



## Wildlife, Lands and Environment Department

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March 17<sup>th</sup>, 2013

To: Chuck Hubert  
Mackenzie Valley Environmental Impact Review Board  
Box 938 Yellowknife, NT  
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### **Re: EIR1011-001 Avalon Closing Comments**

Dear Mr. Hubert,

Please accept this letter and the attached documents as the Lutsel K'e Dene First Nation's (LKDFN) closing comments on the Avalon's proposed Thor Lake Rare Earth Elements Mine. Thank you for the opportunity to provide these comments for the Board's consideration in the recommendations the Board will provide for the ministerial decision on the proposed project.

LKDFN's negotiations with Avalon are still in progress and as expressed in the technical hearings, we cannot support this project until an agreement is in place to provide for benefits to our First Nation that equal or outweigh the impacts that will be suffered from the project.

The comments herein will outline our concerns raised in the hearings, and hopefully provide a clearer picture of our expectations and recommendations for measures from the Board. The main areas of concern are significant and consistent with most other developments on the Akaitcho Traditional Territory, as we have to ensure the protection and sustainability of the resources that the Lutsel K'e Dene have relied on since time immemorial, and will continue to rely on in future generations. The protection of caribou, of water, and the avoidance of contamination of the land are of the utmost importance to the LKDFN, and we will suggest measures that will limit the impacts to these valued ecosystem components.

One way that LKDFN can help Avalon to achieve a sustainable operation is to supply the traditional and local knowledge of the area to the company. To date LKDFN traditional knowledge has not been adequately incorporated, and without this wisdom from LKDFN members, Avalon has failed to seek out the most relevant and important information on the land they are proposing to exploit. This is unacceptable as the environmental impact review

process is designed to allow for the proponent to gain a full and intimate understanding of the land they wish to mine.

Another point that we wish to reiterate is the lack of consultation in general with the community. As raised in the technical hearing, Avalon has not made a diligent effort to engage with the community members of Lutsel K'e. The Board has neglected giving LKDFN the opportunity to host a community hearing, and the fact remains that without the information provided to the community by the Wildlife, Lands and Environment Department of LKDFN, the community would be completely uneducated as to the activities that will be ongoing for the next 20 years on a highly travelled route for the Lutsel K'e Dene.

Lastly, our major concern remains unaddressed regarding the environmental oversight of the project. Avalon has made it clear they do not wish to have an oversight body in place, but based on global concern about rare earth element mining and processing, as well as the precedent set in the Northwest Territories for oversight boards for mines with arguably less potential for significant environmental impacts, LKDFN believes it is a serious mistake to allow this mine to proceed without proper environmental oversight in place.

Throughout this review, LKDFN staff has tried in vain to find an example of a rare earth element mine that has successfully mitigated impacts to the surrounding environment. The global market for rare earth elements has made this deposit economically viable to support development, but to date there has not been significant advancement in technology to allow for an environmentally safe operation in any part of the world. In this territory, the environment is especially pristine, and requires effective mitigation for the sake of people who rely on it. It is necessary therefore to take steps at this stage of the development to ensure the mechanisms are in place to avoid major and minor environmental degradation.

The measures stated in this document will attempt to address the major concerns of the community and if they are taken into account for the final decision, they will alleviate some of the concerns the LKDFN have for the project.

Thank you for your consideration.

Sincerely,



Mike Tollis

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## Introduction

The Lutsel K'e Dene First Nation (LKDFN) has recent documented history in the region that the proposed Avalon Thor Lake mine is located. The site lies on a heavily travelled route in both winter and summer seasons for the Lutsel K'e Dene between Yellowknife and Lutsel K'e. The north shore of Great Slave Lake near the development is a common resting, picnicking and fishing location for the community members before crossing the open water section of the East Arm. LKDFN engages in these environmental review processes to ensure a sustainable development and the protection of the land within the Akaitcho Territory; the fact that the mine is located in a frequently used area only enhances the desire of the First Nation to ensure that the land, water and wildlife are sustained.

