



## Wildlife, Lands and Environment Department

Lutsel K'e Dene First Nation  
P.O. Box 28  
Lutsel K'e, N.T.  
X0E 1A0

Telephone: (867) 370-3197  
Fax: (867) 370-3143

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October 22, 2012

Chuck Hubert  
Mackenzie Valley Environmental Impact Review Board  
Box 938  
Yellowknife, Northwest Territories  
X1A-2N7

### **Re: De Beers Canada's Proposed Gahcho Kue Mine Technical Report**

Dear Mr. Hubert,

The Lutsel K'e Dene First Nation would like to provide this report for the Panel's consideration in the final decisions to be made regarding the Gahcho Kue environmental assessment (EIR0607-001).

Lutsel K'e is the community in closest proximity to the proposed site and will undoubtedly be the most directly impacted by the development, in the present and in the long term. It is for this reason that members of the Lutsel K'e Dene First Nation are frustrated and feel that the proponent is not accessing its resources and capacity to the fullest to ensure proper environmental protection. After closure and reclamation, when De Beers packs up and moves on to their next development, the Lutsel K'e Dene people will still remain here, and it is their wish that the land will still be able to sustain them.

The report will focus on three of the most major concerns of the proposed project, and has been developed incorporating the views of traditional knowledge holders in the community, as well as experience with other diamond mines in the LKDFN territory. This is not an inclusive list of all the communities concerns.

The first issue is the proposed Adaptive Management Advisory Committee. This is perceived as a low-ball offer from the proponent in terms of an oversight body, and an unnecessary deviation from the precedent set by the other three existing diamond mines. Instead of testing a radical new approach, LKDFN wants to ensure that the other three existing oversight bodies are evaluated and used as learning tools in order to determine how to improve their ability to effectively monitor the environmental commitments and performance of the proponent.

The second issue is one of long term water quality. The LKDFN is not convinced that the proponent can accurately state that water quality will be acceptable post closure. This section will focus on one particular issue, of total suspended solids based on concerns from another diamond mine. Clean healthy water is too valuable to the LKDFN not to mention in this report, and certainly too important for De Beers not to take seriously.

The third issue has been a serious concern and continues to be a growing concern in most of the First Nation communities, and that is the rapid decline of the caribou population in the NWT. It is safe to assume (ENR - Caribou Management Strategy 2011-2015) that from the sizable herds in the 90s, the total caribou population is less than a quarter of its former numbers. With the lack of any real research on cumulative impacts in the region, management bodies and government authorities seem content to allow for continuous development prior to any information being discovered about the mining industry's impact to the once-vast caribou herds. Habitat fragmentation, zones of influence, noise disturbance, all factors affecting caribou for each mine in the area; each of these seemingly isolated mines neglect the idea that these small factors are contributing on a larger scale to the herd numbers. This trend will surely continue with De Beers if they are allowed to develop their second mine in the territory without conditions of some real reports on the cumulative impacts of industry. Our recommendations on this section will improve the knowledge surrounding these impacts, and hopefully be used for future considerations of potential developments in this vulnerable area.

LKDFN would like to thank the Board for the opportunity to present this report. Although there are several recommendations provided herein, these are certainly not our only issues with the proposed development as it stands, surely there will be many issues raised at the community and technical hearings. We hope that the recommendations provided will help improve on the environmental stewardship standards laid out by other developments in the area. We've had time to view and scrutinize the work of other mining developments, and only by considering the gaps in their environmental performance can we determine the best path forward for new developments. It is necessary to learn from the past, or else we will continue our currently destructive trends into the future.

Sincerely,



Michael Tollis  
Manager Wildlife, Lands and Environment

## 1.0 NON-TECHNICAL SUMMARY

The LKDFN has consistently raised concerns about two main aspects of development in all project reviews to date. Caribou health and abundance, and water quality have always been, and always will be the priorities to protect in the long term.

For caribou, with no regulatory obligation to monitor and manage industry effects on the herds, the FNs are left to trust the good nature of the company to take it upon themselves and volunteer to run wildlife monitoring programs. In our experience, we cannot rely on the good nature of diamond mine companies, who have shareholders, to undertake this work, maintain this work when economic times are not favourable, and accurately report on this work. There must be a mechanism to ensure proper monitoring and management measures are in place prior to the final decision being made about the proposed development.

