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Kativik environmental quality commission
Commission de la qualité de l'environnement Kativik

MINUTES

OF THE

267th meeting

December 1, 2021

Montréal

ADOPTED

Meeting summary

The 267th meeting was held in Montréal and by videoconference on December 1, 2021.

Present:

Pierre Philie
Daniel Berrouard
Cynthia Marchildon
Murielle Vachon
Thérèse Spiegle
Charlie Arngak
David Annanack
Joseph Annahatak
Lisa Koperqualuk

Executive Secretary: Florian Olivier

PROJECTS AND OTHER MATTERS	DISCUSSIONS OR DECISIONS
Nunavik Nickel Project by Canadian Royalties Inc (3215-14-007)	• After analysis and discussion of the complementary information, the KEQC decided to authorize the modification of the CA
Project of construction of a new Thermal Generating Station on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-015)	• After discussion and analysis of the impact study provided to it, the KEQC concluded it needs more information in order to make a decision regarding the delivering of the certificate of authorization (CA). The KEQC decided to address a series of questions and comments to the proponent
KEQC's Request for funding 2022-2023	• The request for funding was approved by the members of the KEQC and will be transmitted to the Administrator
Answers to the Impact Assessment Act Working Group	• The project of answers to the working group was approved after discussion. It will be transmitted by the executive secretary to the members of the working group.

1. Adoption of the agenda

2. Correspondence

Follow-up of the correspondence can be found in Appendix B of this document

3. Adoption of the minutes of the meeting 266

Minutes of meeting 266 are adopted

NEW DOSSIERS

4. Nunavik Nickel Project by Canadian Royalties Inc (3215-14-007)

4.1. Request for a modification of the CA for the management of the tailings at the Expo mine.

Task: For discussion, decision

Filed on February 10, 2021, this request to amend the certificate of authorization covers the modification of the planned tailings management plan in the operating phase of the project to allow additional tailings to be deposited in the Expo pit.

After discussion and analysis of the preliminary information provided to it, the KEQC had decided to address the promoter a first series of questions and comments on June 15, 2021.

After receiving and analyzing the responses to this set of questions and comments, the KEQC considered that the answers are generally satisfactory.

However, the members of the KEQC believed that the proponent must make additional efforts to improve communication with the communities to ensure they are properly informed and consulted.

Nevertheless, the KEQC believed that the storage of tailings in the Expo pit should reduce the surface footprint, contain solid mine waste in an anoxic environment (thereby preventing the generation of environmentally harmful acids), and reduce or eliminate the maintenance of additional dams.

Lastly, the KEQC noted that the proponent undertakes to monitor the filling of the pit and to update its water quality prediction model every three years. It also undertook to treat the water in the pit if water quality proves to be worse than expected, for as long as necessary.

As a result, after analyzing and discussing all the information sent to it, the KEQC decided to authorize the request to amend the project's certificate of authorization. However, this authorization is subjected to compliance with the following conditions:

Condition 1 For the impact of the discharge into the environment to be assessed, the proponent must submit to the Administrator, for approval, no later than one year prior to the completion of the Expo pit, an application to set Environmental Discharge Objectives (EDOs). The proponent must document the characteristics of the receiving environment required for this calculation, as well as its revised predictions of water quality in the flooded pit. The proponent must specify, where applicable, the additional mitigation measures to be implemented to work toward reaching these values.

Condition 2 The proponent must include data from the monitoring of the water level in the pit and monitoring data from the thermistor(s) installed around the pit in the annual environmental monitoring report.

Condition 3 The proponent must keep the three measurement stations added to respond to concerns in the community of Puvirnituq regarding water quality and to add the measurements to the environmental monitoring report.

Condition 4 The proponent is permitted to deposit a maximum of 2.91 Mt (1.96 Mm^3) of tailings in the Expo pit.

Action: Send a letter to the Administrator – Authorization of the modification of the CA

5. Project of construction of a new Thermal Generating Station on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-015)

5.1. Impact study

Task: For discussion, decision

Given the demographic context of Nunavik and, more specifically, the growing energy demand in the Northern Village of Puvirnituq, Hydro-Québec plans to build a new generating station to replace the existing power plant. This station will ensure the supply of electricity to Puvirnituq starting in 2026.

