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

MINUTES

OF THE

277th meeting

June 29, 2023

Montreal

ADOPTED

Meeting summary

The 277th meeting was held by videoconference on June 29, 2023.

Present:	Pierre Philie	Charlie Arngak
	Daniel Berrouard	David Annanack
	Cynthia Marchildon	Joseph Annahatak
	Thérèse Spiegele	
	Murielle Vachon	

Executive Secretary: Florian Olivier

PROJECTS AND OTHER MATTERS	DISCUSSIONS OR DECISIONS
Project of Deployment of Two Wind Turbines at the Nunavik Nickel Mining Complex, by TUGLIQ Énergie SARF	• The Commission decided to authorize the project, under conditions
Innavik Hydroelectric Project in Inukjuak, follow-up to Condition 4 of the August 23, 2019, Certificate of Authorization	• After analysis and discussion, the Commission decided that the proponent had met condition 4 of the CA
Innavik Hydroelectric Project in Inukjuak follow-up to Condition 13 of the August 23, 2019, Certificate of Authorization	• The Commission decided to send the proponent a second series of questions and comments regarding the compensation plan
Mineral exploration in Nunavik	• The Commission met with Jean-Marc Séguin representative of Makivvik corp. regarding mineral exploration in Nunavik
Project of Underground Mining of the Mesamax Deposit, of Expansion of the Mesamax Waste-rock Stockpile, of Operation of the Expo Quarries 2 and 2b, Operation of Esker 2b and the Construction of Two Helipads—Project Nunavik Nickel by Canadian Royalties Inc.	• The Commission decided to send the proponent a second series of questions and comments regarding the compensation plan
Request from the Impact Assessment Agency of Canada for collaboration about the Strange Lake project by Métaux Torngat	• The Commission is open to sharing information. The Commission is also of the opinion that it is not for it to discuss a process that is determined by the JBNQA.
Decarbonation plan of the Ragan Mine by Glencore	• The Commission reserves its opinion regarding the plan until it is officially submitted

Letter from Adamie Alaku concerning the Salluit Oil deposit	• The Commission decided to send a letter to Mr Alaku explaining that it is aware of the oil supply situation in Nunavik in general and in Salluit in particular.
Letter from KEAC concerning Nunavik nickel project's phase 2b	• The Commission decided to send the KEQC a letter stressing the answers already provided to it.

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 276**

MATTERS ARISING FROM PREVIOUS MEETINGS

4. **Project of Deployment of Two Wind Turbines at the Nunavik Nickel Mining Complex, by TUGLIQ Énergie SARF (3215-22-018)**
   4.1. Request of a certificate of authorization—complementary information
   Task: For discussion, decision

The project consists of installing two, 3 MW wind turbines coupled with a battery energy storage system. These turbines are slated to be installed around 2–3 kilometres to the east of the Expo site. Once installed, it is estimated that they will produce an annual 17,500 MWh of electricity and save 4.5 million litres of diesel from being burned by the generators currently in place. This is a reduction of over 14,000 tonnes of CO2 equivalent in the atmosphere, representing a reduction of 10.5% in the current total GHG emissions of the CRI mining complex.

The site targeted for the project will occupy an area of 0.25 km2 of 1,039 km2 covered by CRI's mining leases. A battery-based energy storage system will be installed within the mine infrastructure and connected to the wind turbines through an underground collector system. Roads are required to transport the equipment and access the site designated as the turbine site. The use of existing roads will be 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.

After analysis and discussion of the information submitted to it by the proponent, including the letter received on June 23, 2023, regarding the end of life of the project, the Commission decided to authorize the modification of the certificate of authorization (CA). However, the authorization is submitted to the following conditions:

Condition 1: At the end of the first year of operation, the proponent must submit an environmental monitoring report to the Provincial Administrator, for information purposes. This report must include all monitoring activities the proponent has foreseen for the project, as well as follow-up on the commitments and mitigation measures it has implemented. The proponent will also propose a frequency for submitting this report to the Provincial Administrator.

Condition 2: No later than one year after project authorization, the proponent must submit to the Provincial Administrator, for information purposes, the final protocol for the landscape change perception survey, and present the results of this survey in its environmental monitoring report.