The following sections of this document outline the major concerns of the LKDFN and proposed measures to address our concerns in a meaningful way. The sections will discuss caribou impacts, focusing on cumulative impacts, barging concerns raised in the hearings, traditional knowledge use, and the need for environmental oversight. The latter is the most important topic for the LKDFN as the nature of rare earth element (REE) mining makes it difficult for LKDFN to trust that Avalon will be able to monitor themselves sufficiently in terms of environmental protection, specifically, the management of the contaminants that will result from the operation.

Again, as stated in the hearings, the term sustainable will be used in this document as described by the LKDFN elders, in that sustainability refers to the ability of members to travel to this site post-closure and practice their traditional way of life without the potential negative human health effects of lasting environmental contamination from the development. Sustainability in terms of the land being able to continue to support the same ecosystems it once did. Sustainability in the way of clean and safe water for humans and fish, and sustainability in the ability of the developer to return the site to a state as close as possible to what it was prior to exploration.

## Caribou

LKDFN relies on abundant caribou as a major food source and in the past two decades the harvesters and elders in the community have been noticing a significant decline in the population of caribou, as well as a decline in the health of the surviving caribou. It is not only traditional knowledge that is noticing the impact development is having on the caribou, as scholars speculate that developments increase competition for foraging, increase the risk of predation, and contribute to low productivity for the affected herds (Nellemann, 1998). Caribou are sensitive to human disturbances and with the rapid expansion of development across the territories, the herd ranges are drastically becoming unfit for caribou survival and fragmented to the point of forcing the caribou to divert from their historical travel routes. Caribou impacts from human disturbances stretch far beyond the actual footprint of the development (Nellemann, 1998, Dyer, 2001, and Boulanger, 2012), making commitment number 144 [147] on the *Avalon Rare Metals – Commitment Table* to “...conduct limited wildlife monitoring in the immediate vicinity of the Nechalacho and Hydrometallurgical development area” and to “...record all significant wildlife observations made by site personnel while in the project area, and report any wood bison sightings to GNWT’s ENR” grossly ineffective at understanding the true impacts this development will have on the caribou (Avalon Rare Metals Inc, 2013).

**Measure:** That Avalon be required to monitor beyond the footprint of the mine at Nechalacho for wildlife, especially caribou, to contribute to the growing body of knowledge regarding caribou relation to mining activity, as well as monitor the potential long range impacts of their mine on the wildlife.

Also from the recently posted Commitments Table, “Avalon acknowledges GNWT request for a Wildlife Effects Monitoring Program (WEMP) and commits to continued discussions with the GNWT about wildlife monitoring...” and the commitment goes on to say how Avalon will work with stakeholders and communities in the on-going review of a possible WEMP (Avalon Rare Metals Inc, 2013). First, LKDFN feels that this is a very weak commitment as all the commitment really implies is basically that wildlife effects will be discussed continually. This is not adequate for the communities to feel comfortable that Avalon is diligently working to mitigate their impacts on wildlife. Secondly, in the experience of LKDFN, commitments made by the proponent throughout the environmental impact review process are unenforceable without an associated measure. We’ve seen companies with these types of commitment tables (over 200 listed) through the review process, and we’ve seen the result of these commitments being unenforceable. The actions of the proponents who have failed to achieve their commitments are understandable; mining companies have shareholders to satisfy and the more non-mining activities that they have to engage in, the less profitable the company is. So the commitments are made to satisfy the interveners in the short term, and once the company receives their permits, the commitments table is ultimately discarded. LKDFN encourages the Board not to repeat the mistakes of the past, and include a measure in their decision holding Avalon to their commitments, even attaching timelines to the important programs such as the WEMP, so that

these promises from the company will be upheld, and there is sufficient recourse for failing to meet the commitments promised.

**Measure:** That Avalon be required to achieve the commitments made throughout the regulatory process, with failure to meet commitments being treated as a failure to comply with conditions of approval of the project.

