
DIRECTION DES ÉVALUATIONS ENVIRONNEMENTALES

Directive for the Innavik Hydroelectric Development Project by the Community of Inukjuak

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*Développement durable,
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INTRODUCTION

The Pituvik Landholding Corporation is planning to develop a run-of-the-river hydroelectric generating station with an installed capacity of 7.5 MW on Rivière Innuksuac. This project aims to minimize, even make up for, resorting to diesel to satisfy the energy demand of the Community of Inukjuak in a proportion of 90% of the time. Aside from the generating station located on the right shore of the river and the dam, the project includes the construction of a 25 kV transmission line over a distance of 9.1 km and the upgrading of an existing ATV trail over a distance of 3.8 km.

The Innavik hydroelectric development project is mandatorily subject to the environmental and social impact assessment and review process under section 23 of the *James Bay and Northern Québec Agreement* (JBNQA) and chapter II of the *Environment Quality Act* (R.S.Q., chapter Q-2).

This directive is based on the preliminary information sent on January 16, 2009 to the Administrator of section 23 of the JBNQA and on February 3, 2009 to the Kativik Environmental Quality Commission (KEQC). This directive indicates the various elements that must be found in the study of this project's environmental and social impacts, notably the nature, scope and extent of the study of the impacts on the natural environment and on the human environment. It presents an approach aiming to provide the information required for the environmental and social assessment of the proposed project in accordance with the authorization process.

Within the context of the carrying out of the impact study, the proponent shall take into account the guidelines found in paragraph 23.2.4 of the James Bay and Northern Québec Agreement.

This directive must not be considered exhaustive and the proponent is required to add to its impact study every other element that is relevant for the analysis of the project.

CONTENT OF THE IMPACT STUDY

1. PROJECT BACKGROUND

The purpose of this section is to present the elements behind the project. It will include a short presentation of the proponent, a description of the insertion context and the purpose of the project, the alternative solutions as well as the related developments and projects. The presentation of the context and the purpose of the project will make it possible to determine the environmental, social, economic and technical stakes at the local and regional levels as well as at the national and international levels, where applicable.

1.1 Presentation of the proponent

The study will present the project proponent and, where applicable, its environmental consultant. This presentation will include general information on its past history in relation to the envisaged project, the activity sector in which the project is situated and, as the case may be, the main principles of the environmental and sustainable development policy of the enterprise.

1.2 Context and purpose of the project

The proponent will present a brief description of the project, including the location of the infrastructures and the main technical characteristics as they appear at the initial planning stage. The proponent will emphasize the project's general insertion context, the goals sought, the related components, the project completion timetable and its cost. The proponent will specify if an eventual expansion of the project is planned.

The proponent will provide a detailed description of the main environmental constraints associated with the implementation of the project. It will discuss the various possible energy systems and its choice of the hydroelectric system. The proponent will briefly explain the purpose of this project considering that a thermal generating plant currently supplies electricity to the Village of Inukjuaq. The proponent will also discuss the way in which these two generating stations will complement each other, where such is the case, for the distribution of electricity. The proponent will specify the current and future energy demand and will indicate how its project will meet this demand. The proponent will specify the human and environmental impacts, where applicable, such as job losses at the thermal generating plant, associated with this approach.

The project's legal insertion framework will be described by specifying the relevant agreements, laws and regulations. In addition, the government policies and directives concerning the activity sector will be presented. Where applicable, the proponent will specify the agreements reached concerning the purchase of the electricity produced by the generating station by Hydro-Québec, as well as the state of discussions with the Ministère des Ressources naturelles et de la Faune (MRNF) concerning the granting of water power rights. The proponent shall also situate the project in relation to the Québec Government's energy strategy or any other program.

The presentation of the project's purpose will make it possible to understand the need to carry out the project and will reveal the environmental, social, economic and technical stakes.

1.3 Alternative solutions to the project

The proponent will briefly present the alternative solutions to the project including the possibility of it not being carried out or being postponed and, where applicable, any solution proposed during the preliminary consultations held by the proponent. It shall justify the choice of the solution opted for by taking into account the objectives pursued and the environmental, social,

economic and technical stakes. The proponent will present the reasoning and the criteria used to arrive at this choice.

