

A Needs and Feasibility Study for a Comprehensive Assessment of Exposure to Mercury [and other contaminants] and Health Status of Eeyouch of Eeyou Istchee

Final Report

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Submitted by:

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Introduction

Study Objectives

The objectives for the Needs/Feasibility Study were:

- Carry out an intensive consultation process with all the Cree communities-and entities to determine local environment-and-health-issues;
- Explore the need and interest for an Oujé/Nemaska type contaminant exposure/health status study that reflects the concerns of the communities and entities;
- Develop a detailed study proposal that includes the information and direction received during the local consultations.

Overview of Consultations

From December, 2003 until May, 2004, with the assistance of Frances Couchees of the CBHSSJB, every effort has been made to schedule and attend meetings with various Cree entities and with the nine communities. Where possible, separate meetings with both the Chief and Council (including other relevant persons such as the Local Environmental Administrator and Community Health Representative) and the community were conducted. This format allowed for a direct interaction with the Chief and Council and others familiar with environment-and-health issues the communities face and provided a venue for community members to express their individual concerns. The presentations to the various groups consisted of three or four short components: (1) a summary of recent developments within the CBHSSJB to reconstitute a mercury working group (by Deborah Schoen, Mathieu Treapanier or Elizabeth Robinson of the CBH); (2) the objectives and findings of the Oujé/Nemaska study (Evert Nieboer); (3) the proposed multi-community study (Nieboer and Eric VanSpronsen); and (4), an overview of the Eeyou Namess Corporation (ENC), its activities and how to apply for funding in support of community projects (Denise Perusse and Gloria Sealhunter). The ENC presentation was limited to Waskaganish, Eastmain, Wemindji and Chisasibi. Details of the visits are provided in the attached table. On average, 25-50 people attended each of the public meetings. For all sessions, translation was provided when needed by a local community member.

Cree Entity Visits

The proposal was well received and support was gained from all entities. Key contacts were made during these visits, including individuals who have access to reports that will be needed in writing the proposal for the project. Specific topics often suggested for consideration in the proposal were: i) safety of traditional foods in relation to infections transmitted by bacteria and parasitic pathogens; ii) public distribution of bagged meats that are not inspected, such as to the Elders (CTA); iii) leaded ammunition as a source of lead for the hunter, as well as consumption of lead-contaminated tissues (CTA); iv) inclusion of PCBs, dioxins and furans in the body-fluid screening parameters (TPDCRA); v) availability of completed studies that clarify the presence of mercury in various tissues of fish, fowl and game (JBACE); vi) the cost of the proposed study (JBACE); vi) input into the design of the food questionnaire (TPDCRA); and vii) the identification of sources of omega-3 fatty acids (i.e., contents in various traditional food types) (TPDCRA). Concerns about the food frequency questionnaire conducted in the Oujé study were voiced a number of times by both Cree entities and during the community visits (see below) in terms of the recall accuracy of foods eaten for an entire year. Clearly, approaches need to be designed to strengthen this component.

Community Visits

During the Chief and Council meetings and the community sessions, we were warmly welcomed and the proposed project was well received. A common theme that was brought up in each community was the confusion of why Nameless/researchers are now promoting the consumption of fish; for so many years now community members have been told to stop eating fish, especially during the last Mercury Agreement period. The research team learned through the visits that the younger people in the communities eat very little fish as they are still scared to eat them due to mercury. Competition from non-traditional food is also apparent. Another concern that was common to a number of communities was the use of pressure-treated wood to build the foundations for houses and buildings in the communities. This material can release arsenic on weathering. Also, a lot of concern for the degradation of the natural environment was brought up in each community, but it was noted that the present study would not be able to address such issues. Another query focused on possible health issues associated with the consumption of tissues with white spots (e.g., of fish, beaver and moose) and the taste/health of rabbits. Residence overcrowding appears to be a serious issue in some of the communities and may influence health status and this type of information needs to be collected through the questionnaire of the proposed study.

During the deliberations, a number of community-specific concerns were brought to the attention of the research team.

Obviously the concerns identified in the *Oujé-Bougoumou* meeting with the Band Council pertained to the environmental impact of mine tailings in their territory and are now concerned about the PCBs levels found in the health survey last year. It was strongly urged to include organochlorines in the array of contaminants to be examined, and that the results be translated into suitable advisories. Further, the need for routine testing of water, sediments and wildlife for contaminant levels was emphasized. Consistent with this was the recommendation that the proposed study go beyond just testing for mercury.