With a design life of 50 years, the new plant will be equipped with four generating units (a fifth may be added if necessary) for a total installed capacity of 6.50 MW and a maximum capacity of 7.44 MW. The guaranteed capacity will ensure grid reliability for over 30 years.

The planned location for the new power plant is approximately 2.5 km west of the centre of Puvirnituq. The developed area will be approximately 15,000 m² and will house the station, a tank farm equipped with two exterior stocking tanks of 75,000 litres each and storage areas for operational needs. Hydro-Québec is also planning a wind farm in the Puvirnituq region; a phase 2 is planned to integrate an energy storage system within the developed area. Also in terms of renewable energy, the building roof will have 35 solar panels to power the actual plant. Finally, in the aim of making the building more welcoming, the work of an Inuit artist from the community will be mounted on a panel on the facade of the power plant.

After discussion and analysis of the impact study provided to it, the KEQC concluded it needed more information in order to make a decision regarding the delivering of the

certificate of authorization (CA). The KEQC decided to address the following questions and comments to the proponent:

General presentation of the project

It is repeatedly mentioned in the volume 1 of the impact study, (see section 2.1, page 2-1; section 2.2, page 2-2; section 4.1.1.2, page 4-4; section 6.8.2, page 6-29; section 7.2, page 7-3), that the implementation of a future wind turbine project is aiming at the integration of 46 to 62% of wind energy to the production in Puvirnituq. However, the feasibility of this project is not well documented, even though the project of thermal generating station has been designed with the wind generation in mind.

QC -1. The KEQC asks the proponent to confirm whether the wind generating project has been presented to the community during the public consultation and whether the preliminary studies have been done. Should it be the case, the promoter must provide this information. Furthermore, the promoter must also detail all the steps foreseen for the implementation of the wind production project, in particular the studies to conduct, the schedule of the works, the public consultations, and the necessary steps to get the required authorizations.

Operating phase

Section 4.2.9 (pp 4–15 of vol. 1 of the impact study), which addresses fuel supply, mentions that a metering system (mass flow meter) will be installed on the storage tanks to detect leaks.

QC - 2. The KEQC asks the proponent to explain how the mass flow meter will be able to detect leaks.

QC – 3a. According to the information available to the KEQC Halutik enterprises is operating in Kuujjuaq only, the promoter must confirm this information.

QC – 3b. The KEQC asks the proponent must specify with figures whether the new power plant's fuel needs will be greater or less than those of the current plant, to better assess whether the storage capacity at the tank farm is sufficient.

Borrow pit preparation

In section 4.3.2 (vol 1 page 4-16 of the impact study), it is mentioned that the localisation of the borrow pits has yet to be identified.

QC - 4. The KEQC asks the proponent to identify the potential site for a borrow pit for the backfill. The proponent must also indicate whether those sites have already been authorized and under whose name or names.

Hazardous residual materials

Section 4.4.1 (pp 4–17 of vol. 1 of the impact assessment) mentions that 300 m3 of construction waste (wood, wool, gypsum, metal, etc.) will be produced during the construction of the power plant. However, 200 m3 is mentioned in section 6.4.

QC - 5. The KEQC asks the proponent to specify how much construction waste will be generated during the construction of the plant.

In section 4.4.1 (pp 4–17 of vol. 1 of the impact study), the proponent indicates that residual materials will be sent to the northern landfill in Puvirnituq or transported to authorized disposal sites in southern Quebec. Discussions have already been initiated with the Northern Village of Puvirnituq for the use of their landfill.

QC - 6. The KEQC asks the proponent to provide written confirmation of its agreement with Puvirnituq and with other disposal sites in southern Quebec to send residual materials to these sites. These documents must specify the modes of transportation used. The storage of construction waste on the power plant site and while awaiting disposal or treatment must also be provided.