1.4 Communication and consultations

The proponent will inform and consult the communities concerned by the project (elected officials, groups, organizations, users of the territory as well as the general public). The information and consultation activities shall, among other things, deal with the description of the project and its impacts, etc., in addition to leaving room for the expression of the points of view and perceptions of citizens. In its impact study, the proponent will present the locations where the consultation was held, the persons and organizations consulted, the results of this consultation initiative and, where applicable, will report on the changes made to the project in light of the concerns expressed by the persons and groups consulted.

2. DESCRIPTION OF THE ENVIRONMENT

This section of the impact study will include the delimitation of a study area and the description of the components of the biophysical and human environments relevant to the project.

2.1 Delimitation of the study area

The proponent will determine a study area and will justify the boundaries thereof, by taking into account the scope of the anticipated impacts and the appropriate ecological boundaries for the various components of the environment. This area may be composed, if necessary, of various subareas delimited according to the impacts being studied. The proponent will locate its project in relation to the current territory use patterns. The portion of the territory encompassed by this area shall be large enough to cover all of the planned activities and the alternatives studied, as well as the related activities associated with the carrying out of the project, and to delimit all of the project's direct and indirect effects on the biophysical and human environments.

2.2 Description of the relevant components

The proponent will describe the state of the environment as it exists in the study area prior to the carrying out of the project. Wherever possible, the description shall present relations and interactions between the various components of the environment in order to be able to delimit the ecosystems having a high interest potential or being of special interest. This description shall make it possible to understand the presence and abundance of animal species according notably to their life cycle, their migratory habits and their dietary behaviour. If required, the surveys shall also reflect the social, cultural and economic values related to the described components. The proponent will provide all information facilitating the comprehension or the interpretation of the data (methods, survey days, location of sampling stations, etc.).

2.2.1 Biophysical environment

The description of the biophysical environment shall be made for the entire project, including the related components. Using maps on which the existing or required infrastructures will be indicated, the proponent will identify the following characteristics:

Geology, geomorphology and climate

The proponent will identify, using maps to the appropriate scales, the main geological formations and will describe the general topography of the terrain and the presence of permafrost. The proponent will locate the zones that are sensitive to erosion and to ground movements, as well as the sectors likely to be used for borrow materials.

It will indicate the average and maximum precipitations over 10 years and, if available, over return periods of 20, 30, 40 and 100 years, as well as the annual evaporation (mm). The proponent will specify the source of these data and the calculations made.

The proponent will describe the sedimentological regime of the river (erosion, sediment conveyance and accumulation zones). Where applicable, the proponent will emphasize the dredging and fill work zones and potential sediment deposit areas in an aquatic environment;

Hydric environment and wetlands

The proponent shall describe in detail, the longitudinal profile, the water levels (high water, low water and average condition), as well as the width, the surface area and the flow pattern for the sector of the watercourse directly affected by the project.

It will provide a general description of the hydrographic network of the watershed of Rivière Innuksuac, the shore, the banks, the wetlands and the current and future flood plains. The proponent will discuss the presence of the tide and its characteristics, including the mixture of water in marine estuarine environments.

The proponent will specify the hydrological regime, including the control flow of the river, the average daily and monthly flows, the high and low water flows, and the classified flows, either the flows measured at the site of the project or the flows transposed from a hydrometric station (the series of flows used must concern a period of at least 30 years; if not, the study must indicate the reliability of the series used at the statistical level and the reasons for the choice of a series of less than 30 years).

The proponent will describe the thermal regime as well as the ice regime in the study area, including the formation of frazil in the ice cover and of ice jams. The proponent will discuss the ice break-up period, the bathymetry and the hydrodynamic conditions (surface and bottom currents). It will indicate the physicochemical characteristics of the water of the watercourses of the study area on an annual basis.

Vegetation

The proponent will describe in detail, using maps, the plant cover of the aquatic, riparian and land environments by indicating the presence of fragile or exceptional stands in the study area. It will indicate the rare or threatened species likely to be found in this sector and will provide a description of their habitats. For this purpose, the proponent will be able to consult the Direction du patrimoine écologique et des parcs of the Ministère du Développement durable, de l'Environnement et des Parcs.

