home ownership in the NWT for supervisory and management positions for which NWT residency is mandatory.
- 8. De Beers has three main policies that result in the monitoring of residency location by employees to administer benefits and site access. These include the following:
 - a) NWT Points of Pick Up this policy establishes the Company's pick up points and governs how employees and contractors will obtain access to travel allowances that assist employees in transporting themselves to the Company's pick up points.
 - b) Travel to Mine Site this policy manages access to the Company's commercial or chartered transportation to and from the mine site.
 - c) Regional Allowance This policy provides for both a salary enhancement and travel allowance for residents living in the NWT and Nunavut and establishes monitoring of residency to administer this allowance.
- 9. It is premature to define what specific alternative measures would be used when a proposed mitigation is not producing anticipated results, without knowing what specific mitigation or the result being considered. However, the starting point for successfully evaluating any mitigation measure is to monitor and report the results of those mitigative measures. By examining the initiatives taken and the results achieved, De Beers can identify any possible adaptive measures that can be taken by the Company,

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governments and/or others to strengthen collective efforts to recruit, train, and retain NWT workers. Good examples of this collaborative approach involving monitoring and response would be the monitoring of employment by residency, heritage and job category at the Snap Lake Mine. Based on these results and those of the other two diamond mines, De Beers, the GNWT and the other two producing diamond mines in the NWT undertook a comprehensive survey of all mine workers with the Bureau of Statistics in 2009 to better understand the drivers for residency locations of mine Based on the ongoing monitoring and the survey follow up workers. program, De Beers, GNWT and others were able to identify opportunities to work together to promote the NWT to prospective skilled employees in the south, to promote mining to young NWT residents heading to post secondary schools and to implement an NWT awareness campaign to southern based workers. De Beers approach with respect to attracting and retaining NWT resident employees to date has been to be work collaboratively with Government and other partners, and we will continue to collaborate this way for the Gahcho Kué Project.

Reference

De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.



Information Request Number: GNWT 9 Source: Government of the Northwest Territories Subject: Northwest Territories (NWT) Procurement EIS Section: 12.6-21, Appendix 1.IV, Appendix 12.II Terms of Reference Section: 5.3.1

Preamble

Contracting and procurement from NWT-owned businesses provides secondary employment opportunities for NWT residents and contributes to the NWT's economy. Maximizing contracting and procurement opportunities for the NWT is a driver for business development in the NWT. NWT businesses have demonstrated an ability to build business capacity within the mining sector, as cumulatively the diamond mines are spending 73 percent of their procurement purchases within the NWT.

Over the life of the Snap Lake Project, De Beers has been able to meet the 70 percent northern procurement commitment as set out in the Snap Lake Socio-Economic Agreement (SEA) accruing a cumulative \$1.537 billion into the NWT economy. Over the course of 2010, NWT purchases fell slightly down to 68 percent totaling \$146 million into the NWT economy annual.

Although it is not clear in the Environmental Impact Statement the specific levels of expected NWT procurement from the Gahcho Kue Project, encouraging information is presented. The NWT Business Policy as well as results from the business interview demonstrates that DBCI is willing to provide procurement benefits locally and that the local community is ready to grow with increased demand. This was reiterated at the December 20, 2011 meeting between the GNWT and DBCI. DBCI also committed to provide the GNWT with an updated procurement strategy, predicted purchases from northern businesses, and to clarify adaptive management measures prior to the technical session. In addition to this commitment the GNWT is looking for clarification on a few remaining issues.



Request

- 1. Please confirm that the same levels of northern procurement from the Snap Lake Project are committed to be achieved for the Gahcho Kué Project.
- 2. Please provide the methodology and assumptions applied in the estimation of procurement targets.
- 3. Detail how, under the implementation of the NWT Business Policy, the Gahcho Kué Project will build on the success of the Snap Lake procurement achievements.
- 4. What specific measures in the Gahcho Kué project will be taken to ensure that NWT businesses have full opportunity to provide goods and services to the Gahcho Kué mine?

Response

1. De Beers has predicted that the Northwest Territories (NWT) and Aborignal business participation in the Gahcho Kué Project will be similar to the current participation in our Snap Lake Mine. This prediction is based on a review of those NWT and Aboriginal Businesses that are registered with De Beers at its NWT Business Registry, the ongoing participation of NWT and Aboriginal businesses in De Beers' current tendering and contracting opportunities, and an understanding of the capacity of NWT and Aboriginal Businesses to supply De Beers' current and growing business requirements. NWT and Aboriginal businesses have demonstrated their ability to successfully tender for contracts in a competitive process with other non-northern business suppliers for De Beers' business. De Beers will continue to use a competitive bidding process for the Gahcho Kué Project. As a result, De Beers has not established specific procurement targets for NWT or Aboriginal Business procurement.

