Québec, December 5, 2018

Mr. Patrick Beauchesne, Deputy Minister
Ministère de l'Environnement et de la
Lutte contre les changements climatiques (MELCC)
Marie-Guyart Building, Floor 30, Box 02
675 René-Lévesque Blvd. East
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Subject: **Application for Attestation of Exemption – Development of a Sturgeon Spawning Ground at KP 113 on the Eastmain River – Additional Information Regarding Details and Commitments Requested by the MELCC and the MFFP**

O/Ref.: **181-08883-00**

Dear Mr. Beauchesne,

This is the English version of the letter we sent you on November 27th concerning the above-mentioned subject.

As requested by Ms. Isabelle Auger, you will find hereafter a summary of details and commitments provided to MELCC's and *Ministère des Forêts, de la Faune et des Parcs* (MFFP)'s analysts (Forest and Wildlife Departments) as part of the environmental permit application process associated with the sturgeon spawning ground development project at KP 113 on the Eastmain River.

The details and commitments are grouped according to the two major project components, i.e. the spawning ground and the access road (between James Bay Road and the contractor area).

Note that MELCC's representatives have specified that the project is not subject to section 22 of the Environment Quality Act. To that extent an attestation of exemption was issued. An authorization was issued by the MFFP (Wildlife Department) under section 128.7 of the Act Respecting the Conservation and Development of Wildlife. The Department also granted an authorization for the deforestation and construction of a winter road under section 41 of the Sustainable Forest Development Act.

SPAWNING GROUND DEVELOPMENT

1 **Clarification on the location of the contractor area.** The area is located above the current Eastmain River high water mark, but on the river's former bed (prior to flow cut off in 1980). At this location, the substrate is mainly composed of bedrock. A few depressions, where runoff water collects and carex plants grow, are present. These areas will not be affected by the contractor area which boundaries were defined as to precisely avoid the depressions.

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2 **Type of granular material stored at the contractor area.** Granular material to be stored at the contractor area shall solely be material that will be used for construction of the spawning ground, i.e. round stones of a relatively large grain size (pebbles, cobbles and small boulders). No quarry run, 0-3/4-type material, nor any other type of material under 5 mm in grain size shall be stored on site.

3 **Path between the contractor area and the spawning site.** It is located over the former rocky bed of the Eastmain River. The substrate is a bedrock devoid of vegetation. No access road will be built. Given that work will be conducted during winter, the path will be mainly developed by compaction of snow and ice allowing passage of the power shovel (which will be the only vehicle to use the path). Granular material shall be placed in local depressions which are too deep, if there are, as to level out the surface. Material shall be the same as the one provided for the spawning substrate (mix of pebbles, cobbles and small boulders). This material shall be removed and placed at the bottom of the spawning ground near completion of work.

4 **Work projected within the contractor area.** Work planned in the contractor area includes:

- Traffic of machinery (power shovel, trucks);
- Temporary storage (for the duration of work) of granular material used as spawning substrate;
- Temporary installation (for the duration of work) of a site trailer.

5 **Site trailer waste.** The site trailer will cause no waste, of any kind, on the work site. A chemical toilet will be placed on site.

6 **Precautions for granular material free of fine particles.** The source of supply for granular material is the borrow pit located at KM 28 of the Eastmain Village Road. The granular material will be screened at the pit using suitable sieves as to achieve targeted grain size for the spawning substrate. Screening will shake stones, thus removing fine particles. It shall be mentioned that our technicians have paid a few visits to the borrow pit and noted that the *in situ* material presents very few fine particles (gravel, sand). Therefore, the spawning substrate will be free of fine particles.

7 **Details on what will happen to the existing breeding site located in the vicinity of the projected development (e.g. will it be covered with new substrate or kept intact throughout work).** The projected site for the spawning ground is located within an area known as a poor-quality sturgeon spawning ground occasionally used by fish. The site will be upgraded thanks to the addition of substrate of suitable grain size and the improvement of flow conditions. Natural spawning grounds (which quality is suboptimal due to overly coarse substrate) around the area shall remain undisturbed.

8 **Clarification on the need to use granular material to level out the contractor area and on the cleanliness of premises during work (there is a risk that traffic in the area could cause fine material deposition on equipment used to build the spawning ground).** First, a very small quantity of granular material is to be used in the contractor area. This area, which is on bedrock, shall be levelled out by compaction of snow for traffic of machinery (trucks, power shovels). If some of the depressions are too deep, a small amount of spawning substrate (pebbles, cobbles and small boulders) shall be placed for the duration of work.

The traffic of machinery could indeed cause the deposition of a small quantity of fine particles on equipment. However, we believe that the amount will be too small to noticeably increase water turbidity and suspended matter. The only material to be stored on this site will be the one used for development of the spawning ground. It will therefore be free of fine particles.