Wildlife

The proponent will provide mapping describing the aquatic and land habitats encountered on the territory under study (spawning grounds, dens, confinement areas, nesting areas, etc.) and will specify the value thereof. The proponent will pay special attention to environments having a fishing and hunting potential. It will present the natural obstacles (physical, physicochemical, hydraulic, etc.) to the migration and movements of fish in the watercourses of the study area, whether permanent or temporary; the migration and local travel conditions and needs of fish at the site of the works. The proponent will also describe the habitats of the fish and the use made of these habitats in relation to their life cycle.

The proponent will identify, if necessary, the rare or threatened species and will take into account the protection statuses currently granted to or considered for these species. For this purpose, the proponent will contact the appropriate government authorities.

2.2.2 Human environment

The description of the human environment shall be carried out for the entire project, by considering the related components and the various project phases. The human environment concerns both the Inuit communities present in the study area and non-Aboriginals. The main components of the human environment comprise the socioeconomic aspects, quality of life and the cultural context, heritage and archaeology, occupation of the territory. If necessary, the proponent can study other subjects deemed relevant for the evaluation of the project.

Occupation of the territory

The proponent will indicate the tenure and the boundaries of the Category I, II and III lands. It will describe the location and the description of the dwellings, constructions and various buildings situated near the project.

The proponent will deal with the occupation and current use of the territory, including the location of water supply sources, hunting, fishing and trapping territories in the study area, including the associated infrastructures (road, trails, camps, etc.), traditional travel ways and their periods of use and navigation in the study area (type, density, trips, etc.).

The proponent will also present the territories dedicated to protection and conservation whose status has been consecrated and the other sectors for which different statuses have been envisaged as protected areas.

Socioeconomic aspects

The proponent will present the demographic profile and its perspectives as well as the economic situation (jobs, activity sectors, sources of income, etc.) of the communities present in the study area. It will also describe the basin of qualified Inuit manpower and enterprises to hold the positions or carry out contracts in relation to the construction or operation activities associated with the hydroelectric development project.

Quality of life and cultural context

The proponent will document the various elements related to the quality of life of the population of the communities of the study area, such as community life (including social relations), social cohesion (which includes the feeling of belonging), and the biophysical elements of the environment. In addition, the proponent shall describe the cultural context specific to these communities. Culture refers notably to knowledge, beliefs, values, norms, roles, ways of life and behaviours acquired by individuals as members of a specific group, community or society.

Heritage and archaeology

The proponent will describe the prehistoric, historical and spiritual sites present in the study area, the sites of special interest such as burial grounds, sacred or preferred sites.

3. DESCRIPTION OF THE PROJECT AND COMPLETION ALTERNATIVES

The proponent will determine the completion alternatives and will select, using discriminating parameters, the most relevant alternative(s) for the project. The consideration of various completion alternatives may make it possible to review certain parts of the project in order to improve it. Afterwards, the proponent will describe the selected alternative(s), on which the detailed analysis of the impacts will focus.

3.1 Determining of the alternatives

The proponent will present the alternatives that can meet the objectives of the project. These alternatives can deal with the main technologies available or the selection of a site.

3.2 Selection of the relevant project alternative(s)

The proponent shall select the best project alternatives, by stressing the distinctive elements likely to come into play in the choice of the optimal alternative at the environmental, human, technical and economic levels. The proponent will then explain how this alternative clearly stands out from the other alternatives envisaged and why the latter were not chosen for the detailed analysis of the impacts.

3.3 Description of the project

The proponent will give an estimate of the costs and will specify the calendar of the various completion phases, by distinguishing the phases carried out in an aquatic environment from those carried out in a land environment, as well as the planned date for the start-up of the generating station, the useful life of the project and the future development phases, where applicable.

3.3.1 Construction phase

The proponent will describe the permanent developments and infrastructures, notably:

- ❑ the location, surface area, tenure of the lands and property titles for the lands used to put in place the infrastructures;
- ❑ the dams, dikes and flow control structures (valves, spillways, spillway crest or other);
- ❑ the generating station (net head, operating level of the reservoir and spillway, installed power, number and type of turbines, production according to the flows, times and periods of the year, etc.);
- ❑ diverted watercourses, free-flow zones and diversion canals, if any;
- ❑ reservoirs (surface area, total and useful volume and levels), where applicable
- ❑ water intakes, water lines, surge tanks and spillways;
- ❑ energy transmission lines, transformer stations and the other equipment needed for the connection to the buyer's or distributor's network;
- ❑ the access roads to the various works.

