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

MINUTES

OF THE

274th meeting

February 22, 2023

Montreal

ADOPTED

Meeting summary

The 274th meeting was held in Montreal on February 22, 2023.

Present:	Pierre Philie Daniel Berrouard Cynthia Marchildon Thérèse Spiegele Murielle Vachon	David Annanack Joseph Annahatak Lisa Koperqualuk
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Executive Secretary: Florian Olivier

PROJECTS AND OTHER MATTERS

DISCUSSIONS OR DECISIONS

Project of widening and replacement of guardrails on the access road to Quaqtaq's airport by MTQ (3215-07-010)	<ul style="list-style-type: none"> The Commission decided to authorize the modification of the certificate of authorization
Project to Deploy Two Wind Turbines with a Battery Energy Storage System at the Nunavik Nickel Mine, by Tugliq Energy in partnership with Canadian Royalties Inc. (3215-10-016)	<ul style="list-style-type: none"> After examining the impact study, the Commission decided to sent the proponent a series of questions and comments
Project of refection and widening of a 5 km section of a road and replacement of 13 culverts in Kuujjuaraapik by KRG (3215-05-009)	<ul style="list-style-type: none"> After analysis and discussion, the Commission decided to exempt this project
Project of development of an end-of-life vehicle storage site in Quaqtaq (3215-16-063)	<ul style="list-style-type: none"> After analysis and discussion, the Commission decided to exempt this project
Project to expand and modernize the Aupaluk Tank Farm, by the Fédération des Coopératives du Nouveau-Québec (3215-22-022)	<ul style="list-style-type: none"> After analysis and discussion of the preliminary information, the commission decided to send the proponent a series of questions and comments.
	<ul style="list-style-type: none">
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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 273

4. Project of widening and replacement of guardrails on the access road to Quaqtak's airport by MTQ (3215-07-010)

4.1. Complementary information, request for a modification of the certificate of authorization

Task: For discussion, decision

The primary purpose of the project is to secure the access road to the airport (Litua Street) and to municipal services (landfill and wastewater treatment). This road also provides access to the land around the northern village. Drivers have reported going off the road in this area and the community is asking that the area be made safer for its users. The road needs to be widened in some areas to allow for the installation of safety barriers (guardrails).

The installation of guardrails on 674 metres of Litua Street requires the widening of the shoulders by one to two metres on each side, on 12 sections of road. The additional site area, i.e. widening of the road shoulders, is estimated at 553 m².

To allow for the required shoulder widening, the extension of a surface drainage culvert may be required in the area of the oil tanks by approximately 5 metres or less, depending on road fill conditions.

The granular material for the widening of the shoulders will be produced by operating a quarry under the supervision of the MTMD or a quarry operated by Makivik. Discussions are underway with Makivik and the Quaqtak Landholding Corporation to secure the required supply of granular material. The production and storage of granular material is planned for summer 2025. The guardrail installation works, including the shoulder widening, is expected to take approximately 15 days and is scheduled for summer 2025.

After analysis and discussion of the information submitted to it by the proponent, the Commission decided to authorize the modification of the certificate of authorization (CA), under the following condition:

Condition: Before the works begin, the proponent must confirm with the Provincial Administrator the location of the quarry and the name of its operator, for information purposes.

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

5. Project to Deploy Two Wind Turbines with a Battery Energy Storage System at the Nunavik Nickel Mine, by Tugliq Energy in partnership with Canadian Royalties Inc. (3215-10-016)

5.1. Request of a certificate of authorization – environmental and social impact assessment

Task: For discussion, decision

The project consists of installing two, 3-MW wind turbines coupled with a battery system for energy storage. These turbines will be installed a few kilometres from the Expo mine site, between 2 and 3 km east of the site. Once installed, it is estimated that these wind turbines will produce 17,500 MWh of electricity annually. The wind farm will avoid the combustion of 4.5 million litres of diesel by the current generators. This is a reduction of more than 14,000 tons of CO₂ equivalent in the atmosphere.

The project site will occupy an area of 0.25 km² of the 1,039 km² covered by CRI's mining leases. The battery system for energy storage will be installed within the mine infrastructure and connected to the wind turbines through the collector system, which will be buried. Roads are required to transport the equipment and to access the turbine sites. The use of existing roads is preferred. However, a new 2.4-km section of access road will have to be built between the existing road and the sites selected for the two wind turbines.