9 **Details concerning rock excavation directly upstream of the spawning ground.** First, it should be specified that this area is located just upstream of the spawning ground development site. The area is characterized by a bedrock outcrop partially blocking flow on the left bank and in the area where spawning substrate will be placed. The average excavation depth shall be 50 cm which will promote a better water flow in the spawning site and allow optimum flow velocities and water depths for the entire range of flows likely to be observed across the developed spawning ground. Since the area to be excavated is adjacent to the upper end of the spawning site, machinery used for work may do so from the area identified as the spawning ground. Excavation will be mainly conducted above water since work will be done during the winter low-flow. It is important to note that **no explosive will be used** during excavation work. The contractor may choose the excavation method, although rock splitter (boreholes in which water is introduced under pressure) or Tramac equipment (oversized pneumatic drill mounted on an excavator) must be used. Excavated material shall be sorted and only reused in the spawning ground riprap.

10 **Clarification regarding the time limit for work.** Work shall be conducted between January 15th and April 30th. The deadline of April 30th was established based on various monitoring results of lake sturgeon reproduction in James Bay. According to the results, it appears that the reproduction season (including egg laying and larval drift) is from May 15th to July 10th (*Environnement Illimité, 2015. Centrales de l'Eastmain-1-A et de la Sarcelle et dérivation Rupert – Suivi environnemental en phase exploitation – Dérive larvaire de l'esturgeon jaune dans la rivière Rupert (secteur à débit réduit) – Bilan 2010-2014. Rapport produit par La Haye Michel, Marc Gendron, Michel Simoneau et Isabelle Lefebvre. Présenté à Hydro-Québec Production. 62 p. et 6 annexes*).

11 **Location of the contractor area.** The contractor area shall be located more than 15 m from the current Eastmain River high water mark.

ACCESS ROAD BETWEEN JAMES BAY ROAD AND THE CONTRACTOR AREA

1 **Clarification regarding the width of the access road right-of-way.** The width of the existing road varies between 6 and 15 m. Some clearing shall be required where vegetation has reclaimed the road as to make sure the right-of-way is 15 m wide (maximum). The maximum right-of-way for the new road (length: 700 m) shall be 20 m, i.e. 10 m from either side of the road centre.

2 **Clarification on disposal of harvested wood.** First, it should be noted that the overall work area was greatly affected by a large forest fire in the summer of 2015 and that a very small population of mature trees survived. Now in regeneration, the current stand was originally characteristic of lichen-spruce woodlands which are widespread across the James Bay region. Main species found are: black spruce (*Picea mariana*), tamarack (*Larix laricina*), grey pine (*Pinus banksiana*), white birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*), lowbush blueberry (*Vaccinium angustifolium*), prairie willow (*Salix humilis*), as well as some ericaceae species. The current forest cover is a sparse burned area, and as such, it presents no commercial value.

Shrubs and tree branches will be left on site following clearing of the road right-of-way. Trunks will be piled up along the roadside of the existing road and left to the Eastmain Community for domestic use (what remains useful anyway).

3 **Clarification regarding the need to spread granular substrate over the access road and, if so, details on its origin.** The access road will mainly be levelled out by compacting snow as this is a winter road. However, a small quantity of gravel and pebbles may be placed in small depressions found on both the existing and the new road as to facilitate passage of vehicles. The granular material shall be taken from the roads right-of-way. No granular material shall be collected from the 100 m protection area around the Eastmain River. Reloading with granular material shall be minimal. The contractor will determine areas to be reloaded.

4 **Details regarding widenings.** There will be three widenings: one at the approach of James Bay Road, one at the end of the existing road (at the junction with the new road), and one at the end of the new road (near the river). The widening near James Bay Road shall be used as a temporary storage area for the spawning granular material. The widening at the end of the existing road will be used as a truck crossing area as well as a wood piling area for the Cree Nation of Eastmain. The widening near the river shall allow maneuvering of machinery (hydraulic shovel, dump truck, pickup) by the contractor.

5 **Details regarding the layout of the new road (why a large curve and not a straight line).** It is impossible to draw a straight line from the existing road since the slope is too steep (more than 15%). Of course, we have studied this option (straight road layout), but we had to rule it out given that the steep slope would not allow for the safe traffic of vehicles and personnel. We are forced to design a winter road with a half-circle layout as to achieve a road of suitable slope. The proposed layout represents the shortest possible road considering the steep slopes along the river.

We hope that this summary of exchanges with MFFP's and MELCC's analysts will meet your expectations. Do not hesitate to contact us should you require any further information.

Best regards,

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