



# Nunavummiut Makitagunarningit

January 16, 2015

## Comments on AREVA Resources Canada Inc.'s Final Environmental Impact Statement for the proposed Kiggavik uranium mine [NIRB File No. 09MN003]

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## Introduction

Nunavummiut Makitagunarningit (Makita) has completed its review of AREVA Resources Canada Inc.'s Final Environmental Impact Statement (FEIS) for the proposed Kiggavik uranium mine. Makita appreciates the opportunity to provide comment on AREVA's proposal and to act as an intervenor in the review of this proposal.

Makita requests that the Nunavut Impact Review Board (NIRB) not approve AREVA's Kiggavik proposal at this time. Makita believes approval for Kiggavik should be withheld until:

- AREVA further develops the Kiggavik proposal. The current proposal lacks concrete timelines for production, which makes all analyses of impacts on the ecological and socio-economic environment so uncertain that they are largely unreliable. Further, there are serious deficiencies in the analyses of cumulative effects and the choice of significance thresholds in the FEIS.
- Nunavut regulators implement a policy/planning framework capable of controlling induced development associated with the Kiggavik proposal. Kiggavik would be a "basin opening" project, leading to increased exploration and mining for uranium in the Kiggavik area. Nunavut requires a strategy to protect critical caribou habitat and places of high cultural value before approving a basin opening project like Kiggavik

Makita has prepared technical comments on the following sections of AREVA's FEIS, which support the above recommendation:

- 1) **Analysis of Project Need and Purpose.** AREVA does not provide a timeline for the construction and operation of the Kiggavik mine, and is seeking permission to construct Kiggavik at some undetermined (and possibly entirely hypothetical) point in the future after uranium markets have rebounded. Makita is aware that many industry analysts believe that it may be a considerable period of time before the price of uranium is high enough to make a relatively marginal project like Kiggavik economically viable. In the interim, the analyses contained in the FEIS will become outdated, as baseline conditions change. This makes all analyses and conclusions contained in the FEIS so uncertain that they are largely unreliable. Makita believes AREVA may simply be moving the Kiggavik project through the assessment process in order to sell it to another company. AREVA SA (the parent company of AREVA Resources Canada) has undergone significant financial turmoil in the recent past, and is in the process of liquidating assets in order to balance its books.
- 2) **Cumulative effects assessment for caribou.** AREVA has acknowledged that its goal for the Kiggavik project is to provide a base of operations for future uranium development in the area. Kiggavik is surrounded by other uranium mineralization and exploration projects. If AREVA is permitted to construct infrastructure (road and mills) in the area, it will significantly decrease the overhead costs for other companies to open mines in the area. As a result, if Kiggavik is approved, it will make the Baker Lake area much more attractive to the uranium industry, leading to increased exploration and mining for uranium in the area. This is called "induced development". An analysis of cumulative

effects should consider the basin opening potential of this project. A central component of an analysis of induced development should be consideration of whether or not Nunavut has a policy/planning framework capable of controlling induced development and ensuring it does not significantly affect caribou and the caribou hunting culture of Baker Lake Inuit. No such analysis is presented in AREVA's FEIS. Makita believes that the current policy/planning framework in Nunavut is incapable of controlling the induced development Kiggavik would bring.

- 3) **Significance threshold for impacts on wildlife.** The significance thresholds selected by AREVA for wildlife define significant impacts as impacts that will threaten the long-term viability of the population. This is a very high-scale and abstract way to define significance. Makita believes that such an abstract conceptualization of significance is inappropriate for assessing impacts on wildlife species that Inuit rely upon for subsistence purposes. Under the current conceptualization, it would not be deemed significant if caribou avoided the Baker Lake area for the entirety of the project lifespan, so long as the herds were not entirely and permanently destroyed. A scenario of this sort would clearly constitute a significant impact for Inuit hunters and their families in Baker Lake. Due to the choice of inappropriate significance thresholds, AREVA's analyses of all wildlife species harvested by Inuit are inadequate.
- 4) **AREVA's Approach to Sustainable Development.** AREVA boasts that it has a strong commitment to sustainable development, including its "social responsibility that requires participation in community development and establishing relationships of trust." In support of this claim, AREVA provides a lengthy description of its operations in Saskatchewan. Makita believes that AREVA's portrayal of itself as a socially responsible enterprise is inaccurate, especially with regards to AREVA's operations in many African countries. Makita has acquired several documentary films which demonstrate the negative impacts AREVA's mines have had in Gabon and Niger. Makita requests that the NIRB provide the opportunity for Makita to present this evidence to the NIRB board, intervening parties, and residents of Baker Lake during the public hearing.