Site development and construction of the project will extend over an 8-month period, from the mobilization of the first equipment on the Expo mine site to hook-up to the mine's electric grid. Construction is scheduled to take place from June to December 2023.

After analysis, and discussion, of the impact study submit to it by the promoter, the Commission wished to obtain more information and decided to sent the proponent a series of questions and comments reproduced in the Appendix C of this document.

Action: Send a letter to the Administrator – questions and comments

6. Project of refection and widening of a 5 km section of a road and replacement of 13 culverts in Kuujjuaraapik by KRG (3215-05-009)

6.1. Request of exemption – complementary information

Task: For discussion, decision

The Northern Village of Kuujjuarapik and the Whapmagoostui Cree First Nation have been using the same trench landfill site located within the Northern Village of Kuujjuarapik since the 1950s. In September 2021, an exemption was issued for the construction of a 600 metre access road to a new landfill site, from the road connecting the Northern Village of

Kuujjuarapik to the existing landfill site. A certificate of authorization was issued for the new landfill in November 2019 by the Cree Regional Administrator. The development, operation and closure of the new landfill site are the responsibility of the Whapmagoostui Cree Nation.

Given the increase in traffic on this road, the Village wishes to make the road safer. In addition, the culverts put in place during the construction of the road are made of galvanized steel, and the salty coastal air has degraded their integrity and so they must be replaced.

The works consist mainly of widening the roadway from 7 to 9 metres. In addition, 13 culverts will need to be replaced with aluminized corrugated metal piping and one culvert will be added. In addition to these tasks, clearing for visibility and guardrail installation will be carried out. The total wetland encroachment will be approximately 1,394 m² over 572 linear metres.

After analysis, and discussion, of the information submitted to it by the proponent, the Commission considered that the project will have a limited impact on the environment and will meet the need for both communities. Thus, the Commission decided not to submit the project to the environmental and social impact assessment and review procedure.

Action: send a letter to the Administrator - exemption

7. Project of development of an end-of-life vehicle storage site in Quaqlaq (3215-16-063)

7.1. Request of exemption – complementary information

Task: For discussion, decision

The purpose of this project is to create a safe site for disposing of end-of-life vehicles and to optimize the management of the residual materials from these vehicles. It could be the first of many similar projects to provide such storage facilities in other northern villages.

The project consists of developing a fenced site measuring approximately 5,000 m² of gravel surface. The vehicles, which would be previously decontaminated at the municipal garage, would then be stored on the site to make them available to residents of the Northern Village, particularly for spare parts. Vehicles that have no more parts available can then be compacted and stacked on site for eventual recovery. Compaction activities will not take place on site until a metal recovery service is available in Quaqlaq.

After analysis, of the complementary information and discussion, the Commission considers that the project will have a limited impact on the environment and will reduce the potential for environmental pollution and accident hazards. Thus, the Commission decided not to submit the project to the environmental and social impact assessment and review procedure

Action: send a letter to the Administrator - exemption

NEW DOSSIERS

8. Project to expand and modernize the Aupaluk Tank Farm, by the Fédération des Coopératives du Nouveau-Québec (3215-22-022)

8.1. Request of exemption – preliminary information

Task: For discussion, decision

The Aupaluk oil depot is operated by the Fédération des coopératives du Nouveau-Québec (FCNQ Petro). It is used to store arctic diesel and gasoline. The oil depot consists of storage facilities (tanks), a loading dock for tanker trucks, a pumping station and an electrical building.

Since its construction, the oil depot has undergone several phases of redevelopment for which requests for exemption from the environmental and social impact assessment procedure were submitted. FCNQ Petro filed an exemption request in November 2006 for the expansion and redevelopment works. An attestation of exemption was issued on February 27, 2007.

In order to meet the growing needs of the Northern Village of Aupaluk, FCNQ Petro plans to carry out works to increase its petroleum product storage capacity for the next 15 years. At the same time, the facilities are slated to be brought up to standards and modernized.

FCNQ Petro plans to add two new tanks (#9 and #10), totalling 2,436,000 litres, therefore increasing the total capacity to 4,360,000 litres, which is almost the double of the current capacity.

The modernization works planned consist of:

- Decommissioning of six tanks (#3 to #8) tanks #1 and #2 left in place.
- Building and installation of an additional dyke.
- The building of a new pumping station and a new loading dock.
- Some electrical installations will be renovated.
- Pre-existing tanks (#1 and #2) will be cleaned, inspected and repaired, as required.