In section 5.6.2.5 as well as in section 17 of Appendix B, there is mention of the management of non-hazardous and hazardous residual materials. In this regard, it is worth mentioning that waste management in northern Quebec is a major issue. Consequently, it is crucial the proponent ensure that the residual materials generated during the construction, operation and decommissioning of the station are disposed of in accordance with the *Regulation respecting the landfilling and incineration of residual materials* (chapter Q-2, r. 19). It will be important to ensure that unused materials or machinery brought in by contractors not be abandoned at the station and be returned to southern Quebec or recovered on site. Consequently:

QC - 7. The KEQC asks the proponent to provide:

- a list of residual materials generated during the construction, operation and decommissioning of the power plant. It must include: all residual materials generated (putrescible materials, metals, plastics, fibres, glass, wood, tires, electronic products, etc.), including solids recovered by the domestic water treatment unit, notably septic sludge;
- a waste management plan, favouring the recovery of waste, which will detail in particular the methods of storage, sorting and transportation, the facilities planned for the storage and sorting area, the storage conditions, the duration of storage before transportation, etc.;
- the names of the ecocentres and landfill sites governed by the Regulation that will receive all of the residual materials generated by the project, as well as written proof of their agreement to receive these residual materials.

Climate

In section 5.4.1 (pp 5–7 of vol. 1 of the impact study) concerning the region's climate data, the proponent mentions that the closest available complete climate data for Puvirnituq is that of the Kuujjuaq station located more than 500 km from the area under study. For

information, several climate data sets from Puvirnituq are available from SILA, a network of permanent observatories for climate and environmental changes in the North run by the Centre d'études nordiques at Université Laval.

QC - 8. The KEQC is inviting the proponent to take into account the available data to paint a true climatic picture of Puvirnituq.

Soils

Section 5.4.4 (pp 5–14 of vol. 1 of the impact study) refers to an environmental soil characterization study at the proposed site of the new generating station.

QC - 9. In order to complete the impact study, the KEQC asks the proponent to provide this soil characterization study.

Impact analysis and mitigation measures

Section 6.2 (vol. 1 page 6-6 of the impact study), states that the projected site for the power station is valued by the community.

QC - 10. The KEQC asks the proponent to explain what the loss of this gathering site exactly means to the community.

Impacts on the human environment and mitigation measures

Section 4.2.6 (pp 4–10 of vol. 1 of the impact study) states that geotechnical surveys were conducted in the limited study area to characterize existing soils and identify the depth and nature of the rock to inform engineering and the positioning of the new infrastructure and site development.

Section 5.4.3 (pp 5–13 of vol. 1 of the impact study) mentions that these surveys confirmed shallow rock over the entire site that is covered by a thin layer of organic soil, then by till composed of sand, gravel and silt.

In section 4.2.2 (pp 4–7 of vol. 1 of the impact study) explains that the power plant will be built on concrete slabs. The site will be excavated and blasted and large layers of granular material will be used prior to construction.

Finally, section 6.6.1 (pp 6–15 of vol. 1 of the impact study) mentions that no impact on soil stability is anticipated during the station's operating stage and that infrastructure design will take the omnipresence of permafrost into account.

Given that Puvirnituq is located in an area that is considered highly sensitive to permafrost thaw (as mentioned in section 5.4.2 of vol. 1 of the impact study)

QC - 11. The KEQC asks the proponent to:

- justify its choice of foundation to ensure the plant's resilience and the integrity of the permafrost for the lifetime of the project, by consulting reference works on permafrost construction in Nunavik, specifically in Puvirnituq, including the *Caractérisation géotechnique et cartographie*

améliorée du pergélisol dans les communautés nordiques du Nunavik[1] (Allard et coll., 2020) report. Only one study on climate change in Nunavut is cited in section 5.4.2 (pp. 5–10, vol. 1 of the impact study)

- present the results of the Englobe (2020) characterization report and geotechnical surveys referred to several times in the impact assessment.

QC - 12. The KEQC is also asking the proponent to provide the phase 1 and 2 environmental characterizations mentioned in section 6.6.1 (pp 6–14, vol. 1 of the impact study).

Noise environment

Section 6.8.3 (pp 6–35, vol. 1 of the impact study) refers to a noise study, of which only excerpts appear in the impact study.