In regards to cumulative effects on the caribou, Avalon stated on day one of the hearings that they believe their project is unlikely to contribute to cumulative impacts on caribou (MVEIRB, 2013). With the already documented information on caribou sensitivity to human disturbance, every activity on the land contributes to cumulative effects on caribou, and this operation is no different. Though LKDFN does not believe Avalon is entirely responsible for managing cumulative effects, they are responsible to work with industry, government and aboriginal parties to work towards understanding cumulative effects in a way that contributes to management decisions on how to balance industrial development with caribou conservation. Though the company has committed to participate in cumulative effects workshops, the commitment again, is unenforceable; therefore the Board must make it mandatory for Avalon to gather data and offer it to the various parties with the goal of influencing management decisions and balancing the two competing interests for a sustainable balance of the two land use types. With the previous measure suggestion, to have enforceable commitments, this issue should be addressed.

## **Barging**

The hearings did not provide much confidence to LKDFN that Avalon will ensure the protection of Great Slave Lake water if a barge incident were to occur. The discussion on barge incidents only served to provide further confusion as to who is responsible for cleanup, when and if cleanups are required, and who has the responsibility for the decision of salvaging sunken materials. In our view, if Avalon and their development is the reason for numerous barge trips across the lake over the next 20 years, then Avalon is responsible for responding to any barge incidents that may occur. If Avalon is positive that no barge incidents have occurred or will occur throughout operations, then it should be simple for them to commit to cleanup or salvage if any incident should occur. LKDFN believes that even though the material being shipped across the lake is supposedly “inert,” any deposition of a foreign substance into the lake is a potential source of contamination and it should therefore be mandatory that the material is removed.

**Measure:** That Avalon be required to remove any deposit of material into Great Slave Lake resulting from barge incidents.

## **Traditional Knowledge**

The traditional knowledge (TK) report developed to date was poorly conducted and ineffective for influencing the design of the mine, and the design of any programs that TK could drastically improve. With the Board's requirement to consider TK as carrying the same weight as scientific knowledge, the Board should reach the conclusion that TK has not been adequately considered throughout this review. The simple fact that Avalon submitted a document with "TK Report" in the title should not qualify as the meaningful incorporation of traditional knowledge. Lutsel K'e community members hold valuable information that could be used for improving the understanding of the area, and therefore enhancing the sustainability of the operation.

The measure suggested in the LKDFN presentation at the hearing would have the company come into the community and discuss the knowledge that the elders and community members have of the site, we also hope to continue to improve Avalon's proposed development by contributing TK on an ongoing basis for all aspects of the project moving forward.

## **Oversight**

The intention of this section is to provide a little more clarity to LKDFN's hearing presentation and follow-up questioning that occurred on February 19<sup>th</sup> 2013 on day two of the technical hearing. LKDFN requested that the Board produce a measure requiring the development of an oversight entity. The entity was referred to with a few different names, but it was all meant to be one entity that would be responsible for environmental oversight, similar to the operating diamond mines' oversight, but more substantial, to deal with the more substantial environmental concerns generated from this new type of mine. The rationale for this request is that we have heard throughout the review that this is a one-of-a-kind mine in Canada, and therefore it requires a one-of-a-kind oversight entity.

Along with the expertise required for adequate environmental oversight (wildlife, air quality, water, aquatic life, mine engineering, etc), this project demands that further expertise be attained to be able to comprehend and evaluate monitoring and mitigation measures in regards to the radioactive nature of the elements being mined and the waste products being produced. LKDFN believes that this project, more so than the diamond mines, has the potential for substantial and long-term environmental degradation attributed to regular operations and

potential accidents and unplanned releases of radioactive by-products into the receiving environment.

We alluded to the notion of the entity having qualities similar to nuclear power plants. To expand on this idea, we encourage the Board to consider some of the qualities of these oversight entities in light of the radioactivity concerns surrounding REE mining. The United States has a responsible authority for nuclear oversight, called the Nuclear Regulatory Commission (NRC), which above all else, has full authority to protect public health and safety concerns and may demand immediate actions, up to and including a plant shutdown (United States Nuclear Regulatory Commission, 2002). The NRC has the authority to conduct regular inspections (10-25 times per year) to ensure that the proponent is conducting activities properly and that equipment is well maintained to ensure safety of the operations (United States Nuclear Regulatory Commission, 2002). The NRC also ensures that corrective measures are taken when required, and that proper plans (emergency, radiation protection, environmental monitoring, fire protection, construction activities, etc) are in place to be prepared for any potential accident or malfunction at the site (United States Nuclear Regulatory Commission, 2002). The NRC responds to accidents and malfunctions by sending a team to the site to investigate any incident and may demand prompt corrective action to be taken immediately, to the exclusion of all other activities at site; their reports are public, and they seek feedback from various parties where appropriate (United States Nuclear Regulatory Commission, 2002). The key to this organization, that should be required at this mine site, is the ability to enforce corrective actions that need to be taken immediately, up to and including a plant shutdown.