The decision is detailed in the document reproduced in Appendix C of the present Minutes (courtesy translation).

Action: send a letter to the Administrator—Authorization under conditions

5. Innavik Hydroelectric Project in Inukjuak (3215-10-005)

5.1. Follow-up to Condition 4 of the August 23, 2019, Certificate of Authorization

Task: For discussion, decision

According to Condition 4 of the August 23, 2019, certificate of authorization (CA): The proponent must submit, for information purposes, prior to the start of construction of the hydroelectric generating station and annually thereafter, an assessment of the steps it has taken to maximize local and regional employment, the training it has provided and details of the hires (number and origin) carried out as part of the Innavik project.

The Commission has analyzed the information received regarding the plan in question and, after discussion, considered that the proponent has met the requirements of Condition 4 of the CA.

Action: send a letter to the Administrator—Condition met

6. Innavik Hydroelectric Project in Inukjuak (3215-10-005)

6.1. Follow-up to Condition 13 of the August 23, 2019, Certificate of Authorization

Task: For discussion, decision

Action: send a letter to the Administrator —

7. Meeting with a representative of Makivik corporation concerning mining exploration in Nunavik

Task: For information

The Commission met with Jean-Marc Séguin of Makivvik. The latter opens the conversation by noting that mineral exploration has indeed increased recently, with the number of claims increasing from an average of 20,000 to 23,000 per year to nearly 40,000 for the past year. Mr. Séguin attributes this increase to Québec's strategy to promote rare earth mining exploration.
Lithium, in particular, is highly sought after and Nunavik has a strong potential for this mineral that is currently very little exploited. Mr. Séguin explains that before an exploration project begins, an application for a certificate of authorization must be filed with the Kativik Regional Government (KRG). The proponent must also demonstrate that it will dismantle the facilities once the project is completed. In Category III lands, the KRG contacts communities directly to inform them of exploration in their territory, proponents are also encouraged to contact the Northern Village of Puvirnituq, which does not have Category I and II lands. Among the exploration projects currently underway, Mr. Séguin believes that projects such as those of KoBold Metals should be monitored. KoBold has very important technical and financial resources, the company is financially supported by Bill Gates (founder of Microsoft) and Jeff Bezos (founder of Amazon.com). The exploration carried out is likely to lead to exploitation because of the significant resources mobilized and available. In addition, KoBold's projects are close to the boundaries of Pingualuit Park.
Regarding the Strange Lake Rare Earth Project by Torngat Metals Ltd. This is a proven 30 years operating deposit, the company found an investor (Cerberus) who contributed $50 million to the

project to start operating. For the time being, Torngat Metals Ltd. is seeking community approval and is increasing contacts in this regard.
For its part, Commerce Resources Inc. which also did exploration for rare earths is still looking for investors in order to start the exploitation the deposits discovered.
Mr. David Annanack, Member of the Commission, asked if there was a risk of spillage into the George River for nearby exploration projects. Mr. Séguin responded that risks are being considered, but the projects are not yet sufficiently advanced to present any real risks at this time. Mr. Séguin added that communities can request to visit the sites and that Makivvik is there to ensure that their rights are respected. Funding is also available for studies requested by communities.
Mr. Daniel Berrouard, Member of the Commission, asked whether protected areas and protected area projects are taken into consideration when authorizations are issued by the KRG. Mr. Séguin replied that this is the case and that Makivvik, the KRG and the Ivujivik community are also advocating for the protection of areas of interest.
Finally, Mr. Joseph Annahatak, Member of the Commission, asks who would be the interlocutor if the communities have questions concerning the quality of the water in the rivers, Mr. Séguin answered that it is the company Makivvik.
Members and the President thanked Mr. Séguin very much for his time.