After analysis of the preliminary information and discussion, the Commission decided it needed more information in order to render a decision on the submission of the project to the environmental and social impact assessment and review procedure. Thus, the Commission decided to address the proponent the following series of questions and comments:

QC 1. The proponent mentions that the resolutions of the Northern Village of Aupaluk authorizing FCNQ Petro to proceed with the expansion work have been formalized. The proponent must provide these resolutions.

QC 2. The life span for the new tanks is expected to be 15 years. Considering that the current tanks, which will be kept, have been in place since 1988 and since

infrastructure sustainability should be a concern, the proponent must explain why the life span of the new tanks is only 15 years and specify whether they could be in service for a longer period.

- QC 3.** Considering the FCNQ's participation in Les Énergies Tarquti, a company aiming to develop renewable energy in Nunavik, the proponent must further justify the medium- and long-term rationale for the project, taking into account the possibility of developing renewable energy. Also, the proponent must present projections of the increase in hydrocarbon needs of the Northern Village of Aupaluk for the next 20 years.
- QC 4.** The proponent must identify the environment's sensitive elements, which could be affected in the event of an accident, in such a way that consequences (to homes, the school, daycare centre, hospital, natural sites of special interest, etc.) could be significant or increased.
- QC 5.** The new 35,214-litre compartmentalized diesel and gasoline fuel tank (#11), included in drawings AU001 and AU003 of Appendix 5 - Plans, is not presented in the report filed by the proponent. The proponent must provide details regarding Tank #11 with respect to construction standards and the planned works.
- QC 6.** The proponent must present the security measures planned for the project, in particular with regard to the facility access restrictions, security systems and preventive measures (monitoring systems, emergency shutdown, fire-fighting systems, sprinklers, presence of emergency generators, leak detectors, high-level alarms, retention basin, safety distance, etc.). It must also draw up a summary of the accidents that have occurred over the last five years for the current facilities and for other similar projects.
- QC 7.** The proponent must clarify its intentions regarding the filing of its Emergency Response Plan (ERP) and must commit to sharing it with local stakeholders, namely the Northern Village of Aupaluk and the Kativik Regional Government.
- QC 8.** Some operations, such as tank filling and cleaning, are likely to emit airborne contaminants, and as such could produce passive emissions. Considering the residences in the vicinity (within one kilometre) and the fact that several petroleum compounds are regulated by a standard or criterion, the proponent must file an atmospheric dispersion model to demonstrate compliance with the standards and criteria for atmospheric quality.
To do so, the requirements laid out in Schedule H of the *Clean Air Regulation* must be applied. To ensure the validity of the method, the proponent is strongly advised to submit a modeling estimate to the Ministère de l'Environnement, de la Lutte contre les Changements climatiques, de la Faune et des Parcs (MELCCFP) before the modelling is carried out.

QC 9. The *Clean Air Regulation* (CAR) lays out requirements for certain types of tanks (sections 44 and 45), including storage tanks for volatile organic compounds (VOCs) that have a certain vapour pressure at storage conditions. The CAR also defines air quality standards (section 197).

Based on the vapour pressure data of the products stored in the existing Tank #1 and the new Tanks #9 and #10, the proponent must demonstrate that it will fulfil requirements of sections 44 and 45 of the CAR. It must also demonstrate that contaminant emissions from activities related to the storage of products in Tanks #1, #2, #9 and #10 (e.g. decanting) are within the limits prescribed in Schedule K of the CAR. This demonstration could be done via air emissions modelling (section 197 of the CAR) or any other valid method.

QC 10. The proponent must demonstrate that it will comply with section 44 of the CAR and use submerged fill lines for the fuel tank, for Tank #2. The proponent must demonstrate with supporting evidence (e.g. plans and specifications, photographs) that the fill lines will be submerged or are submerged if this provision is not already in place.

QC 11. Although the proponent plans to fill the tanker trucks from below to reduce the risk of spills, it is strongly recommended that spill prevention devices be installed on all tanker trucks, regardless of the petroleum products involved, in order to minimize the risk of spills.

QC 12. In the event that contaminated soils are accidentally discovered, the proponent will have to submit for authorization a decontamination and rehabilitation project if it wishes to treat the soils on site.