Beyond monitoring and management, conducting work towards understanding the cumulative impacts of development on the caribou is long overdue. Companies are content to pass off the responsibility to other authorities, and the authorities are content to not hold industry accountable for their clear cumulative impacts. We understand the Board's mandate is to look at this project in isolation, but the trend will continue, developments will be approved, effects will continue to pile up, until finally drastic measures need to be undertaken to save the caribou. What will it take for an authority to step up and look at the big picture? To plan for the future? To be proactive instead of reactive? There is a window now, as De Beers could potentially be operating two diamond mines in the same watershed, to force accountability for cumulative impacts, or at least, take steps to contribute to this body of knowledge that is severely lacking.

Water quality at the end of mine is an environmental and public health concern in the community. In the most basic sense, LKDFN wants assurance that post-closure, community members can travel to Kennady Lake, as in years past, dip a cup into the water and drink clean fresh water. Though the perception of the mining operations could possibly prevent members from drinking the water from Kennady Lake, the idea remains the same, De Beers believes impacts to water quality will be negligible, and all the First Nation wants is assurance of this. After seeing the mining operations to date, it becomes difficult to believe that the impacts will be negligible.

The final topic will focus on the proposed Adaptive Management Advisory Committee. This proposal by De Beers is an attempt to avoid having an independent watchdog to ensure that obligations and regulations are upheld by the company. We recommend that the Board consider a collaboratively developed proposal that will be submitted to the Board prior to the hearing dates.

## **2.0 LUTSEL K'E DENE FIRST NATION**

The Lutsel K'e Dene First Nation resides in a community on the south side of the east arm of Great Slave Lake. The community members have historically traveled and harvested natural resources from the southern border of the NWT, up to Great Bear Lake, and all the way east into Nunavut. The traditional territory of the LKDFN covers close to 500,000 square kilometres, which were, and are presently used to fish, hunt, trap, live and thrive off of. The Lutsel K'e Dene have a spiritual connection to the land that sustains them, and are trusted with watching over the land in the past, in the present, and for the future generations.

The Wildlife, Lands and Environment Department of the LKDFN works to monitor and manage the land on behalf of the Band members. The department is heavily engaged with industry and government trying to work together for a sustainable future. We encourage traditional practices and harvesting, seek to involve the traditional knowledge of the members into design of industrial developments, and press governing authorities and industries to respect the land of the First Nation as the members do.

## 3.0 SPECIFIC ISSUES

### 3.1 Adaptive Management Advisory Committee

#### Impact

From the perspective of various parties to the Project's environmental impact review (LKDFN, YKDFN, DKFN, TG IRs, GNWT IR Response to TG), the Adaptive Management Advisory Committee (AMAC) is not a suitable replacement for an independent, third party oversight committee, with regulatory responsibilities for wildlife and air quality among others.

The main impact is that expert review and monitoring of the company's commitments, as well as critical analysis of the environmental performance of the company in regards to predictions and commitments, will not be completed to the extent that LKDFN expects. Also, the idea of a De Beers creation being responsible for intervening and reporting the First Nations is cause for public concern.

#### Developer's Conclusion

With the document titled *Draft Terms of Reference for De Beers Canada Inc.'s Proposed Adaptive Management Advisory Committee* posted to the public registry on June 29<sup>th</sup>, De Beers believes that the AMAC would serve all the purposes of the independent oversight committee. De Beers believes that this AMAC would allow for greater participation from the parties as well as having the ability to deal with complex technical issues arising from the construction, operation and closure activities of the mine.

The developer maintains that the current regulatory system is adequate in addressing the needs of the communities and no extra-regulatory system is required, though the parties the developer deems responsible (i.e. Land and Water Boards) have denied responsibility.

#### Lutsel K'e's Conclusion

Lutsel K'e is of the opinion that the creation of environmental monitoring agencies (i.e. IEMA, EMAB, SLEMA) was a step towards improved environmental performance. We believe that monitoring of the mining operations is a full time job, and that this responsibility must be taken up by an agency with staff dedicated to ensuring compliance and successful environmental monitoring of the company.