8. Project of Underground Mining of the Mesamax Deposit, of Expansion of the Mesamax Waste-rock Stockpile, of Operation of the Expo Quarries 2 and 2b, Operation of Esker 2b and the Construction of Two Helipads—Project Nunavik Nickel by Canadian Royalties Inc. (3215-14-007)

8.1. Request to Amend the Certificate of Authorization—Complementary information
Task: For discussion, decision

The Nunavik Nickel (NNiP) project, by Canadian Royalties Inc. (CRI) was the subject of an initial Environmental and Social Impact Assessment (ESIA) in 2007, which led to the obtaining of a certificate of authorization (CA) for the entire NNiP mine site on May 20, 2008, under section 201 of the Environmental Quality Act (EQA). Since then, various changes to the overall CA have been authorized.

This request of amendment of the CA is for the underground operation of the Mesamax deposit, the expansion of the Mesamax waste rock pile, the operation of the Expo 2 and 2 b quarries, the operation of the 2 b esker and the construction of two helipads.

After reviewing the responses to an initial set of questions and comments, the Commission is seeking further information in order to provide its views on the authorization of the amendment of the CA and requests that the proponent respond to the following questions and comments:

Community consultation

QC 2 - 1. The proponent indicates that it has not received any comments from the community through the Nunavik Nickel Committee on the Mesamax project. However, a meeting was scheduled for 13 May 2023 to present the project.
The Commission requests the proponent to provide a report of this meeting and, if applicable, the comments received from the community regarding this application to amend the certificate of authorization. Similarly, the proponent indicated that it had added a liaison officer to facilitate exchanges with the Inuit community. The proponent must specify the actions that were taken by the agent and the results obtained.

ICEIP

QC 2 - 2. The proponent noted that the Inuit Community Environmental Improvement Project (ICEIP) will include measures to compensate for wetland losses caused by some of the activities presented in various amendments to the Certificate of Authorization.

The Commission asks the proponent to outline how it will compensate for wetland losses resulting from the activities of the current request of amendment and ongoing projects that have not been incorporated into the ICEIP to date. The proponent must also present progress reports and discussions with the community, the precise description of the work planned in 2023, the costs, the timelines and the areas covered.

Mesamax

QC 2–3. Concerning the risk of contamination of the surface and underground water by the fill of the pit and underground galleries and the addition of a water treatment plant at the Mesamax site, the Commission requests the proponent to file a revision of the site's water balance.

QC 2 – 4 The proponent indicates that the Mesamax Pit will be completely flooded to the point of potentially overflowing. He mentioned that a modelling of the water quality of the pit once flooding is underway. The Commission asks the promoter to provide confirmation by a professional. The potential contribution of acid mine drainage from oxidation of the pit walls exposed to the air will be taken into account in modelling the water quality of the pit.

QC 2–5. The proponent stated that "The underground operation of the Mesamax deposit will produce 100,000 m3 of waste rock, which will be completely returned to the ground for reclamation. As a result, 100% of the waste rock produced at Mesamax UG will return to the ground."

a. The Commission asks the promoter to demonstrate that it will be possible to return 100% of the extracted waste rock underground taking into account the proliferation of dynamited rock. The proponent must specify how many additional cubic metres are to be deposited elsewhere than in the underground mine and where, if applicable.
b. Since PAG waste rock will be temporarily stored on the backfill of the Mesamax pit before being returned to underground workings and to prevent the initiation of sulphide oxidation reactions, the Commission requests the proponent to specify the time required to operate the underground workings and return the waste rock underground.
c. The Commission requests that the proponent specify the estimated time for the disposal of waste rock. In the event that their flooding time is greater than the time necessary to initiate the oxidation reactions of sulphides in the waste rock temporarily accumulated in the pit, the proponent shall specify the strategy that will be put forward to prevent the initiation of oxidation reactions of sulphides before they are flooded in underground workings.

QC 2–6. Ongoing thermal modelling work will provide information regarding the formation of crossing talik. In addition, the 3 intervention options proposed by the proponent based on the result of this modelling are considered acceptable. However, the Commission asks the promoter to specify when thermal modelling will be available. The

Commission also requests the proponent to file with the Provincial Administrator, for information, the thermal modelling findings and to detail which option applies based on this result.
If an alternative response option other than one of the three submitted were selected, the proponent must provide the details to the Administrator as soon as possible for approval.

Waste water treatment

QC 2–7. In response to QC-7, the proponent states that 82,000 m3 of material will be excavated from the main collection pond (MCP) and that the material will be deposited on the waste rock pile. The proponent must specify whether the capacity of the halde is sufficient for this addition.