QC 13. The proponent did not address in its report the impact of climate change on its project. In addition to the risk of avalanche, which is considered non-existent, the proponent must demonstrate that it has taken into account all the risks and potential impacts of climate change, both on its project and on the environment in which its project is located, for the entire life span of the planned infrastructure. It may consult the French-language guide on climate change for project proponents, *Guide à l'intention de l'initiateur de projet Les changements climatiques et l'évaluation environnementale*¹, as well as the report *Portrait climatique régional en climat de référence et futur en soutien à l'analyse des impacts et de l'adaptation aux changements climatiques sur le territoire Eeyou Istchee Baie-James, du nord de l'Abitibi-Témiscamingue et du Nunavik*.²

QC 14. Blizzards, windstorms and ice storms are among the climatic hazards posing the greatest risk to the Northern Village of Aupaluk.³ The proponent must identify the project components that may be affected by each of these hazards and their potential consequences for the project and its setting. If relevant, it should also

¹ <https://www.environnement.gouv.qc.ca/evaluations/directive-etude-impact/guide-intention-initiateur-projet.pdf>

² <https://www.ouranos.ca/fr/projets-publications/portrait-climatique-regional-en-climat-de-reference-et-futur>

³ <https://experience.arcgis.com/experience/563a353574604dfaabaec67d0d116b12/page/Caractérisation-du-pergélisol-au-Nunavik/>

propose climate change adaptation measures appropriate to its project design and/or infrastructure maintenance.

- QC 15.** The proponent must consider the risks associated with thawing permafrost, which could compromise the stability of its infrastructure. The proponent must summarily assess these risks by first reviewing the stability of the existing infrastructure at the petroleum storage site and provide the results of this assessment. It may refer to the report *Caractérisation géotechnique et cartographie améliorée du pergélisol dans les communautés nordiques du Nunavik: Aupaluk*. This document suggests that the current petroleum depot site is located on thaw-stable deposits and suggests that the risk to infrastructure from permafrost thaw is low. However, given the infrastructure's size, that it is crucial to the Northern Village, and the impacts of an eventual failure, necessary precautions must be taken to ensure the project's future stability. Based on its summary examination and conclusions, the proponent may choose, if necessary, to call upon an expert to perform a geotechnical analysis and issue recommendations in regards to ensuring the stability of the infrastructures in response to project site conditions.
- QC 16.** Tank washing and filling operations specifically and the use of hydrocarbons on the site more generally will generate greenhouse gas emissions (GES). The proponent must submit a quantification of the greenhouse gas emissions that will be emitted by the project. To do so, the proponent is asked to consult *Guide de quantification des émissions de gaz à effet de serre*,⁴ which presents the detailed approach (Schedule A), including the sources of GHG emissions to be taken into account and the calculation formulae.

Action: Send a letter to the Administrator – questions and comments

9. Varia

9.1. Terminology workshops

Mme Lisa Koperqualuk a participé à l'atelier de terminologie organisé par Glencore en février 2023. Un rapport et un lexique seront produits, ils seront très utiles pour la traduction des termes techniques en Inuktitut.

9.2. Ethics

Mme Cynthia Marchildon explique son implication professionnelle dans la restauration des mines d'amiante par soucis de transparence. Il se pourrait qu'elle se retire des discussions de la Commission pour éviter toute apparence de conflit d'intérêt advenant qu'un tel projet soit traité en réunion.

9.3. Rare earth mining project in Labrador

⁴ <https://www.environnement.gouv.qc.ca/changements/ges/guide-quantification/guide-quantification-ges.pdf>

M. David Annanack fait part de ses préoccupations au sujet d'un projet minier qui s'établirait au Labrador mais dont les déversements pourraient potentiellement atteindre la communauté de Kangiqsualujjuaq au Nunavik. La Commission discute de la question épineuse des répercussions de projets qui se situent dans une autre province. Les membres de la Commission vont rester vigilants à ce sujet, bien que la Commission ne soit pas compétente pour des projets hors de la province de Québec.

9.4. Meeting with members of the IAA working group

Pour information, Nancy Dea, Camille Fréchette et Lindsay Richardson, membres du groupe de travail sur la LÉI, présentent les résultats des consultations menées auprès de divers organismes provinciaux et fédéraux concernant les processus d'évaluation environnementale en milieu nordique. La Commission avait répondu par écrit à des questions posées par le groupe de travail lors des consultations. Les membres de la Commission remercient les membres du groupe de travail pour cette rencontre d'information.