## 1. Project Need and Purpose [Volume 1, Section 1.3]

AREVA's FEIS includes only a brief discussion of the economic feasibility of the Kiggavik project, and notes that the price of uranium was too low to justify project commencement during the preparation of the FEIS.

“The economic feasibility of the Kiggavik Project depends on 1) the production cost for the uranium concentrate including construction, operation and decommissioning costs and 2) the market value of the final product. An Initial Feasibility Study (IFS) for the Kiggavik Project was completed in November 2011. The study assessed the technical and economic viability of developing and operating a uranium mine and mill site in the Kiggavik area and estimated the capital cost of the Project at \$2.1 billion and the operating cost at \$240 million per year. This initial feasibility study will be updated and refined prior to a development decision. The market price for uranium concentrate over the last years has been within the range needed for a reasonable return on investment to its owners, however at the time of FEIS preparation was below the threshold needed for Project advancement. AREVA believes future opportunities are strong enough to encourage Project advancement with the intent of development that will coincide with viable future markets.”

AREVA is, in effect, seeking approval for the Kiggavik project now, with the intention to construct Kiggavik at a later, undetermined date, when the price of uranium hypothetically rises. For a variety of reasons, it is possible that the price of uranium will remain too low to construct Kiggavik for quite some time:

- Nuclear power is already a largely uneconomical source of power, due to the high costs of reactor construction and maintenance, as well as waste storage. The recent boom in shale oil/gas and other unconventional sources of fossil fuels has flooded the market with cheap petroleum, out-competing nuclear. The subsidization of alternative energy sources (solar and wind) has further flooded the supply side of the energy market (especially in the United States). The United States' reactor fleet is aging. While many reactors are scheduled to be decommissioned in the coming years, few reactors are being built to replace them. As a result, the demand for uranium may remain low for quite some time.
- The demand for nuclear power has as much to do with national politics as it does with global economics. While the current government of Japan intends to begin restarting its nuclear-fleet, a future government may reverse this decision. Indeed, there is a very strong and determined anti-nuclear movement in Japan which may well force its government to discard its plans for a nuclear future. Further, construction of new reactors has, and continues to, face stiff opposition from many residents of India.
- Kiggavik is a relatively marginal ore body, located in a territory with no transportation infrastructure and extreme climatic conditions. There are numerous other proposed/mothballed uranium mines that have lower overhead/fixed-capital costs than Kiggavik, which would come on-line and depress market prices before Kiggavik ever becomes viable. Low cost uranium is being developed in other parts of the world, especially in-situ leach mining but also open pits in much less hostile climates and (even)

less demanding regulatory regimes. It is more likely that shuttered mines in Namibia, for example, would re-open -- or new mines would open in Niger, the USA, and Kazakhstan.

As a result, there is potential for AREVA (or a possible future owner of the Kiggavik project) to wait an unacceptably long time before project commencement. If project commencement occurs five years or more into the future, many of AREVA's analyses of impacts to wildlife, water quality, and community economies may be so out of date that they are largely irrelevant. The baseline conditions AREVA relies upon for its analyses may change drastically in five to ten years. Climate change is predicted to alter water conditions and caribou habitat. More mines could be built in the interim, which could seriously change the conditions of caribou herds, caribou habitat, ground water quality, surface water quality, and the socio-economic environment. Further, other changes in demographics in the Kivalliq region may seriously alter the socio-economic environment and harvester pressure on caribou herds. Taken together, these changes could make AREVA's analyses (and, by extension, AREVA's proposed mitigation measures) out of date, irrelevant, and effectively useless.

Makita does not agree with allowing AREVA to proceed through the assessment process in this manner.

In other jurisdictions, strict timelines are included in project approvals which stipulate that developers must begin construction within a specified period following the granting of approval. For example, the National Energy Board's March 2011 project certificate for the Mackenzie Gas Project contains a "sunset clause":

"Unless the NEB otherwise directs, this Certificate shall expire on 31 December 2015 unless construction in respect of the Mackenzie Gas Project has commenced by that date."<sup>1</sup>

With this clause a federal regulatory agency gave the proponent less than five years from the date of approval to actually commence construction of the project.