QC 2–8. As the operation of the Mesamax Pit expansion began in 2021 according to the proponent's information and since it is necessary to remove water from the Mesamax Pit before operating, the Commission asks the proponent to clarify whether it has already started pumping water out of the pit and, if so, if the MCB expansion and installation of the new water treatment plant (WTP) have already been completed as well. The promoter will have to indicate the actual work to date and the work to come. It must also indicate the dates on which this work was carried out.

QC 2–9. The proponent presents the maximum projected mean concentrations of contaminants in the effluent for the combination of the two water treatment plants (current and projected). The results show that the environmental release targets (ERT) are exceeded for nitrates, nitrites, silver, beryllium, cadmium, copper, mercury, nickel and lead. The current and proposed water treatment plant concept does not include removal of nitrate and ammonia nitrogen. The Commission requests the proponent to specify what measures will be put in place to reduce the levels of nitrate and ammoniacal nitrogen released into the aquatic receiving environment.

QC 2–10. The sulphide concentrations shown in Table 5 appear implausible. Such high sulphide concentrations (59.51 mg/L) are likely to result in acute toxicity to the final effluent. The Commission asks the proponent to give details of the analytical method used to obtain this result and to confirm that it is indeed a sulphide concentration.
If the results truly represent the best estimate of water quality, the Commission requests the proponent to submit and implement measures to prevent episodes of acute toxicity to the final effluent and to limit impacts on the receiving environment.

QC 2–11. The proponent reported that two samples were acutely toxic to Daphnia during the 2022 annual effluent monitoring. In the 2022 Annual Report, it is mentioned that sublethal effects were also noted on green algae, cladocera and water lentils. However, the causes of toxicity are not mentioned in the report and no corrective measures are defined. The Commission asks the proponent to state the causes of the 2022 toxicity. It must also present the corrective measures it has implemented.

QC 2–12. According to the promoter, the expansion of the Mesamax waste rock pile consists of increasing the footprint of 22,138 m^2 with a capacity of 546,000 m^3. Most of the expansion is located directly between the existing waste rock dump and the MCB. It is also planned to increase the capacity of the collection basin by 82 000 m^3 in excess of it.

The Commission asks the proponent to explain how the expansion of the waste rock heap and the MCB at the foot of the heap can affect the geotechnical stability of these structures. Among other things, the proponent must provide more information regarding the conceptual details of the planned changes (expected increase in the height of the pipe, the number of banks, the angle of the slope, the depth of the basin, the water level in relation to the limit of the pipe, waterproofing measures at the bottom and walls of the basin, etc.). The proponent should also provide more information on geotechnical assessments already completed and those planned for the detailed engineering stage. The proponent must demonstrate that these assessments will ensure the stability of the slopes and foundation of the waste rock pile and provide a description of the planned stability monitoring changes associated with the planned expansions.

Plan for the protection of fauna and flora

QC 2–13. The Plan for the protection of fauna and flora (PPFF) is incomplete and the suggested measures are not sufficient to ensure adequate protection of wildlife. In particular, sectors and themes are missing to assess the impacts of the modification request currently under analysis, including quarries, esker and helicopter landing areas and the effect of the operation of each of these sites.

The Commission requests that the proponent updates its PPFF to reflect the elements of the amendment application currently under review. To do this, it must revise its PPFF so that it is complete and that the suggested measures are sufficient to ensure adequate protection of fauna and flora.

Geochemical characterization of ore and mine waste rock

QC 2–14. The proponent did not answer QC-10. To better understand the environmental risks associated with the management of ore and mine waste rock, the Commission requests the promoter to submit a descriptive analysis of the geochemical characterization of the ore and mine waste rock extracted from the pit and underground mine. It should compare the generation potential of acid mine drainage and leaching of metals from ore and mine waste rock extracted from the pit and underground mine.

The Commission also requests the proponent to submit the anticipated effectiveness of the water treatment system used at the Mesamax site.

Archaeology

QC 2–15. The Commission requests the proponent to commit to implementing all the recommendations of the archaeological inventory report prepared by AECOM (2022).

