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March 2,1990

Honorable Titus Allooloo
Minister of Renewable Resources
Government Of The Northwest Territories
Yellowknife, N.W.T
X1A 2L9

Dear Titus:

Hydro-Quebec Plans For Development Of Great Whale River

Attached is a copy of the minutes that were taken of a meeting between the Municipality of Sanikiluaq and Hydro-Quebec, in regard to the proposed hydroelectric development of the Great Whale River in Northern Quebec.

The proposed project will involve the construction of 3 dams and generator stations on Great Whale River, creation of a large reservoir at Lake Bienville, and the diversion or modification of Little Whale River, Boutin River, Coats River and the Nastapoka River. In order to assist you understand the scale and magnitude of this project, we have enclosed a brochure that was prepared, and given to us at the meeting, by Hydro-Quebec.

Although you will become aware of some of our concerns for this project after reading the minutes, we would like to emphasize and encourage you, and the Government of the Northwest Territories, to request that a full environmental assessment of the project be undertaken before it proceeds, particularly because it will cause impacts and alterations to the marine environment within the Northwest Territories.

In this regard, and due to our dependence upon the marine environment which sustains the majority of the foods our community needs to survive, we are particularly concerned about the increased level of mercury that the hydro project will generate, and how it will contaminate the food chain - as already occurred from phase 1 of the proposed project, on the La Grande drainage basin.

In light of our concerns, we look forward to any information your department can provide about this proposed project. We also would appreciate any assistance that will facilitate and ensure that a full environmental assessment and public hearing will be conducted, in order to protect the environment and wildlife that we, and other communities within the Hudson and James Bay region, depend upon.

If you, or any of your staff, would like further information or have any questions about this matter please do not hesitate to write me at the above address. Alternatively, you may also call Lucassie Kittosuk, the Senior Municipal Administrator Officer of Sanikiluaq, at 819-266-8874.

In the meantime I, on behalf of the community, look forward to your reply.

Sincerely,

Peter Kattuk
Mayor of Sanikiluaq

cc.
Jim Noble, Renewable Resources, Baffin Region
Charlie Crow, MLA Hudson Bay, NWT
Alex Takatak, Mayor of Kuujuurapik
Noah Inukpuk, Mayor of Umiujak
Superintendent, Municipal and Community Affairs, Baffin Region
Baffin Region Inuit Association
Baffin Regional Council

Special Meeting Number 1

Minutes From A Meeting Between Hydro-Quebec and The Municipality of Sanikiluaq At The Hamlet Office in Sanikiluaq, February 7, 1990.

Present at the Meeting:

Peter Kattuk - Mayor of Sanikiluaq
Harry Sala - Deputy Mayor of Sanikiluaq
Annie Appaqaq - Municipal Council
Caroline Tookalook - Municipal Council
Zack Novalinga - Municipal Council
Lucassie Kittusuk - Senior Administrative Officer, Sanikiluaq
Brian Fleming - Community Economic Planner, Sanikiluaq
Charlie Takatak - Sanikiluaq Hunter and Trappers Association
Lucassie Arragutainna, Sr. - Interpreter
Joe Ikidlak - Records/Minutes of the Meeting

Noah Inukpuk - Mayor of Umiujak, Nunavik
Alex Takatak - Mayor of Kuujuurapik (Great Whale River), Nunavik

Jaculyne Demers - Environmental Department, Hydro-Quebec
Lucy Matten - V.P. Information/Public Relations, Hydro-Quebec
Real Gagnon - V.P. Information/Public Relations, Hydro-Quebec
Robert Lanari - Makivik Corporation
Normand Blouin - Environmental Department, Hydro-Quebec
Jean-Francois Rougerie - Environmental Department, Hydro-Quebec

The meeting was called to order by Peter Kattuk at 2:50 pm by explaining that this meeting was long over due, and we will continue with the meeting despite the recent death of one of the elders in Sanikiluaq. Peter advised that this elder would not mind if we proceeded with the meeting. Although not all of the councilors from Sanikiluaq are present, the ones here are members of the Environmental Committee. Peter presented the Agenda that was prepared by Hydro-Quebec, and suggested that we follow it for this meeting, after everyone is introduced.