Next meetings

The next KEQC meeting will be held in Montreal on April 22, 2023

APPENDIX A

AGENDA

274th Meeting

February 22, 2022, 9:00 am to 5:00 pm. — Montreal

1. Adoption of the agenda

2. Correspondence

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

3. Adoption of the minutes of the meeting 273

MATTERS ARISING FROM PREVIOUS MEETINGS

4. Project of widening and replacement of guardrails on the access road to Quaqtaq's airport by MTQ (3215-07-010)

4.1. Complementary information, request for a modification of the certificate of authorization

Task: For discussion, decision

5. Project to Deploy Two Wind Turbines with a Battery Energy Storage System at the Nunavik Nickel Mine, by Tugliq Energy in partnership with Canadian Royalties Inc. (3215-10-016)

5.1. Request of a certificate of authorization – environmental and social impact assessment

Task: For discussion, decision

6. Project of refection and widening of a 5 km section of a road and replacement of 13 culverts in Kuujjuaraapik by KRG (3215-05-009)

6.1. Request of exemption – complementary information

Task: For discussion, decision

7. Project of development of an end-of-life vehicle storage site in Quaqtaq (3215-16-063)

7.1. Request of exemption – complementary information

Task: For discussion, decision

NEW DOSSIERS

8. Project to expand and modernize the Aupaluk Tank Farm, by the Fédération des Coopératives du Nouveau-Québec (3215-22-022)

8.1. Request of exemption – preliminary information

Task: For discussion, decision

9. Varia

9.1. Presentation of the results of the IAA working group

10. Next meetings

DOSSIERS UNDER ANALYSIS

Environmental monitoring report 2021 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 of the certificate of authorization of July 11, 2017 (3215-14-019)

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

Nunavik Nickel Project by Canadian Royalties Inc. Phase 2b Delta (3215-14-007)



Appendix B
 Follow-up of the correspondence from November 28, 2022 to January 30, 2023

PROJECT	FROM/TO	DOCUMENT	DATE	COMMENTS	ACTION
Project of refECTION and widening of a 5 km section of a road and replacement of 13 culverts in Kuujuaaraapik by KRG (3215-05-009)	MELCCFP to KEQC	Complementary information (answers to the Q&C)	Rec'd Nov. 28, 2022		
Construction of a new thermic power generation station in the northern village of Puvirnitug (3215-10-014)	KEQC to MELCCFP	certificate of authorization	Sent Dec. 22, 2022	A/R Jan. 9, 2023	
Innavik Hydroelectric Power Project in Inukjuak (3215-10-005)	KEQC to MELCCFP	Follow up on condition 13 of the CA of August 29, 2019	sent Jan. 11, 2023	A/R Jan. 11, 2023	
Project to expand and modernize the Salluit Oil Depot, by the Fédération des Coopératives du Nouveau-Québec (3215-22-018)	KEQC to MELCCFP	Q&C (third series)	sent Jan. 11, 2023	A/R Jan. 11, 2023	
Nunavik Nickel Project by Canadian Royalties Inc. Phase IIa (3215-14-007)	KEQC to MELCCFP	Questions and comments	sent Jan. 13, 2023	A/R Jan. 13, 2023	
Extension of the temporary crushing at the surface of a portion of the ore, Raglan by Glencore Canada inc. (3215-14-019)	KEQC to MELCCFP	Authorization of modification of the certificate of authorization	sent Jan. 13, 2023	A/R Jan. 13, 2023	
Project to develop a contaminated soils treatment platform in Puvirnitug (3215-06-062)	KEQC to MELCCFP	Attestation of exemption	sent Jan. 13, 2023	A/R Jan. 13, 2023	
Project of development of an end-of-life vehicle storage site in Quaqtaq (3215-16-063)	KEQC to MELCCFP	Questions and comments	sent Jan. 13, 2023	A/R Jan. 13, 2023	
Project to dismantle, clean and refurbish mobile camp sites - Request #9 by Les Aventures Jack Hume Inc. (3215-21-014)	KEQC to MELCCFP	Conditions met	sent Jan. 19, 2023	A/R Jan. 19, 2023	
Project to dismantle, clean and refurbish mobile camp sites - Request #10 by Club Chambeaux Inc. (3215-21-014)	KEQC to MELCCFP	Conditions met	sent Jan. 19, 2023	A/R Jan. 19, 2023	