The proponent will present the temporary developments and infrastructures, including:

- ❑ the water deviation works (cofferdams, etc.);
- ❑ the material reception, handling and storage areas;
- ❑ the machinery and fuel depots;
- ❑ the waste management method and the domestic and construction waste disposal sites;
- ❑ the drinking water treatment and distribution works;
- ❑ the wastewater treatment works;

- the workers' camps.

The proponent will discuss the development and construction activities and the planned operations, notably:

- development and construction activities and planned operations, including blasting under water and on land, encroachment on the aquatic environment, location and surface area of borrow pits, excavated and fill materials (volume, origin, transport, storage and elimination) and the material and equipment used (characteristics, transport, etc.);
- fill work in an aquatic setting;
- excavated and fill materials (volume, origin, transport, storage and elimination);
- material and equipment used (characteristics, transport, etc.).

3.3.2 Impoundment and operating phase

The proponent will describe:

- the impoundment of reservoirs (duration, period, instream flow, etc.);
- the activities and operating methods, where applicable, including hydraulic management (turbine flows, biological and esthetic instream flows of the bypassed stretch, drawdown in the reservoir, operation of works, water renewal rate) for various hydrological conditions (high water and low water periods including flows that are weaker than the instream flows), the management of ice and frazil, the maintenance of works, developments and facilities;
- the commitment to provide, a few years prior to the cessation of activities, the plans to decommission works and facilities.

3.4 Description of the manpower required

For each component, the proponent will provide the information pertaining to the construction and operation calendars, the distribution of manpower as well as the qualifications required by job class.

For each project phase, the proponent will present the description of the manpower by stressing the employment opportunities for the Inuit population. The information regarding the corporate policies dealing with the hiring of local manpower as well as the workplace training programs will be presented. In addition, the impact study will specify the qualifications required in terms of language as well as the measures that will be put forward by the company to facilitate the integration of the Inuit in the labour force.

Where applicable, the proponent will specify the exact location of the accommodation infrastructures, as well as the accommodation capacity, the duration and periods of use of these facilities.

4. DETERMINING AND EVALUATION OF THE PROJECT'S IMPACTS

The proponent will determine the impacts and evaluate the importance thereof by using an appropriate method and criteria. It will consider the positive and negative, direct and indirect impacts and, as the case may be, the cumulative synergistic and irreversible impacts related to the carrying out of the project.

While the determining of the impacts is based on anticipated facts, their evaluation entails a value judgment. This evaluation may not only help to establish the acceptability thresholds or levels, but also make it possible to determine the impact mitigation criteria or the needs in the monitoring or follow-up field.

The evaluation of the importance of the impact depends first on the component affected, namely its intrinsic value for the ecosystem as well as the social, cultural, economic and aesthetic values attributed to these components by the public. The more a component of the ecosystem is valued by the public, the more the impact of this component is likely to be important. The basic concerns of the public, notably when elements of the project represent a danger for health or safety or entail a threat for archaeological sites, also influence this evaluation.

The evaluation of the importance of an impact also depends on the intensity of the change which the affected environmental components undergo. The more an impact is widespread, frequent, lasting or intense, the more important it will be. Where such is the case, the importance of the impact must be pinpointed to the appropriate scale, namely the study area, the region or the province (for example, a loss of biodiversity).

The proponent will describe the chosen method, as well as the related uncertainties or biases. The techniques and methods used will have to be objective, concrete and reproducible. The reader must be able to easily follow the reasoning of the proponent to determine the impacts. The proponent will associate the activities of the project and the presence of the works with the components of the environment, in the form of synoptic tables, check-lists or impact sheets.