De Beers believes that NWT and Aboriginal businesses will continue to be significant participants in its business through procurement opportunities in a competitive tendering process. De Beers will report on the participation of



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NWT and Aboriginal business in the Gahcho Kué Project annually in the same way De Beers does now for the Snap Lake Mine.

2. As noted in the 2010 EIS, in Section 12, Table 12.6-21, the procurement needs for the Gahcho Kué Project will be sourced from NWT Businesses as much as practical during construction, operations and closure (De Beers 2010). What is practical will be guided by De Beers' NWT Business Policy which articulates the company's commitment to sustainable development, and in particular the framework through which the company will contribute to the development of a sustainable economy in the NWT through the provision of business opportunities to NWT and Aboriginal businesses.

Although De Beers' NWT Business policy was developed with respect to the Snap Lake Mine, this policy will also apply to the Gahcho Kué Project. The NWT Business Policy will be updated to incorporate the Gahcho Kué Project upon receipt of permits to proceed.

De Beers' track record with the Snap Lake Mine demonstrates a commitment to sustainable development through the provision of business opportunities and to the success of De Beers' NWT Business policy. Since commencement of construction in 2005 to December 31, 2011, De Beers has spent \$1,593,733,484 to construct and operate the Snap Lake Mine. Of that total expenditure, \$1,110,000,796 (69.65%) has been spent with Northwest Territories businesses. The expenditure with Aboriginal businesses for the same time period is \$681,407,382 which is 61.39% of the De Beers' Northwest Territories expenditure.

Underpinning De Beers' NWT Business Policy is the supply chain services department, which has established policies and procedures that enable De Beers Canada to obtain goods and services that meet the company's needs for best price, quality assurance, achievement of technical standard requirements, timeliness in the delivery of goods, excellence in service support and economies of scale that address De Beers' purchasing requirements across its Canadian projects.



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To ensure these needs can be measured and factored into the De Beers' decisions regarding which service provider the company selects for the provision of goods and services, and to uphold the company's reputation for fairness, De Beers will be actively pursuing and demonstrating fair and open competition for the aquistion of goods and services for the Gahcho Kué Project.

3. De Beers has developed relationships with a number of NWT and Aboriginal businesses both through its current competitive tendering and contracting process, and also through the contractual relationships De Beers has with its current goods and services providers. De Beers will build on the successful track record of the Snap Lake Mine by aiming to achieve economies of scale through contracts that can supply both the Snap Lake Mine and the Gahcho Kué Project. By promoting the Gahcho Kué business opportunities early through its annual Business Opportunities event in Yellowknife, De Beers has already begun flowing information to NWT and Aborignal businesses regarding the kinds of goods and services the Gahcho Kué Project will be requiring so that NWT and Aboriginal Businesses can plan for their own growth strategies.

De Beers also notes that with more than ten years of supplying goods and services to the diamond industry, NWT and Aboriginal businesses have developed a compliment of skills and business capacity to address the needs of both De Beers and the diamond and mining industries generally. This has resulted in a number of NWT and Aboriginal businesses demonstrating in the Snap Lake tendering process that they are successful competitors. With knowledge of De Beers, its processes and business needs, De Beers believes that NWT and Aboriginal businesses can and will build on their current capacity, positioning themselves for significant participation in the supply of goods and services to our business.

4. As noted above in #2 above, although De Beers' NWT Business policy was developed with respect to the Snap Lake Mine, this specific measure will also apply to the Gahcho Kué Project. The NWT Business Policy will be updated to incorporate the Gahcho Kué Project upon receipt of permits to proceed. DE BEERS CANADA

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Consistent with its commitments in the NWT Business Policy, De Beers will continue to use a competitive evaluation and adjudication system for procurement tendering of goods and services. The type of evaluation will vary with the nature, criticality, complexity and value of the purchase and will include such evaluation criteria, but not limited to: price competitiveness and stability, support, reputation, quality and NWT and Aboriginal content. This facilitates fair treatment and participation for NWT and Aboriginal Businesses, while maintaining the ability of De Beers to achieve its supply chain and materials management business objectives.

De Beers will monitor the results and will report annually regarding the level of procurement participation in our Gahcho Kué Project. De Beers will review its business procurement practice as part of its ongoing supply chain management process, to ensure that policies and the implementation of these policies are continuing to achieve De Beers' sustainable business objectives and that the NWT Business Policy objectives are being met.

Reference

De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.