Project Overview

After introductions Normand Blouin presented a technical overview of the project planned by Hydro-Quebec.

The project will consist of 3, dam sites with generator stations, built on the Great Whale River, and a large reservoir as follows:

GB1 will be located 25 miles north of Kuujuurapik. It will raise the water 210 feet, divert it into Manitounak Sound/Hudson Bay, and consist of 5 generators. At this site there will be 2 dams and 36 dikes.

GB2 will be located about 145 miles east of Kuujuurapik, on the Great whale River. It will raise the water level 270 feet, and

consist of 1 dam, 17 dikes, and 3 generators.

GB3 will be located about 185 miles east of Kuujuurapik, on the Great Whale River. It will consist of 2 dams, and 25 dikes. Approximately 230 miles east of Kuujuurapik, a reservoir will be created at Lake Bienville. It will involve a series of 60 dikes and retaining structures.

In addition to the dams on Great Whale River, the Little Whale River and the Nastapoka River will be diverted to GB1 by constructing 20 to 25 dikes.

In order to construct the project a road will be built from Radisson/LG2 to GB1, and possibly to Kuujuurapik. An additional road will be built to link the dam sites on Great Whale River and the Bienville Reservoir.

During the construction phase, work camps will be set up at each dam site, at the reservoir, and 3 or 4 other camps will be set up to divert the Nastapoka and Little Whale River. At peak construction there will be a family village to accommodate 1300 workers at GB1, 450 workers at GB2, 600 workers at GB3, and 300 workers at the Bienville Reservoir. Approximately 300 other workers will be scattered in smaller camps. The camps at GB1, GB2, and GB3 will be permanent. At present Hydro-Quebec is not sure if they will use the existing airport at Kuujuurapik, or build a new one near GB1. Another airport will be constructed between GB2 and GB3, as well as several other temporary airports.

Construction is planned to start at GB1 during 1993, which will be generating power by 1998. Construction at GB2, GB3, and at the Bienville Reservoir will start in 1994, which will be generating power by 1999. In order to keep the schedule, construction on the road will have to start in 1991. It will be completed by 1993.

Environmental Aspects of Project

Before presenting the environmental aspects to the project, the delegation from Hydro-Quebec first explained that Hydro-Quebec is a public utility company accountable to the Government of Quebec. The objective of the company is to;

(1) ensure that there is enough electrical power available as it is needed by the province,

(2) forecast future demand for electricity, and

(3) propose projects that will supply and meet future electrical demands.

In order to meet future demand for power, it usually takes about 10 years to plan and build an electrical power generating facility, which is why it is important for Hydro-Quebec to

examine and identify which rivers it will use, and how much it will cost for each project.

The Great Whale River was first identified and examined for its hydro-electrical potential in the early 1970's, as part of the Northern Quebec and James Bay Agreement in 1975. Since 1975 there have been many studies and reports. In 1981, a final report was presented to the Quebec government for review. In 1983 the project was suspended due to the lack of demand for power, so no further studies have been done. At present, however, the demand for hydro-electric power has increased, so now there is a need to start the Great Whale River project in order to meet the electrical demands for the year 2000.

Before the government will give authorization for a project like this one, the promoter must, by law, submit the proposal to the Quebec government. To get authority to start the project, the government will evaluate the proposal according to:

(1) why the project is needed

(2) feasibility of the project based on a cost-benefit analysis

(3) assessment of the environmental impacts

In Nunavik there is two Agencies that review the environmental assessment report. They are the Kativik Environmental Quality Commission and the CEEIJB. Since 1973 the Environmental Department of Hydro-Quebec, which consists of 140 people, has also made over 170 studies. Some of these studies included the Great Whale River.

Sources of Impact

According to studies conducted by Hydro-Quebec, the main impacts will be at the reservoirs, as a result of the flooding. There will be reservoirs created behind each dam site, as follows:

GB1 - 200 sq. miles
GB2 - 110 sq. miles
GB3 - 200 sq. miles
Bienville Reservoir - 700 sq. miles

The second source of impact involves the reduction of flow in four rivers, because they will be cut off or diverted. Great Whale River will be cut off and diverted to GB1, causing a reduction of 85 percent. Little Great Whale River, along with the Boutin River will be reduced by 75 percent, and the Nastapoka will be reduced by 15 percent.