The proponent will define the criteria and the terms used to determine the anticipated impacts and to classify them according to various levels of importance. The following criteria may help determine and evaluate the impacts:

- ❑ the intensity or the scope of the impact (degree of disturbance of the environment influenced by the degree of sensitivity or vulnerability of the component);
- ❑ the extent of the impact (spatial dimension such as length, surface area);
- ❑ the duration of the impact (temporal aspect, irreversible nature);
- ❑ the frequency of the impact (intermittent nature);
- ❑ the probability of the impact;
- ❑ the domino effect (link between the affected component and other components);
- ❑ the sensitivity or vulnerability of the component;
- ❑ the uniqueness or rarity of the component;
- ❑ the sustainability of the component and the ecosystems (durability);
- ❑ the value of the component for the public;
- ❑ the formal recognition of the component by a law, a policy, a regulation or an official decision (park, ecological reserve, threatened or vulnerable species, wildlife habitats, plant habitat, known archaeological sites, etc.);
- ❑ the risks for the health, safety and well-being of the public.

4.1 Impacts on the biophysical environment

Based on the resources of the community, the occupation of the sector and its use, the vocation of the sites and the carrying capacity of the various environments, the proponent will evaluate the changes to the natural conditions and the environmental losses. In addition, the proponent will determine the irreversibility thresholds for each impact. It will take into account the following points:

Geomorphology

- ❑ the erosion of the banks of watercourses caused by the drawdown of water and the management of the flow during the operating phase;
- ❑ based on the portrait of the distribution of the permafrost, the impacts ensuing from the risks of slumping and erosion associated with the melting of the permafrost on the edge of the planned developments;

Hydric environment

- ❑ the changes to the hydrological regime (flows, water levels, drainage), the ice regime, the sedimentary regime, the thermal regime and the quality of water;

Vegetation

- ❑ fragile and exceptional stands and rare or threatened species likely to be affected by the project;

Wildlife

- ❑ aquatic habitat losses related to the drying out or temporary or permanent encroachment of works during the various phases of the project;
- ❑ the effects of hydrologic changes and of turbine flows on the fish habitat and the activities related to the life cycle (upstream or downstream migration, spawning) of the species present;
- ❑ fish entrainment and the anticipated deaths during their passage through the turbines;
- ❑ the effects of the creation of the reservoir on the fish communities present in terms of abundance, distribution and diversity of habitat;
- ❑ the effects on wildlife and wildlife habitats in the flooding, drying or disturbance zones caused by the project, and particularly on species that are threatened, vulnerable or likely to be so designated as well as on subsistence species and species of sport interest;

4.2 Impacts on the human environment

As for the human environment, the proponent shall consider all possible impacts of the project in order to highlight the major stakes. This involves evaluating globally the likely changes to the ways of life of the various communities inhabiting the territory concerned by the project, while taking into account the perceptions that users of the environment have of these same impacts. On this subject, the proponent shall, wherever possible, refer to other similar projects on the northern Québec territory.

Without limiting itself thereto, the proponent will address the impacts concerning:

Use of the territory

- ❑ The consequences on the current and planned use of the territory and the resources, notably on territory accessibility patterns, including banks and watercourses, in relation to hunting, fishing, trapping and outfitter services, where applicable;
- ❑ the impacts on public or community service infrastructures such as roads, ATV or snowmobile trails, water intakes, parks and other natural sites of special interest, etc.;

Economic spin-offs

- ❑ the number and type of temporary and permanent jobs created by the project for the Inuit and Aboriginal peoples, according to the various project phases;

- ❑ the availability of the qualified manpower and manpower that can receive training;
- ❑ the contracts allocated to the Inuit and to Inuit enterprises;
- ❑ the economic spin-offs anticipated over the short and long terms for local enterprises;
- ❑ the development perspectives in the related sectors for local or regional communities;

Quality of life and cultural context

- ❑ the impacts on the well-being and quality of life of the communities concerned, such as the nuisances caused by noise or dust, the drawbacks of the traffic on roads, the reduced access to river banks, etc.;
- ❑ the perception and the fears of the Inuit concerning the possible contamination of the environment, notably by mercury, within the context of the construction and operation of the project;
- ❑ the repercussions of an accidental spill of an oil product or any other chemical on the environment;
- ❑ the visual impact of the intrusion of new elements in the visual field and the change of the aesthetic quality of the landscape;

Heritage and archaeology

- ❑ the impacts on the historical and spiritual sites present in the study area, the sites of special interest, such as burial sites, sacred or preferred sites, archaeological sites, etc.