Makita also notes that federal legislation has recently been passed which would place similar restrictions on developers operating in Nunavut. The *Nunavut Planning and Project Assessment Act* stipulates that project proponents must commence a project within 5 years of the granting of approval, or the project will be subjected to a new assessment and the proponent will have to submit a new proposal.

"147. (1) If a project is not commenced within five years after the day on which the project was approved under this Part, that project is subject to a new assessment under this Part.

(2) It is prohibited to carry out the project referred to in subsection (1) in whole or in part, but the proponent may submit a new project proposal in relation to it in accordance with section 76.

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<sup>1</sup> <https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll&objId=674486&objAction=browse> (Clause 74, p. 30)

(3) The person or body exercising powers or performing duties or functions under this Part in respect of the project referred to in subsection (1) must consider, and may rely on, any assessment activities carried out under this Part in respect of the project.”<sup>2</sup>

Makita notes that this new legislation has yet to be implemented, and that it is not being applied to the review of AREVA’s proposed Kiggavik mine. However, Makita also notes that this legislation was developed by the Nunavut Legislative Working Group, which contained representatives from Aboriginal Affairs and Northern Development Canada (AANDC), Nunavut Tunngavik Inc. (NTI), and the (Government of Nunavut (GN), and was supported by the Nunavut Planning Commission (NPC) and the NIRB.<sup>3</sup> Therefore, the framework contained in this new legislation seems to have consensus support from the regulators of land use in Nunavut. AREVA’s proposal, lacking in timelines, clearly does not conform to the framework for project approval which has received broad support from all regulators in Nunavut.

AREVA has had significant financial issues in the recent past. AREVA’s credit rating was reduced to “junk” in November 2014, seriously limiting its access to financial markets. Reuters reported that a variety of factors has left AREVA without the earnings to repay its debts.

“With billions of capital destroyed by writedowns on a Finland reactor project and an African uranium mine and its revenue crimped by a post-Fukushima dearth of reactor orders, Areva lacks the earnings to repay debt and is seeking to delay payment by extending its bond maturities.

The 87 percent state-owned firm has already cut spending and investment to the bone and has few assets left to sell, while a capital increase has been ruled out for now.”<sup>4</sup>

Reuters noted that AREVA has few attractive assets to sell to raise funds, aside from uranium mining and nuclear fuel projects.

“Analysts doubt anyone would want to buy into Areva's loss-making reactor division, tainted by cost overruns. But its uranium mining and nuclear fuel divisions -- accounting for most of the company's 1.04 billion euros 2013 core earnings -- would be attractive, particularly for China, which is keen to secure uranium supplies for its growing nuclear fleet.”

If AREVA were to sell Kiggavik following NIRB approval, would a new project operator/owner abide by the numerous oral/informal promises AREVA representatives have made to residents of the Kivalliq since 2006?

Makita believes that the lack of a reasonable project timeline in the Kiggavik FEIS, combined with the high likelihood that AREVA simply plans to sell the project once it is approved, indicates that AREVA’s proposal is not sufficiently developed and should not be approved at this

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<sup>2</sup> <http://laws-lois.justice.gc.ca/eng/acts/N-28.75/FullText.html>

<sup>3</sup> <https://www.aadnc-aandc.gc.ca/eng/1352232572579/1352232614417>

<sup>4</sup> <http://uk.reuters.com/article/2014/11/28/areva-debt-idUKL6N0TH31X20141128>

time. The analyses in the FEIS are likely to become outdated, due to changes in baseline conditions, long before Kiggavik is ever built. As a result, Makita strongly recommends NIRB return the Kiggavik proposal to AREVA for further development.