LKDFN has learned from three other diamond mining developments on the traditional territory that wildlife, air quality and traditional knowledge use represent clear gaps in the regulatory system as no governing body has taken responsibility for implementing or enforcing the monitoring of each. We have seen and learned that in order to have effective monitoring of these aspects, we cannot rely on the environmental system to

regulate industry, but there must be an alternative means to close these regulatory gaps. Similarly, we cannot rely on the developer to regulate themselves in these aspects.

The LKDFN is actively engaging our neighbouring FNs with the intention of developing a framework for a monitoring agency that would close these regulatory gaps, address the concerns of participation, and provide adequate, acceptable oversight of the operation.

### Rationale

The TOR of the AMAC describes all the responsibilities of the committee and though these responsibilities are very similar to those of a monitoring agency, there are significant departures from the standard monitoring agency that cannot be overlooked. A main factor that is a cause for public concern is that De Beers proposal is not for an independent board. The idea of a De Beers representative co-chairing all the meetings with the AMAC raises public concern for two reasons.

One that De Beers' objectives and viewpoints on matters will arise in the meetings and could influence the ideas put forth. It is necessary for the oversight committee to be at arms-length from the company so as not to bias the information and ideas raised. Two, as chairs, and as stated in the TOR, De Beers would be responsible for managing the consultants that are hired to develop what is supposed to be verification of the work De Beers and their other consultants have produced. In general, the FNs tend to be more skeptical of reports submitted by De Beers and their consultants as without fail, they always serve the purpose of the company, and consequently, FN minds are more at ease (even if the report serves the purpose of the company) when a report is conducted by independent researchers. LKDFN believes public concern will be raised if the community understood that a De Beers run committee would be responsible for oversight and reporting on De Beers' environmental performance. Simply stating that the AMAC would provide advice on where third-party reviews may be necessary, is not an acceptable alternative; LKDFN believes all work conducted by the monitoring agency should be from a third-party perspective.

There are several main areas that the developer would not be regulated on, if the AMAC were to be the acceptable oversight board. First, there is no regulatory authority for air quality monitoring and management, allowing the developer to disperse whatever contaminants they desire into the air with no recourse. This is not a field where the FNs readily have experts available to notice or address areas of potential concern. Second, in the past two years, AANDC has passed off the responsibility for wildlife onto the GNWT, who have in turn, passed it off to the Land and Water Boards, who have stated that wildlife management is outside of their jurisdiction. Wildlife has consistently been of the highest priority to the LKDFN throughout this assessment and through various assessments since the beginning of development on the territory. Our concerns were addressed with other developers through the creation of a monitoring agency charged with the responsibility of these issues that are left in limbo by regulatory authorities.

Though the monitoring agencies assume these regulatory positions, the overarching goal of the watchdog is to allow for the best environmentally performing mine possible, which, through discussions and throughout this review, we understand to be the developer's goal as well. LKDFN believes that in order to allow for the best environmental performance, it is necessary to have a body to assist the developer in attaining these goals. The existing monitoring agencies have good relationships with the company, and we understand that they developers value the input of these agencies. To dismiss the use of such an effective means of ensuring environmental responsibility is a giant step backwards for conservation in regards to industry.

Speaking to the trust issue, it is fundamentally and scientifically flawed to believe that the developer can provide oversight for themselves. It also forces the FNs to review all documents meticulously and have experts lined up to ensure proper feedback is provided to the company. LKDFN would like to note to the Panel that this is not the only file currently ongoing in the LKDFN office, and we simply lack the capacity and expert knowledge to effectively review the documentation put forth by the developer. By establishing an independent oversight body, the FN can put its trust in them, as it does with IEMA for example, to speak on behalf of the FN and raise the concerns that are held by the community. The alternative would be to have each FN, currently overwhelmed by documents to review for existing mines and exploration, receive capacity and funding from the Crown in order to meaningfully participate in these reviews; an alternative that is inefficient on a variety of levels.

### Recommendation

LKDFN recommends that the Panel require a measure that establishes an arms-length monitoring body that provides for independent oversight and the closing of the other gaps that the current regulatory system does not claim responsibility for. The body will be based on best practices in the territory as well as best available information that has come to light since the establishment of the existing monitoring agencies, including, but not limited to, giving the body greater means to encourage and expect compliance from the developer.