It was pointed out that historically *Waswanipi* was adversely affected by the mercury issue due to a chlor-alkali plant upriver from the community. Waswanipi had a fishery established near their community that had to be shut down due to the mercury levels in the fish. It was also identified that thyroid deficiencies may be prevalent and that the diabetes rates are among the highest in Waswanipi. Concerns were also raised about confidentiality of personal information (including medical). In the context of the consumption of traditional foods, the following issues were raised: the extent that migratory birds accumulate persistent pollutants in their southern habitats; the investigation of contaminants in wildlife should not be limited to fish and should be extended to animals and birds; and the need to determine what parts/organs of wildlife are most contaminated.

Thyroid-related health concerns were also found to be an issue in *Mistissini*. We were also told that there is active mining in the Mistissini territory and more are proposed to open. Council also recommended that the proposed study brochures be translated into Cree. As in Waswanipi, concern was expressed about the extent that migratory birds accumulate persistent pollutants in their southern habitats, as well as the long-range transport of air pollutants, especially from the south.

In *Waskaganish*, we were advised that the coastal communities have more migratory geese and so there may be more of a lead problem relative to Oujé/Nemaska and by analogy to Fort Albany. Leaded ammunition is still used prominently. Also, the people of Waskaganish are worried about the location of the dump and its proximity to the community and between the two rivers, stressing that

the drinking water quality may be an issue. We were told that the garbage is sometimes burned in the open to reduce the amount in the landfill with unknown consequences. Up-river mining was another worry. It is also important to note that some houses in the Waskaganish community have been built on swampy land and there is a mold problem due to increased moisture that causes an odour. From discussions, it became again clear that some of the younger people refrain from eating traditional foods, with contamination as one of the reasons.

The community-specific concerns expressed in *Eastmain* were: high prevalence of diabetes and elevated blood cholesterol levels, and river contaminants coming from upstream locations in relation to mining and forestry. The inclusion of trappers as a special group in the proposed study was encouraged and interest was expressed for a monitored fish distribution program for Elders.

In *Wemindji*, some issues arose surrounding the new incinerator and also the treatment of their water for uranium. The question was also proposed of a possible connection between the prevalence of diabetes and contaminants intake. Issues mentioned in relation to the new river-diversion developments concerned the viability of restocking fish and the change of the taste of fish with the water level (fish taste poorly when the water levels are low).

In *Chisasibi*, it was revealed that there is concern about mines and exploration for diamonds and gold in their territory. They are also worried about chemicals coming from the generating plants that are used to clean the turbines, as well as the use of herbicides under the hydro-lines. The community consultation in Chisasibi was by radio-phone-in-show. During it and the meeting with the Band Council, the following concerns were expressed: i) it is believed that their drinking water is not safe (“people are healthy in the bush but get sick when they are in the village”); ii) the river no longer freezes; iii) the “steaming” of the river makes people cough; and iv) the fatal congenital “Cree Disease” (i.e., leukoencephalopathy) was brought up and that it had not been evident in their recent past.

In *Whapmagoostui* concerns raised by the community included the health risks of eating non-traditional foods, the use of materials from the dump as cooking apparatuses, and poor air circulation in the houses that leads to molds. A major issue in the community is dust from the roads. People believe that it is causing respiratory problems such as asthma. The proximity of the airport to the community is also a worry for the people as the planes kick up dust and create fumes that the community can smell. The community’s dump is located just past the airport, which presents another concern for the community as it creates an odour and it is periodically burned. It was also mentioned that since the Le Grande project, the water level in their territory has also gone down. Other noteworthy points include a decrease in the thickness of the sea ice and also concerns about long-range transport of chemicals from the south.

The minutes for all of the meetings conducted are available upon request.

Development of a Proposal for a Multi-Community Contaminant Exposure and Baseline Health Study

During the months of March and April, 2004, a proposal for a multi-community environmental-and-health survey modeled after the Ouje-Bougoumou/Nemaska Study was prepared. It was decided that the service and research options available through the Atlantis Mobile Laboratory of the INSPQ would allow related community-specific issues not covered in the core study to be addressed. Of these, food safety was the most prominent, especially the need to implement an ongoing community-based programme to address this important issue. After extensive consultations between the researchers at the INSPQ and McMaster University and the principals at the CBH, a preliminary draft of the proposal was presented to the ENC Board on April 14. Even though there was considerable support for the comprehensive study outlined and approval was given in principle, some concerns were expressed about the comprehensiveness of the study, the effectiveness of the involvement of the Atlantis Mobile Laboratory, especially its impact on the cost, as well as the ability to launch the study during the summer of 2004.

Even though a preliminary second draft of the proposal was prepared by April 23, 2004, but not submitted to the ENC Board, it became obvious that it was not possible to bring Atlantis to one or more communities on short notice, to obtain the approval of the selected Cree communities, to assemble the inter-institutional team planned (CBH, INSPQ, McMaster University, CINE as McGill and the University of Montreal), to strengthen some parts of the protocol (especially the food consumption questionnaire and food safety issues), to obtain the appropriate ethics board approvals and to permit external review of the proposal to be completed. Clearly, more preparation time was needed.

