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NUNAVIK REGIONAL BOARD OF HEALTH AND SOCIAL SERVICES
RÉGIE RÉGIONALE DE LA SANTÉ ET DES SERVICES SOCIAUX NUNAVIK

**RECOMMENDATIONS CONCERNING HEALTH AND
SOCIAL SERVICES ISSUES FOR THE PREPARATION OF
THE GUIDELINES FOR THE RARE-EARTH MINING
PROJECT IN ZONE-B OF STRANGE LAKE IN NUNAVIK**

RECOMMENDATIONS SUBMITTED BY THE
NUNAVIK REGIONAL BOARD OF HEALTH AND SOCIAL SERVICES
TO THE
KATIVIK ENVIRONMENTAL QUALITY COMMISSION

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Recommendations concerning health and social services issues for the preparation of the guidelines for the rare-earth mining project in Zone-B of Strange lake in Nunavik

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1. INTRODUCTION

The Kativik Environmental Quality Commission (KEQC) recently began work on the preparation of the guidelines for the impact study on the environment and social aspects of the rare-earth mining project in Zone-B of Strange Lake in Nunavik. The site under study is located near the Labrador border, more than 300 km south of Kuujjuaq and Kangiqsualujjuaq and some 200 km northeast of Schefferville, Kawawachikamach and Matimekush-Lac John.

The recommendations formulated hereunder are based on the Health impact assessment (HIA).¹ The AHI is an assessment process of a development project's potential repercussions on the population's health and the social distribution of those effects, starting from the planning stages of the project, with the goal of reducing the negative effects of projects and maximizing their positive effects on health and well-being. This process is meant to be a complement to the Québec procedure of environmental assessment.

In effect, large-scale development projects are presently subjected to the Québec procedure for assessment and review of environmental impacts, as described in the provincial legislation. In principle, the effects on population health must be taken into account. However, in current practice in Québec and elsewhere, those effects are very often assessed in impact studies from the angle of issues related to the physical environment, particularly when it comes to issues of environmental health. Other questions are not as well documented, notably the issues related to social determinants of health (such as food security, lifestyles, socioeconomic characteristics, at-risk behaviour, social and cultural integration, family environment, health and social services, and so forth).

The present recommendations were designed from the perspective of better consideration for the populations' health and well-being issues² which could be integrated with those to be presented by the KEQC in its guidelines to the proponent.

Note that the Nunavik Regional Board of Health and Social Services (NRBHSS) observes a holistic definition of health. In effect, from the Inuit point of view, health and well-being are based on a strong feeling of identity and belonging to the culture and the environment, on an understanding of an individual's role with regard to others and on the feeling of contributing to the common good. That collective vision of health and well-being is maintained among the Inuit from generation to generation and is anchored in Inuit cultural tradition. It is holistic in that it considers all aspects of life and the environment as being interconnected. In that perspective, health encompasses all dimensions: physical, psychological, social and spiritual.

¹ INSPQ (pending). Évaluation d'impact sur la santé: Guide relatif aux grands projets de développement. Québec: Institut national de santé publique, 48 p.

² See the summary of its role and responsibilities in relation to mining developments in appendix.

Further, the guiding principles of risk management underlie the recommendations in the present document. Those principles are described in the *Cadre de référence en gestion des risques pour la santé dans le réseau québécois de la santé publique*³ [Reference framework on management of health risks in the Québec public-health network], adopted in 2003 by the directors of Public Health of all the regions of Québec.

2. RECOMMENDATIONS

The NRBHSS' opinion is that all the significant health and social services issues that could arise during the various stages of the project's life cycle—construction, exploitation and closing of the site—must be taken into account in the proponent's impact study. During the assessment of both the project's positive and negative impacts, the proponent must also elaborate on their distribution among the Inuit population as well as the particular anticipated repercussions on vulnerable populations.

The assessment of health impacts must be based on the best available data relative to the various health determinants. When insufficient in quantity or quality, those data should be completed through studies conducted according to good practice. The proponent should validate the choice of health issues documented in the impact study. Nevertheless, it should pay particular attention to certain major issues identified by the NRBHSS and presented further in the document. For those issues, it should document the anticipated impacts and identify the required measures for mitigation, benefit enhancement and monitoring.

Occupation and Use of the Territory

Traditional foods and the activities of hunting, fishing, trapping and gathering are of considerable, indeed capital, importance for the health, well-being and cultural identity of the Inuit. These activities contribute significantly to the nutritional intake and food security of *Nunavimmiut* as well as to the mental health of individuals and the vitality of the Inuit communities' social fabric.