As minimal movement has come from the developer regarding this very important issue, LKDFN will be participating in a FN-led workshop to develop an appropriate proposal to the developer that addresses the concerns of the FNs. This proposal is expected to be submitted to the Board prior to the scheduled hearings.

## **3.2 Water Quality Objectives**

### *Impact*

The closure water quality for aquatic health has not given due consideration to the potential impact of total suspended solids in the water. With the fine PK facility located

on the opposite side of a large dyke (Dyke L), it is possible for long term increases in TSS thus causing local and downstream impacts to the water. These impacts could decrease the quality of fish in the region and cause health impacts to LKDFN members consuming the water and fish from the area.

#### *Developer's Conclusions*

Effects will be negligible and mitigated by the dyke.

#### *LKDFN's Conclusions*

The proponent did not prove that the dyke is sufficient enough to prevent the extra-fine PK particles from entering the water column. The particles released are miniscule and flat allowing for water flow and wind to factor into their dispersion throughout the water column and therefore potentially impacting downstream water quality. Though the PK facility will be covered, it is likely that throughout the operation, these fine PK particles will end up in the water management area of Kennady Lake and therefore be subject to release upon refilling and through natural causes.

#### *Rationale*

Dyke L is supposed to be the new shoreline with the PK facility behind it. Through seepage and water leaching down through the surface, it is possible for water to penetrate the cover layer (of mine rock) and for fine PK to be moved by the flowing water into a water body that will be reconnected to the surface water regime (attached email). BHP's oversight agency has documented concerns regarding the release of kimberlite from their containment facility to the receiving environment, they are wary of the potential for impacts to downstream water quality when the containment facility is reconnected to the natural flow of water. There is no reason to believe this development would pose any different of a threat to water quality.

#### *Recommendation*

LKDFN recommends that a measure be in place to ensure that the proponent is ultimately responsible for water quality at closure and beyond. With the LKDFN still unconvinced that water quality will be acceptable at closure, and with the potential for contaminants to be released in the distant future, we recommend that the maximum security bond be put in place to ease the uncertainty.

### **3.3 Caribou Impacts**

#### *Impact*



The proposed development will impact the availability, distribution and movement of caribou in the area, and the winter road will force caribou further east, impacting the Lutsel K'e Dene's ability to harvest caribou at a reasonable cost.

#### Developer's Conclusions

All impacts to caribou will be appropriately mitigated.

#### LKDFN's Conclusions

Traditional knowledge from the Lutsel K'e elders and harvesters see clear barriers being created by both the Tibbitt to Contwoyto winter road, and the branch of the road that will extend to the Gahcho Kue mine site. These barriers section off parts of the caribou range and force caribou further east in the territory during migration, with in turn, forces the local harvesters further out into the barrenlands in order to practice their harvesting rights.

The livelihood of the members of the LKDFN depends on the consistent availability and accessibility of the herds. With currently depleting populations of caribou and no recovery or increases of the populations in the foreseeable future, coupled with the accumulation of industrial develops across the territory, LKDFN fears that cumulative effects on caribou directly affects the ability of the Lutsel K'e Dene to sustain themselves.

#### Rationale

To date, the developer has not proven beyond doubt that the demographics and population of caribou herds won't be negatively impacted by the winter road. The information provided regarding the effects of caribou losing a portion of their range simply states that it will be negligible to low (EIS Section 11.8.5), and in most cases temporary. But there is no information available on how the caribou will behave in the long term or where they will travel as a result of having this barrier in place.

Traditional knowledge of caribou encountering the road also suggests division of herds as some will cross over, thereby isolating smaller groups of caribou, potentially impacting total population and exposes the smaller groups to increased predation.

#### Recommendation

LKDFN recommends that the Board require the proponent to develop a study that accurately assesses the caribou herds' relationship, and behavior modifications when encountering the winter roads. It should investigate the impacts to population in the long term of no longer having access to portions of their traditional ranges, as well as the altered migration patterns associated with the road/mine developments since the early 90s.