4.3 Mitigation of impacts

The mitigation of impacts aims for the best possible integration of the project in the environment. In this respect, the proponent will specify the actions, the works, the remedial measures or the additions planned in the various completion phases to eliminate the negative impacts associated with the project or to reduce their intensity. The proponent will present an evaluation of the effectiveness of the proposed mitigation measures and provide an estimate of their costs. The following mitigation measures may, for example, be considered:

- ❑ the terms and conditions and the measures for protecting soils, river banks, surface water, flora, wildlife and their habitats, including temporary measures;
- ❑ the management of water levels, flows and drawdowns according to the uses;
- ❑ the installation of barriers to keep fish away from the water intake;
- ❑ the establishment of instream flows for ecological, aesthetic or navigation purposes;
- ❑ the installation of crossing works for fish;
- ❑ the visual integration of the works and infrastructures;
- ❑ the sound-related integration of the generating station;
- ❑ the measures to ensure the safety of boaters during construction, impoundment and operation;
- ❑ the contractual or other provisions seeking to limit, during the construction phase, the production of residual materials by the proponent or its contractors.

As the case may be, the proponent will present the measures envisaged to promote or maximize positive impacts such as, for example, the hiring of local manpower or the awarding of certain contracts to local firms.

4.4 Compensation of the residual impacts

The residual impacts are those that will remain after the application of the mitigation measures. The proponent shall take into account the estimated costs associated with each impact and the possibilities of compensation in the case of unavoidable residual impacts, for the biological and human environments, without compromising the technical and economic feasibility of the project. The loss of habitats in an aquatic environment should notably be compensated by the creation or improvement of equivalent habitats.

5. MANAGEMENT OF ACCIDENT RISKS

The proponent shall make an analysis of the technical accident risks for this type of project. In addition, it shall briefly describe the programs for maintaining and overseeing the works, and present a preliminary emergency measures plan for the construction and operating phases.

5.1 Estimate of the major consequences

Given the characteristics of the works and the knowledge of the receiving environment, the proponent will estimate the consequences of the failure of the works or of another major accident. This exercise will make it possible to identify and locate the areas likely to be submerged in the event of a dam failure, as well as the populations, goods and services that risk being affected.

The proponent will pay special attention to the sensitive elements of the environment (camps, dwellings, natural sites of special interest, etc.) that can be affected in such a way that in the event of an accident the consequences could be major or increased. The proponent will also take into account external events, whether climate-related or other, likely to cause major technological accidents. It will discuss the consequences related to operational stoppages during a high electricity demand period. This information will be integrated in the planning of emergency measures.

5.2 Structure maintenance and supervision program

The proponent will describe the programs for maintaining and supervising works, including related developments and facilities, intended to reduce the risks of accident, including among others:

- the limitations on access to the site;
- the safety facilities (supervision, emergency stop and firefighting systems, presence of emergency generator sets, etc.) and control measures;
- devices for detecting anomalies in the dam and their method of operation;
- the terms and conditions for re-evaluating and updating maintenance and monitoring programs.

5.3 Emergency measures

The proponent will submit a preliminary emergency measures plan to react adequately in case of an accident. This plan will make known the main actions envisaged to respond to an incident/accident situation. It will clearly describe the link with municipal authorities, as well as the alert transmission mechanisms. If an emergency measures plan has already been filed for a given territorial unit, this plan could be updated to incorporate the new development.

For the accident scenarios having consequences (real or anticipated) on the surrounding population, the project proponent must make sure that its emergency measures plan is coordinated with that of the municipality.

Generally, an emergency measures plan contains the following elements:

- ❑ the alert and evacuation plans for generating station employees;
- ❑ the relevant information in case of an emergency (persons in charge, available equipment, plans and maps indicating the location of the works, etc.);
- ❑ the emergency intervention structure and the decision-making mechanisms within the enterprise;
- ❑ the methods of communication with the external civil preparedness organization;
- ❑ the measures that should be envisaged to protect the populations that risk being affected;
- ❑ the planned means for effectively alerting the populations that risk being affected, in cooperation with the community, municipal and government organizations concerned (transmission of the alert to public authorities and the subsequent information on the situation);
- ❑ the program for updating and re-evaluating the emergency measures.