Project to dismantle, clean and refurbish mobile camp sites - Request #11 by Pourvoirie Rivière aux Feuilles(3215-21-014)	KEQC to MELCCFP	Conditions met	sent Jan. 19, 2023	A/R Jan. 19, 2023	
Project to dismantle, clean and refurbish mobile camp sites - Request #13 by Caribou expédition (3215-21-014)	KEQC to MELCCFP	Waiting for a dismantling report	sent Jan. 19, 2023	A/R Jan. 19, 2023	



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

Appendix C

Questions and comments of the KEQC to TUGLIG Énergie S.A.R.F. concerning the project of deployment of two windmills at the Nunavik Nickel mining complex (3215-14-007)

1. BACKGROUND

Presentation by the proponent

QC -1 Section 1.1 of the Directive issued in May 2022 mentions that the impact study must clearly present how the company's administrative structure will provide the required financial guarantees when environmental restoration, decontamination, infrastructure dismantling or other measures must be taken. This information was not presented in the impact study. The proponent must present the administrative structure of the company and indicate what financial guarantees will be put in place to ensure decommissioning and/or the costs associated with the above-listed risks.

2. ANALYSIS OF THE PROJECT VARIANTS

2.1 Alternative locations for the wind farm

QC -2 In section 2.1 (page 11 of volume 1 of the impact study), the proponent mentions that three alternative locations were analyzed for the wind farm. It specifies that the selected option would install the two wind turbines approximately 3 km east of the Expo site in the Nunavik Nickel Mining Complex. The information presented indicates that this is the best alternative from an economic, technical and environmental perspective. The proponent must indicate whether social criteria were also considered in the final selection (e.g. land use, landscape). It must also indicate whether it consulted the various stakeholders, including the northern villages of Kangiqsujuaq and Salluit, certain nearby mining companies, representatives of the Kattiniq-Donaldson airport and representatives of the Parc national des Pingualuit about the alternative locations for wind farm and its final choice. **À ce sujet, la Commission demande aussi au promoteur de sonder l'intérêt de la communauté de Puvirnituq à participer aux consultations ou à être informée sur les différents aspects du projet, car malgré son éloignement géographique du site, cette dernière est signataire de l'entente Nunavik Nickel au même titre que les villages de Kangiqsujuaq et Salluit.**

3. PROJECT DESCRIPTION

3.4 Greenhouse gases (GHG)

3.4.1 Methods

Sources of GHG emissions

QC -3 Section 3.4.1.3 (page 30 of volume 1 of the impact study) states that fugitive emissions from the operation of electrical transmission and distribution equipment (e.g. capacitors, transformers) have not been quantified. These fugitive emissions are usually composed of gases, such as SF₆ or perfluorocarbons, that have a global-warming potential that is 18,000 to 23,000 times greater than CO₂. These emissions can occur during gas handling and transfer operations, the operation of equipment or its mechanical failure. Since the project

includes several pieces of electrical equipment (wind turbines, energy storage system, etc.), a quantification of fugitive emissions is required. Proponent is asked to quantify these emissions. In this regard, the proponent may refer to section 3.8 of the French-language guide for quantifying GES, Guide de quantification des émissions de gaz à effet de serre.

QC -4 Emissions from the loss of carbon sequestration caused by wetland destruction were not quantified. The projected area of disturbance is small at the project scale (0.05 hectares). However, it is important to note that knowledge of GHG impacts on wetlands has developed and that the Guide was updated in December 2022. The proponent must therefore present this quantification by referring to section 3.12 of the Guide.

3.5 Jobs and training

3.5.3 Wind farm dismantling phase

QC -5 Section 3.5.3 (page 36 of volume 1 of the impact study) mentions that, rather than being dismantled, the two wind turbines could remain in place and their management and operation transferred to local communities. The proponent must indicate whether, in such case, the costs of decommissioning, environmental remediation and decontamination will be borne by the local communities. It must also specify whether the financial guarantees will be transferred to the local communities and who will pay them

QC -6 The proponent must indicate what will happen to the wind energy equipment if the mining project activities cease for unforeseen reasons.

3.7. Project costs

3.7.3 Decommissioning

QC -7 The proponent must indicate whether decommissioning costs have been estimated and provide these numbers, if applicable. If not, it must confirm when this estimate will be made.

3.8 Developments and related projects

QC -8 Section 3.8 (page 37 of volume 1 of the impact study) indicates that a phase 2 of the project is foreseen in the next few years. Considering the current life of the wind project is estimated at 10 years, the proponent must describe how this second phase will be integrated into the present project and what it consists of.