A large variety of migratory and non-migratory animal species, including several that represent traditional foods for the Inuit, thrive in the zone targeted by the project. Among those are caribou of the George River herd, various species of waterfowl, small game and fur-bearing animals as well as a diversity of fish species.

On one hand, the road connecting Labrador to the mining site and the presence of workers on the site are likely to open up greater access to the Nunavik territory for hunters and fishers. Conflicts related to territory use could thus emerge. On the other hand, the road and the mining activities (physical barrier, noise, etc.) could disrupt the migration and reproduction of species of importance to the Inuit (caribou, waterfowl, fish and so forth). These two factors could have an effect on the availability of traditional foods for the Inuit.

³ INSPQ. 2003. Cadre de référence en gestion des risques pour la santé dans le réseau québécois de la santé publique. Québec: Institut national de santé publique, 85 p.



1. The NRBHSS recommends that the proponent document the occupation of the territory and the use of resources by aboriginal populations (Inuit, Innu, Naskapi) on the study site and surrounding area. The proponent must take particular care to detail the existing outfitters and the routes privileged by Aboriginals toward and through the site, according to season, from the regions of Kuujjuaq, Kangiqsualujjuaq, Matimekush-Lac-John, Kawawachikamach as well as the Inuit and Innu regions of Labrador.
2. The NRBHSS recommends that the proponent document the project's impacts on the availability of various traditional foods for the Inuit of Nunavik and the potential conflicts regarding territory use. The proponent must include how it expects to manage the hunting and fishing activities of its employees, both beneficiaries and non-beneficiaries of the *James Bay and Northern Québec Agreement (JBNQA)*. It must describe the policy on use of the road from the Labrador coast to the site and how it expects to mitigate the potential impact of increased access to Nunavik made possible by this new road link.

Possible Human Exposure to Environmental Contaminants

The U.S. Environmental Protection Agency⁴ reports that rare earths sometimes contain radioactive elements such as thorium and uranium. If so, these radionuclides, as well as other contaminants from mining activities, could represent a human health issue as they could be released in the environment and could potentially enter the food chain of the Inuit, notably through contamination of migratory species such as caribou and waterfowl. Those contaminants are also likely to enter the hydrological system of the George River basin and thus contaminate the fish that could then be consumed by the Inuit. Note that a mere reduction in Inuit confidence in the safety of traditional foods, whether truly contaminated or not, could translate into a drop in consumption of traditional foods and, consequently, have a significant effect on the food security of *Nunavimmiut*.

3. The NRBHSS asks that the proponent document the presence of radionuclides in the ore to be extracted and assess the impact on human health for the workers and the Inuit population resulting from the potential contamination of the site by contaminants released by mining activities, including radionuclides. That assessment should include an estimate of the exposure linked to possible contamination of traditional foods by using a model based on Inuit eating habits. The proponent must also describe its environmental-monitoring program.

Employability

The creation of a large-scale mining project in Nunavik always signifies an important possibility for job creation. In the context of an isolated region where employment opportunities are fewer than elsewhere, it is important to take into account the local and

⁴ EPA (2012). Rare Earth Elements : A review of production, processing, recycling and associated environmental issues. Washington: United States Environmental Protection Agency, Office of Research and Development.



regional populations directly affected by the project during hiring efforts. On the other hand, given that the population has limited access to post-secondary education on the Nunavik territory, it can be quite difficult to obtain the qualifications necessary to occupy certain positions in the mining industry, and measures fostering employment of Inuit become particularly important.

4. The NRBHSS recommends that the proponent document the employability measures specifically aimed at *Nunavimmiut* and which it intends to apply in order to facilitate access to mining jobs and certification for the Inuit of Nunavik (proportion of jobs reserved for *Nunavimmiut*, communities to be served by fly-in, fly-out transportation services — FIFO, training program for the mining sector, etc.). The proponent must also describe the privileged solutions in view of improving retention of the Inuit workforce within the mining sector.

Psychosocial Impacts

In Nunavik's social context, where interactions with family and friends are very frequent and spontaneous, it could be psychologically difficult for an individual to leave his/her community for long periods and be exposed to another culture in a situation of total isolation without the support of loved ones, in terms of FIFO-type jobs. As with workers from other regions, the family unit could be affected by the FIFO arrangement, as much for the spouse and the family who remain in the village as for the worker who leaves.