An emergency measures plan shall be submitted by the proponent prior to the start-up of its project. The impact study shall also include a temporary emergency measures plan for the construction phase. This plan will list the dangers having repercussions on the safety of individuals and property, will describe the planned measures to protect the public and the environment in case of an accident (oil spill, explosion, etc.), and will provide the contact information of the persons in charge on site.

6. ENVIRONMENTAL MONITORING PROGRAM

The aim of environmental monitoring, carried out by the project proponent, is to ensure compliance:

- ❑ with the measures proposed in the impact study, including the mitigation or compensation measures
- ❑ with the conditions set out in the certificate of authorization issued under section 201 of the Environment Quality Act;
- ❑ with the commitments made by the proponent;
- ❑ with the requirements found in the relevant laws and regulations.

Environmental monitoring concerns the construction phase as well as the operating, closure and project dismantlement phases. The monitoring program may make it possible, if necessary, to reorient the work and to eventually improve the unfolding of the construction and the putting in place of the various elements of the project.

The proponent will propose an environmental monitoring program. This program will describe the means and mechanisms put in place to ensure compliance with the legal and environmental requirements. The program will make it possible to verify the smooth operation of the works, equipment and facilities, and to supervise any disturbance of the environment caused by the carrying out, operation, closure or dismantlement of the project.

The environmental monitoring program shall notably contain:

- ❑ the list of elements requiring environmental monitoring;
- ❑ all of the measures and means envisaged to protect the environment;
- ❑ the characteristics of the monitoring program, when they are foreseeable (e.g.: location of the interventions, planned protocols, list of the parameters measured, analysis methods used, completion timetable, human and financial resources assigned to the program);
- ❑ an intervention mechanism in case of the observation of non-compliance with the legal and environmental requirements or the commitments of the proponent;
- ❑ the commitments of the proponent concerning the filing of monitoring reports (number, frequency, content).

7. ENVIRONMENTAL FOLLOW-UP PROGRAM

The purpose of the environmental follow-up, carried out by the proponent, is to verify by way of the experience in the field the accuracy of the evaluation of certain impacts and the effectiveness of certain mitigation or compensation measures planned in the impact study and for which some uncertainty remains.

The proponent will propose a preliminary environmental monitoring program. This preliminary program will be completed, as the case may be, following the authorization of the project. This program will notably contain the following elements:

- ❑ the purposes of the follow-up, including a list of the elements requiring an environmental follow-up;
- ❑ the objectives of the follow-up program and the components targeted by the program (example: validate the evaluation of the impacts, assess the effectiveness of the mitigation measures for the water, air, soil components, etc.);
- ❑ the number of planned follow-up studies as well as their main characteristics (protocols and scientific methods envisaged, list of parameters to be measured, planned completion timetable);
- ❑ the details concerning the production of follow-up reports (number, frequency, format);
- ❑ the intervention mechanism implemented in case of the observation of an unexpected deterioration of the environment;
- ❑ the commitments of the project proponent concerning the dissemination of the results of the environmental follow-up with the population concerned.

A guide for the planning and implementation of the environmental follow-up program is available at the Direction des évaluations environnementales.

PRESENTATION OF THE IMPACT STUDY

The impact study must be presented clearly and concisely and be limited to the relevant elements for a good understanding of the project and its impacts. Whatever can be presented in the form of illustrations or maps must be so presented, to the appropriate scale. The project's components must appear both on thematic maps and on composite maps. Wherever possible, the information must be analyzed in light of the appropriate documentation.

We encourage the proponent to illustrate, using photographs and visual simulations, the highlights of its study. The availability and the quality of the data used should also be evaluated by the proponent. All sources of information must be cited in reference.

When tabling its impact study, the proponent will be required to provide 15 copies of all its documents in French, as well as two copies on computer medium in PDF (Portable Document Format) format. An English translation of the impact study, available in at least 15 copies, shall also be made available to encourage its consultation by the Inuit.