3.12 Climate change risk and vulnerability assessment

3.12.7 Identification of risk treatment and mitigation

3.12.7.2 Recommended mitigation measures for each project component

QC -9 Section 3.12.7.2 (page 67 of volume 1 of the impact study) states that mitigation measures for each project component have been recommended by a consultant. The proponent must undertake to incorporate these measures into the project.

QC -10 The proponent must indicate what measures it will put in place, given the presence of permafrost, to ensure the stability of the exterior staircase of the wind turbine tower, the foundation of the battery storage, and roads.

QC -11 The proponent must undertake to revise the risk analysis periodically, i.e. every 5 years, to reflect the rapid advancement of knowledge in Northern Quebec.

4. CONSULTATION WITH THE COMMUNITY

QC -12 Consultations were held with various stakeholders and groups in the region (the northern villages of Kangiqsujuaq and Salluit, local mining companies, representatives of the Kattiniq-Donaldson airport and of Parc national des Pingualuit). Chapter 4 of volume 1 of the impact study reports all the comments, concerns and questions raised by these stakeholders and groups. However, the proponent provides little or no comments or answers to respondents' concerns and questions. For the sake of clarity, the proponent must provide a summary table grouping the comments, concerns and questions by category of stakeholders and groups, as well as its answers to them, and specify the adjustments it has made to its project in response to these concerns. The proponent must also indicate whether the community of Puvirnituq wanted to be informed or consulted about the project, in line with QC -2 (see above).

4.1 Inuit villages of Kangiqsujuaq and Salluit

4.1.2 Village of Salluit

QC -13 In section 4.1.2 (page 73 of volume 1 of the impact study), the proponent mentions that it planned on spending two days in September 2022 in Salluit to consult residents and meet with representatives of the northern village. However, since poor weather conditions prevented travel to the village at that time, the trip and therefore the public consultation did not occur. The proponent must confirm when it intends to hold a public consultation in Salluit to present its project to the public and to gather residents' concerns and comments.

6. IMPACT IDENTIFICATION AND ASSESSMENT

6.3 Impacts on the biological environment

6.3.1 Terrestrial and wetland flora

6.3.1.1 Construction phase

QC -14 In Table 6-13 (page 166 of volume 1 of the impact study), the proponent mentions a direct impact (permanent loss) of 467 m² of wetlands. The proponent must demonstrate that all measures have been taken to avoid and minimize losses of wetland. Under section 22 of the Environment Quality Act, the permanent losses caused by the works must be re-justified when the ministerial authorization is requested. Finally, the proponent must undertake to rehabilitate disturbed sites, as foreseen for temporary losses, and propose additional enhancement measures to compensate for permanent wetland losses.

QC -15 In Table 6-13 (page 166 of volume 1 of the impact study), the proponent mentions an indirect impact (temporary loss) of 3,944 m² of wetlands. The works require heavy vehicles, excavators, concrete mixers, a crane, trailers for workers and materials for the wind turbine installations. The maps, plans or specifications do not identify where these temporary disturbances will occur. The proponent must specify what the works consist of and identify, if applicable, the temporary encroachment areas into wetlands and water bodies. Further, the proponent must specify the methods that will be used to restore the disturbed sites and it must undertake to restore them.

6.3.1.4 Mitigation measures

QC -16 The mitigation measures presented in section 6.3.1.4 (page 167 of volume 1 of the impact study) do not include measures specific to status species or to biodiversity. The proponent must provide measure for mitigating and/or monitoring the potential impacts on biodiversity

that were characterized during the preliminary studies, particularly for status species identified in the study area.

6.3.3 Caribou and other mammals

6.3.3.1 Construction phase

QC -17 In section 6.3.3.1 (page 177 of volume 1 of the impact study), the proponent mentions that there were no collisions between trucks and caribou in 2021. This time reference does not paint a true picture of the direct mortality and the frequency of disturbance caused by road traffic. The proponent must present the observation and collision data since the CRI began annual monitoring, which aims to document collisions between caribou and trucks on the roads (including the road linking the Expo site to Deception Bay).

6.3.3.4 Mitigation measures

QC -18 In Table 6-19 (page 179 of volume 1 of the impact study), the MTR1 measure must be reinforced by requiring workers to comply with the decision tree for caribou (Figure 6 2), which is available to all workers in the Nunavik Nickel project area. The proponent must commit to strengthening the MTR1 measure.