## 2. Cumulative Effects Assessment for Caribou and the basin opening nature of the Kiggavik proposal [Volume 6, Section 13.3]

One of Makita's core concerns with the Kiggavik proposal is the "basin opening" nature of the project. If AREVA builds a road and mill for Kiggavik, it will drastically lower overhead costs for other companies to open uranium mines near Kiggavik. Companies operating nearby could utilize AREVA's road and milling infrastructure. This would make ore bodies that would have otherwise been marginal into economically viable projects. As a result, if AREVA receives permission to construct a road and mill, it is likely to result in increased exploration for uranium in the Baker Lake area. If AREVA actually builds a road and mill, it is likely to result in numerous other uranium mines opening in the area. Indeed, AREVA has publicly admitted that its goal for the Kiggavik project is to provide a base of operations for future uranium mines in the area.<sup>5</sup>

The basin opening nature of Kiggavik needs to be taken into consideration in any analyses of cumulative effects. This requires an assessment of whether or not Nunavut currently has a policy/planning framework capable of controlling induced development. Induced development could be controlled through a land use plan and other legislation which ensures that mining and exploration does not take place in critical caribou habitat and areas of high cultural value to Inuit. However, AREVA's FEIS does not consider the ability of Nunavut's policy/planning framework to control induced development in its analysis of cumulative impacts on caribou. Regardless, Makita believes that the current planning/policy framework is insufficient to protect critical wildlife habitat and important Inuit cultural areas from induced development. There is currently no adequate protection for critical caribou habitat and areas of high cultural value in the Kivalliq region.

Makita notes that the Baker Lake Hunters and Trappers organization (HTO) submitted a list of conditions that were to be satisfied before it would support the Kiggavik proposal. Included was the insistence that mining and exploration be banned in critical caribou habitat (calving and post calving grounds) and in areas of high cultural value.<sup>6</sup> The submission notes that there are uranium properties in/near areas of high cultural value and caribou calving and post calving grounds. The Baker Lake HTO attempted to have these areas protected through the Nunavut Planning Commission (NPC)'s development of a territorial land use plan for Nunavut. The Baker Lake HTO submitted a map to the NPC, indicating areas they wanted protected.<sup>7</sup> However, this map does not appear to be included on the NPC's consultation record, and it is unclear whether or not it was incorporated into the Draft Land Use Plan. The Baker Lake HTO also wrote to the

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<sup>5</sup> Frederic Guerin, Nicola Banton and Barry McCallum, 'The Kiggavik Project: Designing Uranium Development in Nunavut', presentation to the 4th International Professional Geology Conference, Vancouver, Jan. 24, 2012,

[http://www.ccpge.ca/news/en/Documents/5\\_AREVA%204th%20IPGC%20Jan%2024.ppt](http://www.ccpge.ca/news/en/Documents/5_AREVA%204th%20IPGC%20Jan%2024.ppt)

<sup>6</sup> <ftp://ftp.nirb.ca/02-REVIEWS/ACTIVE%20REVIEWS/09MN003-AREVA%20KIGGAVIK/2-REVIEW/02-GENERAL%20CORRESPONDENCE/140408-09MN003->

<BL%20HTO%20Ltr%20to%20Dist%20Re%20Conditions%20of%20Project%20Support-IEDE.pdf>

<sup>7</sup> [http://www.nunavut.ca/files/reports/2014-01-21\\_Baker\\_Lake\\_Report.pdf](http://www.nunavut.ca/files/reports/2014-01-21_Baker_Lake_Report.pdf) (p. 18)



NPC, requesting that mining/exploration be banned in caribou calving grounds.<sup>8</sup> The NPC received similar calls to ban mining in caribou calving grounds from a wide array of commenting parties, including the Government of Nunavut (GN), the Nunavut Wildlife Management Board (NWMB), the Kivalliq Wildlife Management Board (KWB), the Repulse Bay HTO, and the Beverly and Qamanirjuaq Caribou Management Board (BQCMB).<sup>9</sup> The BQCMB's submission includes letters and motions opposing mining/exploration in calving grounds from the Arviat, Baker Lake, Chesterfield Inlet, Repulse Bay and Whale Cove HTOs.<sup>10</sup> There is clear and widespread support for the banning of mining/exploration in caribou calving grounds from Nunavut's wildlife management institutions and the Government of Nunavut.

The NPC's Revised Draft Nunavut Land Use Plan, released in the summer of 2014, includes partial protection for caribou calving and post calving grounds. However, areas already identified as having high mineral potential will remain open for development in these critical caribou habitats. The NPC's draft plan therefore does not seem to properly incorporate the direction of Nunavut's wildlife management institutions. Regardless, the planning process is now tied up in court proceedings, after the federal government refused to fund a final hearing for the NPC's draft land use plan.