In the LKDFN presentation, we mentioned the concerns held by the United States Environmental Protection Agency (USEPA) regarding REE mining and processing. In a document titled *Investigating Rare Earth Element Mine Development in EPA Region 8 and Potential Environmental Impacts*, the USEPA recognizes the need for proper oversight citing above all else that the lack of operations monitoring and the lack of the application of best management practices at the mine site, could result in REE production posing a significant risk to human and environmental health (Paul, 2011). USEPA states that the lack of effective monitoring of REE mining and refining can threaten human and environmental health, and that nowhere is this more apparent than in the nation that is dominating REE mining and refining today (Paul, 2011). Attached as an appendix to this presentation is the USEPA report, as we feel it is relevant to the review in order to determine best practices and avoid repeated mistakes of the industry that result in irreversible environmental effects. Specifically we would like to draw the Board's attention to section 6.0, *Potential Risks to Human Health and the Environment* which cites some of the major areas of concern for contamination with REE mining and processing.

The report mentions several key performance indicators in determining if the mine and related processing are effective. These include performance summaries, summaries of inspection reports, and historical performance of the mine to be able to evaluate improvement or decline in performance over time (Paul, 2011). Other performance indicators are industry trends, to continually improve best management practices, program evaluations for each of the monitoring programs, and of course, stakeholder feedback to be able to determine priorities (Paul, 2011).

LKDFN believes that these key performance indicators, and the authoritative powers given to the oversight board are necessary for a sustainable development. No other government agency or Board will hold this responsibility for this specific site, and production at Thor Lake and Pine Point will be carried out without any monitor other than the limited attempts by Avalon. It is not sufficient to allow the proponent to be their own watchdog, for we have seen time and time again the abilities of profit-driven companies to neglect environmental and human health concerns in the pursuit of a bigger payout. There is no need to jeopardize environmental or human health, when the answer is simply to have an oversight body responsible for this REE mine and processing plants.

**Measure:** That Avalon be required to work with aboriginal parties and responsible government authorities to develop an oversight entity that is responsible for all aspects of the operation, has powers of enforcement for significant areas of concern, and ensures that this development will not result in the environmental degradation suffered elsewhere in the world as a result of REE mining.

The idea of this mine not having a watchdog is a terrible notion considering the state of environmental concern of REE mining. The wording of the measure can change, but the essence of it must remain, that oversight for the sake of environmental and human health impacts must be developed.

## **Conclusion**

Regardless of the measures being accepted and enforced, LKDFN will be wary of the operations at Thor Lake and Pine Point, for we do feel that this project has the potential for significant and long term adverse environmental impacts. This regulatory process puts the onus on the developer to convince government and the public that they will not produce any significant adverse environmental impacts; but in no environmental assessment has the proponent ever



come back from a Developers Assessment Report (DAR) and/or Environmental Impact Statement (EIS) saying that too many adverse impacts exist, and that they will not be seeking permits because of environmental concerns. It is therefore placed in the hands of the reviewers of the project to really determine if the affects predicted are acceptable. So for this analysis the LKDFN looked globally, at REE mining, and though significant concern exists on an international scale, there are few examples of REE mines in countries with adequate environmental legislation to govern them. It is easy to see how REE mines in countries with low environmental standards can cause such significant impacts, but in this territory, our environments and ecosystems sustain us, and the land holds value beyond the minerals in the ground. We take measures to protect this valuable resource, without which, our territory will have the same fate as the countries with limited environmental protection, and this is not acceptable for sustainable development. It is necessary in this territory to use all available environmental protection resources and even suggest stronger ones (such as an oversight body with enforcement powers) in order to provide for the protection Lutsel K'e expects from the Mackenzie Valley Environmental Impact Review Board.

## References

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