QC - 13. The KEQC asks the proponent to provide this study.

Accident prevention measures and facility safety during the operating phase

Section 8.5.2 (pp 8–17, vol. 1 of the impact study), which addresses the risk management program, mentions that the tanker truck that will fill the diesel fuel tanks will use a reserved area. The proponent mentions that a recovery kit will be available at this location for use in the case of a leak or incident during the transfer of diesel fuel.

QC - 14. The KEQC asks the proponent to briefly present its training program for the employees in charge of the management of hazardous material, in particular in which concerns the fuel leaks. The promoter will also explain if, on top of the above-mentioned recovery kits, other measures are necessary in order to mitigate any leaks.

QC - 15. Moreover, the KEQC asks the proponent to detail its procedures and requirements with its suppliers about the norms for fuel delivery. In particular, the proponent must explain its requirements in terms of training of the personnel about the prevention of accidental leakage of fuel.

Atmospheric dispersion study

Section 2.2 (pp 130–131, vol. 2 of the impact study), which describes the equipment and the simulation scenario, the atmospheric dispersion study includes only one scenario, for a total installed capacity of 6.50 MW. The other potential scenarios mentioned in the impact study, i.e., a total installed capacity of 7.44 MW and a capacity of 9.3 MW, have not been modelled.

QC - 16. The KEQC wishes to remind the promoter that for these two other scenarios to be authorized, the proponent must add them to the atmospheric dispersion study.

[1] https://experience.arcgis.com/experience/563a353574604dfaabaec67d0d116b12/page/page_20/

In Section 2.3 (air emission standards), Table 2 presents a limit value of 2.2 g/MJ for total hydrocarbons. However, since the generators will be powered by diesel, the limit value for total hydrocarbons should be 0.28 g/MJ supplied by the fuel for an engine rated at 1 MW or greater, as specified in Section 52 of the *Clean Air Regulation* (CAR).

QC - 17. The KEQC asks the proponent to confirm that it will consider the correct information and provide explanations and corrections as necessary.

QC - 18. In order to validate the emission rates presented in section 3.9 (pp 153-154 of vol. 2 of the impact study) on emission parameters, The KEQC asks the proponent to provide the engine data sheet from the generator manufacturer, which should include contaminant emission data according to the speed and reference documents it used to determine the odour emission rates of diesel generators.

Action: Letter to the Administrator – Questions and Comments

6. Budget and financing of the KEQC

6.1. Request for funding 2022-2023

Task: For discussion, decision

The executive secretary presented the draft funding application for the 2022–2023 fiscal year. The COVID pandemic has affected the KEQC's expenses, particularly travel and accommodation. Nevertheless, it chooses to make a budget request as in a normal year, hoping to use part of the surplus to carry out projects that have been postponed for years, such as a tour of the communities. The KEQC also plans to use another portion of these surpluses to build its working capital fund, as requested since 2017.

In addition, the Chairman has brought to the members' attention that the reimbursements for business and travel expenses for Inuit members have not been revised for several years. The executive secretary was tasked with making enquiries to update the business and travel reimbursement rates.

Action: Letter to the Administrator – KEQC's request for funding 2022-2023

7. Impact Assessment Act Working Group

7.1. Project of answers to the working group

Task: For discussion, decision

The executive secretary submitted to the members a draft response to the questions posed by the working group on the federal working group for the Impact Assessment Act regarding KEQC operations. In general, and in line with previous discussions on the subject, the members do not really understand the purpose of the process. Nevertheless, the draft letter was validated and will be sent by the executive secretary.

Action: send a letter to the Impact Assessment Act Working Group – answers to the questions

8. Varia

9. Next meetings

Next KEQC meeting will be held in Québec City on February 23, 2022.