6.4 Impacts on the human environment

6.4.1 Economy and employment

QC -19 For both the construction and decommissioning phases of the project, the proponent plans to hire about 20 workers, some of whom could come from Inuit communities. It indicates on page 182 of volume 1 of the impact study that *mitigation measures will be put in place to limit the modification of the lifestyle of the Inuit who will work at the sites*. The proponent must explain what it means by *limit the modification of the lifestyle of the Inuit* and must specify whether these are the ECO4 mitigation measures presented in Table 6-21, i.e. those resulting from the Nunavik Nickel Agreement between CRI and its Inuit partners, or whether they are new mitigation measures specific to the wind farm project.

6.4.3 Non-Indigenous occupancy and land use

6.4.3.1 Construction phase

QC -20 The proponent must consider the conservation objective of the Fjord-Tursukattaq Protected Area, which is to protect a territory that is representative of the physiographic ensemble of the Georges Bay high plateau, characterized by an irregular and strongly incised relief. The proponent must confirm that the project will not impact this conservation objective.

6.4.6 Landscape

QC -21 In addition to Map 6-1 on the description of the landscape and the projected visual impact, the proponent must provide photo simulations of the operation phase of the project, according to the different “visual access zones” indicated on pages 200 and 201 of volume 1 of the impact study. Day and night photo simulations (due to light pollution) are required.

8. ENVIRONMENTAL MONITORING AND FOLLOW-UP PROGRAMS

8.2 Environmental monitoring

QC -22 The proponent must specify whether it will join the monitoring body already in place, the Nunavik Nickel Committee, with a view to communicating to the Inuit communities all up-

to-date information on the wind farm project and the results of environmental and social monitoring, or whether it plans on setting up a monitoring committee specific to its project.

8.2.2 Monitoring of bird mortality

8.2.2.2 Adapting the avian protection system based on monitoring results

QC -23 A protection system for avian fauna, based on the programming of various environmental parameters, must be implemented by the proponent to reduce the risk of collisions. Section 8.2.2.2 (page 227 of volume 1 of the impact study) indicates that adjustments can be made quickly to the operation of the wind turbines if there is a particular problem with birds. After discussion with avian biologists, the proponent must provide a list of time periods and weather conditions during which the turbines will be shut down.

8.2.5 Monitoring of light pollution and visual impacts

QC -24 Section 8.2.5 (page 227 of volume 1 of the impact study) mentions that a light pollution monitoring program is already underway as part of CRI's environmental monitoring activities at Nunavik Nickel project's mine sites. The impact of light pollution generated by the addition of the two wind turbines could be integrated into this monitoring program: "The program could be improved to include several viewpoints within the Parc national des Pingualuit and to document the visual impacts of the project during the day and at night" (courtesy translation). Discussions with park representatives are all the more important, in that the park "is currently in the process of having its territory recognized as a 'Dark Sky Reserve'" (page 136 of volume 1 of the impact study; courtesy translation). Given the community's concerns and the importance it attributes to the region's natural features, particularly the Parc national des Pingualuit, and its concerns about the light pollution that would be generated by the two proposed wind turbines (page 76 of volume 1 of the impact study), the proponent must undertake to complete the landscape monitoring program with a survey of the perception of landscape modifications due to the project with representatives of the Parc national des Pingualuit, its employees and visitors. This survey aims, among other things, to survey the opinions of park users and representatives regarding the integration of the project into the environment.

8.3 Sharing information with local communities

QC -25 When the proponent consulted representatives of the northern villages of Kangiqsujuaq and Salluit during the preparation of its impact study, the latter expressed the wish to be informed of the results of the various follow-ups that could be carried out within the framework of the project. The proponent undertakes to send "the results of the various environmental monitoring activities during the construction phase and the environmental follow-ups during the operation phase to the elected officials of the two northern villages, as well as to the representatives of their respective landholding corporations" (page 228 of volume 1 of the impact study; courtesy translation). In addition, the proponent intends to make environmental monitoring and follow-up reports available to Inuit communities on its website. The proponent must specify its communication strategy and commit to deploying the necessary means to keep the stakeholders interested in the project regularly informed of the site's activities and environmental and social monitoring results. **Le promoteur devra, entre autres, communiquer par courrier aux corporations foncières et aux villages nordiques concernés un résumé exécutif de l'information mise à disposition sur le site Web. Pour les raisons évoquées à la question QC -2 (voir ci-dessus), le promoteur devra faire la même chose pour Puvirnituq si la communauté en a exprimé le désir.**