The above diversions will result in an increased flow of water at certain areas, so that inland lakes will be increased by four

times, and Coats River will double in volume as the water from the Boutin and Little Whale River is diverted to GB1. In order to channel all the water to GB1 a new river will be created.

As a result of the river diversions a fourth impact will be the reduction of freshwater flowing into the estuaries along the coast. This means that there will be an average loss of freshwater flow at Great Whale River by 85 %, 75 % loss at Little Whale River, and the Nastapoka will decline by 15 percent. At GB1, however, there will be an increase of freshwater flowing into Manatounik Sound as a result of the new river.

Another source of impact will be the result of the construction and presence of roads in the region. Similarly, airports, construction camps, and dikes will result in additional impacts. The construction camps will also require diesel power stations producing 10 to 15 thousand kw/hour.

The last major impact Hydro-Quebec has identified involves the transportation of supplies and materials along the coast, from Chisasibi to Kuujuurapik. The traffic may disturb the marine wildlife.

Based on the above sources of impact Hydro-Quebec has identified four areas of concern:

1. There will be an increased concentration of mercury in the reservoirs, and it may enter the maine environment.

2. Particular animals may be effected such as the beluga whales that use the estuaries, and the rare freshwater seals in the Lower Seal Lake area.

3. A high density waterfowl habitat will be flooded along at the reservoirs, and the new river coming out of GB1 may effect marine wildlife migration patterns.

4. Social and economic changes that may occur to the human communities from the project, such as when the territory is opened up by road access, and how coastal and land use patterns may be modified.

In light of those concerns the purpose of environmental assessment by Hydro-Quebec is to identify specific impacts, estimate the magnitude of each one, and propose mitigative measures to the impacts. We also want to define a monitoring program, by incorporating what we have learned from the La Grande project, because it is very informative. In regard to people, we are studying land use patterns and historical sites, and how the project will benefit the communities as well. The final report should be very informative, and it will be available in Inuktitut, English and French. That is about all we want to say for now, and we can try to answer any questions.

Questions

Harry Sala - There are many trees in the project site, and are you going to cut them, or drown them?

Answer - No large scale tree cutting program is planned, but there will be some small programs at certain sites in order to build the dams, roads, dikes and so on.

Harry Sala - Are the roads going to have bridges built over the Rivers? Answer - Yes.

Zack Novalinga - We have heard that there is a larger amount of mercury in the La Grande River since it has been damned, so I wonder if the level of mercury will increase here too ?

Answer - The studies are not yet complete, but because this project is smaller than La Grande there is a chance that less mercury will be produced.

Lucassie Kittosuk - If wildlife will be effected by mercury, how do you propose to prevent it?

Answer - First, there will be no mercury from the rivers that will be reduced. Whales may not go to the reduced rivers, only to those rivers where there is mercury. Oceanographers will study this question with us as it is hard to answer. The estuaries are warmer and whales like shallow water, so in that respect we don't think it will effect the whales but we are still not certain.

Lucassie Kittosuk - We are concerned about this project because we are only 100 miles from GB1, and the mercury will be passed to us through the food chain of fish and animals.

Answer - We share that concern but we can't say anything for certain because GB1 will be a new river. In the La Grande River there is no reported increased mercury outside of the river, but at GB1 it involves different kinds of animals. I know this is not a very good answer, but we are currently studying this matter.

Harry Sala - We do not want to stop our traditional hunting and we will continue to travel to hunt, so how will the project effect the sea-ice?

Answer - We have several computer models and simulations about this kind of question and we don't see any significant changes or problems to the sea-ice from this project. At GB1, however, there will be an area of open water during the winter, which may create some safety concerns. At La Grande they have a similar problem, so we built a bridge over the river so people could cross safely. With the help of hunters, we also monitor the ice conditions at La Grande. At GB1 there may be sections of thin

ice, so we may need to build bridges so people can travel safely.
Caroline Tookalook - How are you going to make the new river at GB1?

Answer - From the lakes we will build a very deep tunnel inside the rock under the ground. It will be about 3 milec long and 600 feet deep. A channel will be made at the end of the tunnel (Engineering plans were displayed to aid the explanation).