During the subsequent deliberations, a number of issues arose that reinforced the need to proceed more thoughtfully with the planning. It was felt that there were several issues that required additional consideration. (1) The development and delivery of long-term monitoring programs to address risk associated with human exposure to mercury and other contaminants, as stated in the New Mercury Agreement. (2) The link and integration of the previous objective into the CBHSSJB's internal Public Health Department Mercury Program and activities/sub-groups (Health Study Team; Mercury Working Group; Mercury Advisory Group; Diabetes Working Group; Nutrition Working Group, etc). (3) How best to implement a permanent food safety program in parallel with the ENC's and CBHSSJB's efforts to promote increased consumption of traditional foods. (4) Since food safety clearly is an important issue for Traditional Pursuits Agency of the Cree Regional Authority as well as the Cree Trappers' Association, their participation in the development of a program needs to be considered. (5) To determine if the Atlantis Mobile Laboratory can be effective in promoting and being part of long-term, community-based and -empowered environment-and-health programs. (6) Objective 1, 3 and 5 would entail the development of an effective environment-and-health education program. A request to ENC for some additional funding to pursue these various issues before presenting a final draft of the study proposal was not supported. Subsequently, the CBHSSJB has made a commitment to explore these various components and continues to seek funds to do so.

Community Follow-Up

Two letters are attached to this report. The first was sent to the communities along with a copy of the minutes of the public meeting with the council and a study progress report. The distribution of the second letter is to coincide with the submission of this report.

Summary of Consultations

Community/Organization	Date	Place	Activity
Cree Trappers' Association (CTA) Executive	Nov 26-27	Val d'Or	Meeting with the Executive of the CTA (Nieboer and Robinson)
Cree Board of Health (CBH)	Dec 11	Montreal	Information and planning session at the CBH
James Bay Advisory Committee on the Environment (JBACE)	Dec 12	Montreal	Meeting with the Board of the JBACE (Nieboer and Trepanier)
Cree Trappers' Association (CTA) Board	Dec 12	Val d'Or	Met with the Board of the CTA (Nieboer and Trepanier)
Oujé-Bougoumou	Jan 5	Oujé-Bougoumou	Meeting with the Chief and Council and the Corporate Secretary (Nieboer, VanSpronsen and Schoen)
Waswanipi	Jan 5 Jan 6	Waswanipi	Meeting with Chief and Council, Health Clinic Staff, the Health Committee, Public Health Liaison and the Director of Operations (Nieboer, VanSpronsen and Schoen); Meeting with the Waswanipi Community
Mistissini	Jan 7	Mistissini	Meeting with Council Members, Public Health Liaison, Local Environmental Administrator and a Tourism Department representative (Nieboer, VanSpronsen and Schoen)
Traditional Pursuits Division of the Cree Regional Authority (TPDCRA)	Jan 30	Montreal	Meeting with the TPDCRA (Nieboer, Schoen and Trepanier)
Waskaganish	Feb 9	Waskaganish	Meeting with Council Members, a Healing Center representative, the Economic Development Technician and the Local Environmental Administrator (Nieboer, VanSpronsen and Trepanier); Meeting with Waskaganish Community

Eastmain	Feb 10	Eastmain	Meeting with Council Members and the Local Environmental Administrator (Nieboer, VanSpronsen and Trepanier); Meeting with the Eastmain Community
Wemindji	Feb 11	Wemindji	Meeting with the Chief and Council, CTA Liaison Officer, Local Environmental Administrator and the Public Health Officer (Nieboer, VanSpronsen and Trepanier); Meeting with the Wemindji Community
Chisasibi	Feb 12-13	Chisasibi	Meeting with the Chief and Council, Economic Development Officer, Director of Public Works and the Assistant Director of Operations (Nieboer, VanSpronsen and Trepanier); Radio meeting with the Chisasibi community
Whapmagoostui	Mar 16-18	Whapmagoostui	Meeting with the Chief and Council, acting Corporate Secretary, Land and Environment Department Representative and Cree Board of Health Representative (Nieboer, VanSpronsen and Robinson); Radio meeting with the Whapmagoostui Community
Institut national de santé publique du Québec (INSPQ)	Mar 19	Quebec City	Consultations with the Atlantis group about the proposal for the multi-community study
Eeyou Nameless Corp	Apr 14	Montreal	Meeting with the Eeyou Nameless Corporation Board to present the proposal for the multi-community study
INSPQ	Apr 15	Quebec City	Consultations with the Atlantis group about the proposal for the multi-community study