The fatigue caused by long shifts and long work periods can have an impact on the workers' mental health if adequate measures are not planned. Moreover, a work environment involving a pool of workers from the southern regions of Québec mixing with workers from Nunavik is a potential source of conflict. Programs fostering a mutual understanding of the different cultures, smoothing over prejudices and enabling exchanges, take on primordial importance. A remote mining complex is a microcosm where relations must be harmonious so that everyone is able to maintain equilibrium.

5. The NRBHSS recommends that the proponent document the anticipated psychosocial impacts due to the FIFO arrangement as well as the mitigation measures, as much for the workers as for their spouses and other family members. The proponent must also describe the linguistic and cultural-integration policies and the measures supportive of good mental health and wellbeing⁵ it intends to establish on the mining site. It must also specify the policies concerning intimidation, harassment, alcohol and drug use on the site, and the control measures to be applied.

Health Services on the Mining Site and Links with the Health Network

The context of extreme isolation unique to the unorganized territory of Nunavik requires particular attention in terms of the interface between the institutions of the health network and mining enterprises. Occupational and non-occupational health problems that

⁵ For information on the subject: <http://www.miningfm.com.au/news/news-archive/1133-fifo-inquiry-recommends-industry-wide-code-of-practice.html>



necessitate urgent and non-urgent evacuations represent a challenge not seen elsewhere. Further, the organization of health services on a mining site must cover the impossibility of transferring a sick or injured worker due to unfavourable weather conditions, for example in case of fog or blizzard. Consequently, there is a particular need to ensure the availability of certain medications on site. Globally, the organization of a health service on an extremely isolated mining site must deal with those challenges in terms of both supplies and human resources.

6. The NRBHSS recommends that the proponent produce an organization plan for its health services. That plan must provide for the availability of competent human and physical resources sufficient to respond to the particular needs related to isolation and the challenges of a harsh climate. It must take into account not only the number of workers but also the possibility of delayed transfer in case of illness or injury as well as on-site availability of medications that need to be administered rapidly.
7. Moreover, the NRBHSS recommends that the proponent describe the organization as well as the corridors for health services, whether for urgent or non-urgent transfer, which should translate into service agreements with the institutions of the region's health network or those outside the region.

Social Involvement

8. To ensure a maximum of regional benefits, the NRBHSS would like the proponent to integrate benefit-enhancement measures in the areas of health and social services into the Impact and Benefit Agreement to be negotiated with the stakeholders of Nunavik.
9. Finally, the proponent should indicate how it intends to carry out a regional rendering of accounts relative to the enterprise's social responsibility, including the issues of respect for the standards and laws in effect, local investments, voluntary aid initiatives and the protection of the health of workers and local communities.



APPENDIX

NUNAVIK REGIONAL BOARD OF HEALTH AND SOCIAL SERVICES MANDATE RELATIVE TO MINING DEVELOPMENT

In accordance with its mandate, the Nunavik Regional Board of Health and Social Services (NRBHSS) acts on a multitude of fields concerning the population's health.

Through its Department of Public Health, the NRBHSS is responsible for monitoring the population's state of health and its determinants, identifying situations involving health risks, notably those likely to represent a threat to public health due to their biological, chemical and physical nature, conducting the necessary investigations for that purpose and recommending or seeing to the application of measures for preventing or reducing the effects of those threats to the population's health. Its role also involves prevention and the preparation of response to emergencies that could arise on the Nunavik Northern Villages territory, as well as assumption of responsibility during and after an event (application of emergency measures, population monitoring and statements on operations).

Québec legislation assigns to directors of Public Health the responsibility of ensuring application of specific health programs for establishments (section 127 of the *Act respecting occupational health and safety*, Ch.S-2.1), which must be set up on mining sites. Section 113 of that same statute prescribes the elements that must be covered, notably the measures aimed at identifying the health risks to which workers are exposed when performing their tasks and ensuring monitoring and assessment of the quality of the work environment.

As nutrition and food security are recognized as important health determinants, Public Health is also involved in the promotion of healthy eating and the improvement of food security, especially by promoting the consumption of traditional foods (Arctic char, caribou, ptarmigan, beluga, etc.). The interventions and programs target, among other things, the reduction of the incidence of cardiovascular diseases, diabetes and excess weight caused by overconsumption of foods high in calories and low in nutrients. They also aim for the creation of partnerships with other regional and local organizations toward the improvement of food security and the promotion of healthy eating habits.

The NRBHSS is responsible for informing its region's population of the overall state of health of its individual members, the health problems taking priority, the most-vulnerable groups, the principal risk factors and the interventions deemed most effective. It also plays a role in the prevention of negative psychosocial impacts and the promotion of mental health.