### Significance

The reason that this recommendation is significant is because with the lack of governing body on the issue of cumulative impacts, and the resistance of any one company to take the lead on the investigation of cumulative impacts, the FNs (with limited capacity) are left to speculate what these impacts may be. With continued exploration and development planned, we may not understand the impacts until we are far beyond a point of reconciliation. If the proposed project comes into development, De Beers will operate half of the diamond mines in the territory and if that doesn't warrant more environmental stewardship, it certainly makes a case for this organization to exercise a leadership role within the territory to accurately depict the impact of the mining operations and the winter roads on the status of caribou herds.

## 4.0 SUMMARY OF RECOMMENDATIONS

### 1) Regarding the Adaptive Management Advisory Committee:

LKDFN recommends that the Panel require a measure that establishes an arms-length monitoring body that provides for independent oversight and the closing of the other gaps that the current regulatory system does not claim responsibility for. The body will be based on best practices in the territory as well as best available information that has come to light since the establishment of the existing monitoring agencies, including, but not limited to, giving the body greater means to encourage and expect compliance from the developer.

### 2) Regarding Water Quality:

LKDFN recommends that a measure be in place to ensure that the proponent is ultimately responsible for water quality at closure and beyond. With the LKDFN still unconvinced that water quality will be acceptable at closure, and with the potential for contaminants to be released in the distant future, we recommend that the maximum security bond be put in place to ease the uncertainty.

### 3) Regarding Caribou and Cumulative Impacts:

LKDFN recommends that the Board require the proponent to develop a study that accurately assesses the caribou herds' relationship, and behavior modifications when encountering the winter roads. It should investigate the impacts to population in the long term of no longer having access to portions of their traditional ranges, as well as the altered migration patterns associated with the road/mine developments since the early 90s.

## ATTACHMENT

Email from Tim Byers regarding TSS at the Ekati Mine.

Tim Byers Oct 19

to me

Hi Mike,

I should clarify that there have not been any TSS problems downstream of the EKATI mine to this point (the only time it was a serious issue was when a huge plug of sediment was washed down the Panda Diversion Channel into Kodiak Lake about 10 or so years ago). But certainly suspended solids of kimberlite within upstream cells of the Long Lake Containment Facility (LLCF) have been a concern to IEMA for several years as we fear it may become an issue at closure when downstream LLCF cells are reconnected to the lake watershed.

Not knowing anything about the Gahcho Kue project, I can offer only a limited amount of advice. I would only observe that Dyke L must do an effective job at removing all fine PK from the Fine PK facility (tailings pond?) into the rest of Kennady Lake. If it doesn't filter it all out then TSS may become a problem downstream if those fine tailings are anything like those in EKATI's LLCF. EKATI's extra-fine PK is defined by BHPB as less than 0.1mm diameter mostly clay particles, identified by IEMA's Tony Pearce as "smectites"). Individual particles are flat, not round, so that they tend to float in the water rather than sink, resulting in being suspended in the water column for a much longer time (i.e. contributes to high TSS). Also, it seems to me that if the properties of the PK (such as density) are such that when it settles to the bottom it does not consolidate with the natural sediment, then wind-caused upwelling could re-suspend the bottom PK into the water column.

The other thing to consider with Dyke L is whether breaching it at closure will release any PK that would be adhering to it (or does De Beers think that all of that PK would slide down the dykeface and settle on the bottom?). So bottom line is you really have to have a handle on what are the chemical and physical properties of the PK going into the WMP.

As I mentioned to you earlier today, TSS can impact lakes in 4 ways:

- giving a cloudy, dark or murky appearance to the water, making drinking water unappealing and possibly taste bad.
- heavy metals can adhere to suspended particles in the water, so high TSS can thereby present greater amounts of possible contamination to life in the water column.
- if TSS is drastically increased in a lake, palatability of fish can change (the reason why pike or burbot in silty rivers on the Prairies often do not taste as good as those caught in clear lakes).

- if it is dense, very high TSS can block the sun's rays from penetrating deeply into the water, so that photosynthesis cannot occur; phytoplankton production is thus severely reduced, thereby impacting life all the way up the food chain

Finally, with regard to both dike breaching and reconnecting the lake with the rest of the watershed, I would want to know about current velocities through those connection points as you want to prevent bottom erosion created by turbulence from too strong a current. Often what is done to prevent that is to build boulder fields or other structures to dampen the velocity of incoming water flow.

I hope all this helps, Mike.

Best of luck in your Gahcho Kue deliberations.

Tim.