The Kiggavik proposal is continuing through the NIRB process, despite the fact that habitat protection measures insisted upon by Nunavut's wildlife management institutions and the Government of Nunavut have not been adopted and implemented. Further, protection for areas of high cultural value, insisted upon by the Baker Lake HTO, has not been provided. As a result, Nunavummiut Makitagunarningit believes that the Kiggavik proposal and its basin opening potential poses a serious threat to the long-term viability of the Kivalliq region's caribou herds and the land based culture of Baker Lake Inuit. As a result, Makita strongly recommends NIRB not approve the Kiggavik proposal until planning/policy measures capable of controlling induced development are implemented.

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<sup>8</sup> <http://nunavut.ca/files/2014-06-20%20NPC%20Response%20to%20Baker%20Lake%20HTO.pdf>

<sup>9</sup> <http://www.northernpublicaffairs.ca/index/from-the-magazine-mining-in-caribou-calving-grounds-canada-nunavut-beat-the-status-quo/> (p. 5)

<sup>10</sup> <http://www.nunavut.ca/files/2014-02-14%20BQCMB%20comments%20re%20DNLUP.pdf> (p. 23)

### **3. Significance Thresholds for Wildlife Species Harvested by Inuit [Volume 6, Section 13.1.3]**

In the FEIS, AREVA describes the significance thresholds it employed to determine whether or not project effects on wildlife are significant. For example, AREVA defines significant impacts on caribou “based on whether the effect influences the long-term viability of a population or delays its recovery.” Similar thresholds are employed for other wildlife species Inuit harvest (seals, beluga whale, wolf, fox, wolverine, etc.).

Makita believes the significance thresholds selected by AREVA are inappropriate for wildlife species Inuit depend upon for subsistence harvesting. The thresholds chosen operate on an extremely abstract scale. As a result, smaller changes in caribou distribution are not captured in AREVA’s significance thresholds. However, these smaller changes may be extremely significant to Inuit hunters and their families. For example, under the current conceptualization, it would not be deemed significant if caribou avoided the Baker Lake area for the entirety of the project lifespan, so long as the herds were not entirely and permanently destroyed. A scenario of this sort would clearly constitute a significant impact for Inuit hunters and their families in Baker Lake. Due to the choice of inappropriate significance thresholds, AREVA’s analyses of all wildlife species harvested by Inuit are inadequate.

#### 4. AREVA's Approach to Sustainable Development [Volume 1, Section 1.6.1]

AREVA boasts that it has a strong commitment to sustainable development, including its "social responsibility that requires participation in community development and establishing relationships of trust." In support of this claim, AREVA provides a lengthy description of its operations in Saskatchewan.

Makita believes that AREVA's portrayal of itself as a socially responsible enterprise is inaccurate, especially with regards to AREVA's operations in many African countries.

In 2012, Raphael Granvaud published *AREVA en Afrique*, a book written in French, which documents the history and present-day realities of AREVA's uranium mining operations in Niger and Gabon. A press release accompanying the book<sup>11</sup>, translated into English<sup>12</sup>, states the following.

"Niger has only inherited a triple catastrophe: an environmental catastrophe, a health catastrophe and a social catastrophe", stated the author. According to various NGOs, only 12% of the value of Nigerian uranium returned to the country. Niger powers one in three French lightbulbs but it imports electricity from Nigeria, and the majority of Nigerians don't even have electricity."

A 2010 article in *Spiegel*, a newspaper published in Germany, deals with AREVA's operations in Niger. The article documents illness among former AREVA workers, the role of AREVA's operations in fomenting political instability in the region, and the lack of economic benefits to the people of Niger, which remains one of the poorest countries in the world.<sup>13</sup>

Makita has acquired several documentary films which demonstrate the negative impacts AREVA's mines have had in Gabon and Niger. Makita requests that the NIRB provide the opportunity for Makita to present this evidence to the NIRB board, intervening parties, and residents of Baker Lake during the public hearing.

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<sup>11</sup> <http://survie.org/francafrrique/diplomatie-business-et-dictatures/article/l-epopee-d-areva-en-afrique-sortie>

<sup>12</sup> <https://makitanunavut.files.wordpress.com/2012/05/surviepressrelease.pdf>

<sup>13</sup> <http://www.spiegel.de/international/world/uranium-mining-in-niger-tuareg-activist-takes-on-french-nuclear-company-a-686774.html>