DOSSIERS UNDER ANALYSIS

Environmental monitoring report 2019 Raglan Mine Project, phases II and III by Glencore (3215-14-019)

Environmental and social monitoring report 2020, direct shipping ore project, project « 2a » (Goodwood) by Tata Steel Minerals Canada, (3215-14-014)

Raglan Mine Project, phases II and III by Glencore – follow up to conditions 1 and 3 of the certificate of authorization of July 11, 2017 (3215-14-019)

Raglan Mine Project, phases II and III by Glencore - follow up to conditions 4 and 8 of the certificate of authorization of July 11, 2017 (3215-14-019)

Culverts replacement on Salluit's airport access road and installation of an AWOS, by MTQ (3215-07-005)

Rock mound blasting project at the Kangiqsujuaq airport site and replacement of lighting devices, by MTQ (3215-07-013)

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Kativik environmental quality commission
Commission de la qualité de l'environnement Kativik

APPENDIX A

AGENDA

1. **Adoption of the agenda**

2. **Correspondence**

Follow-up of the correspondence can be found in Appendix B of this document

3. **Adoption of the minutes of the meeting 266**

NEW DOSSIERS

4. **Nunavik Nickel Project by Canadian Royalties Inc (3215-14-007)**
   4.1. Request for a modification of the CA for the management of the tailings at the Expo mine.
   Task: For discussion, decision

5. **Project of construction of a new Thermal Generating Station on the territory of the northern village of Puvirnituq by Hydro-Québec (3215-10-015)**
   5.1. Impact study
   Task: For discussion, decision

6. **Budget and financing of the KEQC**
   6.1. Request for funding 2022-2023
   Task: For discussion, decision

7. **Impact Assessment Act Working Group**
   7.1. Project of answers to the working group
   Task: For discussion, decision

8. **Varia**

9. **Next meetings**

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Appendix B

Follow-up of the correspondence from Sept. 30 to Nov. 22, 2021

PROJECT	FROM/TO	DOCUMENT	DATE	COMMENTS	ACTION
Nunavik Nickel Project by Canadian Rolyalties inc.	MELCC to KEQC	Allamaq mine closure plan	rec'd Sept. 27, 2021		
Dismantling clean up and restoration of mobile camp sites – request #6 by Makivik corporation	MELCC to KEQC	Updated Action Plan	rec'd Sept. 30, 2021		
Project of construction of a new thermic power generation station in the northern village of Puvirnituq, by Hydro-Québec	MELCC to KEQC	Impact study	rec'd Oct. 13, 2021		
Project to Open and Operate a Quarry in Inukjuak	KEQC to MELCC	Attestation of exemption	sent Oct. 29, 2021	A/R Oct. 29, 2021	
Nunavik Nickel Project by Canadian Rolyalties inc. Environmental report 2020	KEQC to MELCC	Questions and comments	sent Oct. 28, 2021	A/R Oct. 29, 2021	
Nunavik Nickel Project by Canadian Royalties Inc. Power Line and Fiber Optic Supply at the Deception Bay Camp (3215-14-007)	KEQC to MELCC	Questions and comments	sent Oct. 28, 2021	A/R Oct. 29, 2021	
Nunavik Nickel Project by Canadian Rolyalties inc. Allamaq mine closure plan	KEQC to MELCC	Questions and comments	sent Oct. 28, 2021	A/R Oct. 29, 2021	
Kuujjuarapik thermal generating station capacity increase project by Hydro-Quebec	KEQC to MELCC	Questions and comments	sent Oct. 29, 2021	A/R Oct. 29, 2021	
Dismantling clean up and restoration of mobile camp sites – request #6 by Makivik corporation	KEQC to MELCC	aknowledgement of receipt	sent Nov. 5, 2021	A/R Nov 8, 2021	
Nunavik Nickel Project by Canadian Rolyalties inc. Allamaq mine closure plan	MELCC to proponent	Questions and comments	sent Nov. 16, 2021		
Nunavik Nickel Project by Canadian Rolyalties inc. Environmental report 2020	MELCC to proponent	Questions and comments	sent Nov. 16, 2021		
Culverts replacement on Salluit' s airport access road and installation of an AWOS, by MTQ	MELCC to KEQC	preliminary information	rec'd Nov. 12, 2021		

Rock mound blasting project at the Kangiqsujuaq airport site and replacement of lighting devices, by MTQ	**MELCC to KEQC**	**preliminary information**	**rec'd Nov. 18, 2021**		