Caroline Tookalook - Does the mercury just settle or does it travel?

Answer - This is a difficult question because there is two kinds of mercury. One is metallic, the other is organic. The fish get mercury from the trees as they rot in the water after the land is flooded. Once the fish pick up mercury, it enters the food chain and it is called the biological accumulation of mercury. As the fish move down the river they get chopped up as they pass through the turbines. Subsequently, the pieces of dead fish are eaten by live fish, who gather downstream of each generator station. As a result the mercury becomes more concentrated in the food chain. The highest amount of mercury accumulation will take place during the first 20 to 30 years after the dam is built.

Zack Novalinga - I am concerned about mercury because we eat from the surrounding sea only - knowing mercury will be created and passed down to the islands and passed into our food chain. I also know whales like strong water currents so there is nothing to stop whales from adventuring up the new river at GB1.

Answer - Quite possible.

Charlie Takatak - My concern is for our grand children. When the animals get contaminated, what kind of compensation is planned?

Answer - We are trying to determine the nature of this impact. If there are impacts, we are considering food substitutes, but no monetary compensation is presently planned. We know there are already health problems, but we are not sure how this project will create other health problems. An alternative would be to build a hospital in one of the communities.

Charlie Takatak - In your study of La Grande River, can you compare the freshwater now, to what was like in the beginning?

Answer - There is on going studies and no significant changes have been observed.

Lucassie Kittosuk - Do you study the water currents in Hudson Bay, and how will the whales react to changes in the estuaries?

Answer - Yes we do and the rivers have next to no effect on large scale sea currents. Whales use the estuaries to assist them molt, to clean off parasites, and the warmer water in an estuary

may be adaptive for pregnant whales. They also use the sandy bottom in shallow waters of an estuary to rub and scrape their hide which may also help them molt.

At present we do not expect the decrease of flow into the estuaries to affect the whales because each estuary is closed in by sand bars, and the decreased flow will increase sedimentation. As a result the sand bars will build up and close off the estuary to protect it from the sea, which will keep the habitat in place by allowing the warmer temperature and shallow depth to continue.

Annie Appaqaq - I want the compensation to start at the same time the hydro project starts because this project will effect our foods.

Answer - We are here to take your concerns and bring them to the managers of Hydro-Quebec. For ourselves, we don't know what kind of compensation may be available.

Brian Fleming - Where is the transmission line going to be built?

Answer - At present we are not sure. We will have 3 power stations and they need to be linked to La Grande. We are not sure if they will be linked to La Grande at LG3 by one line, or by a system of lines. From Radisson at LG2 and LG3 we will need a line to carry 735,000 volts to Montreal, but that will have to be constructed. Because the dams are more important we have not decided where to locate the transmission line yet. An alternative is to put the line along the road but we are not sure yet.

Brian Fleming - Will the transmission line be included as part of the impact study?

Answer - No it won't because it is more important to first build the dams.

Brian Fleming - You described your monitoring program at La Grande is very informative and that it will be incorporated into the Great Whale River Project. Can you give any concrete examples?

Answer - There is lots of examples. We monitor the water quality by testing 100 different parameters. Of these 100, 80 have no effect or change, and there is small or large changes in the other 20 parameters. So we will incorporate the more important parameters that we have learned from La Grande project, into this project.

Peter Kattuk (Closing Comments) - We are sorry that the first meeting in Kuujuurapik did not go as planned but are grateful that we had an opportunity to meet today. I also hope this will not be the last one, because our concerns have not been cleared.

Our working groups will be meeting about these matters in the near future.

Hydro-Quebec - Thankyou, and we will have another meeting, perhaps in the spring. Maybe it could be a public meeting and we will try to stay longer so there will be more time. We are also sorry if we could not provide answers to all your questions, but we will continue to work on them.

Noah Inukpuk - I would like to apologize for coming in at the wrong time, with the recent death in the community. But I happen to feel welcome and I hope we will continue to work together, or even work closer together. We all do not have the technical understanding like those people but we will learn. Once again, thankyou.

Meeting adjourned at 6:35 pm.

Mayor of Sanikiluaq
Peter Kattuk

Records/Minutes of the Meeting
Joe Ikidlak