General Comments

QC 2–16. The approved redevelopment and restoration plan calls for the Mesamax Pit to be finished. If the scenario is modified to fill the pit with waste rock, the Commission asks the promoter to revise its plan, in particular by proposing a covering concept for waterproofing the pits.

QC 2–17. Given the effluent exceedances for acute toxicity, the Commission requests the proponent to demonstrate that the new WTU will meet the acute toxicity criteria.

QC 2–18. The Commission requests the proponent to provide an update of the work planned and completed for the next 2 years. The proponent must commit to providing them every 6 months throughout its project.
The Commission also requests the proponent to provide a map showing an up-to-date aerial photograph of each of the operational sites in progress or under analysis by superimposing the study areas, authorized areas and infrastructure boundaries. The sponsor must undertake to include such a card in its annual report.

Finally, the Commission would like to remind the proponent that any modification to the operating capacity, facilities and areas operated, the stripping of surfaces and the addition of infrastructure to the mine site must be approved by the MELCCFP, following a decision by the CQEK. The proponent must also ensure that any other authorization or fee is obtained.

Action: send letter to Administrator—questions and comments (second series)

9. Varia

9.1. Request for collaboration about the Strange Lake project by Métaux Torngats
Task: For information, discussion

The Executive Secretary presented a letter received from the Impact Assessment Agency of Canada (IAAC) regarding the Strange Lake Mining Project by Torngat Metals Ltd. The Agency asks the Commission if it wishes to participate in a meeting to discuss ways of harmonizing their impact assessment processes.
The Commission is of the opinion that it is not for it to discuss a process that is determined by the James Bay and Northern Quebec Agreement and that the Provincial Administrator would be the preferred interlocutor on this subject. On the other hand, the Commission is quite open to exchanging information with the Agency on the Strange Lake project. The Commission decided to send a letter to the Agency to present its views.

Action: send a letter to the IAAC

9.2. Decarbonation plan of the Ragan Mine by Glencore
Task: For information, discussion

The Commission read a document sent to it by Glencore concerning its plan to decarbonise the Raglan mine. The Commission reserves its opinion for the time being for when the proponent will formally submit the project or projects in question.

Action: send a letter to the proponent stating that the Commission reserves its opinion

9.3. Letter from Adamie Alaku concerning the Salluit Oil deposit
Task: For information, discussion

The Executive Secretary presented a letter received from Adamie Alaku, where he questioned the processing time of the modernization file of the Salluit oil depot. Mr. Alaku also asks whether the Commission is aware of the precarious nature of oil supplies in Salluit.
With the approval of the President, a letter was sent to Mr. Alaku, explaining that the file raised important safety issues that required extensive analysis and a number of additional questions to the proponent. This considerably lengthened the processing time of the file. Furthermore, Mr. Alaku is told that the Commission is made up of half of Inuit members, the majority of whom live in Nunavik, the latter is well aware of the precarious supply of fuel for all communities in Nunavik.

Action: send a letter to Mr Alaku

9.4. Letter from KEAC concerning Nunavik nickel project's phase 2b
Task: For information, discussion

The Executive Secretary informed the Commission of a letter from the Kativik Environmental Advisory Committee (KEAC, hereinafter referred to as the Committee) following previous correspondence regarding Phase 2b of the Nunavik Nickel Mining Project of Canadian Royalties Inc.
The Committee expressed concern that the fact that this phase of the project would be treated as an request to amend the Certificate of Authorization (CA) rather than as a request for authorization would constitute a circumvention of the provisions of Chapter 23 of the James Bay and Northern Quebec Agreement (JBNQA) and does not allow a correct assessment of impacts or correct information of populations.
The Committee has already expressed its concerns in previous correspondence, also addressed to the Provincial Administrator. The Commission has responded to this request and wishes to stress that it considers that the answers previously provided should have reassured the Committee. However, the Commission wishes to assure the Committee that an amendment to the CA is as rigorous and binding a process as a request for authorization, and that the Commission ensures that communities are properly informed. The Executive Secretary will send a letter to the KEAC to this effect.

Action: send a letter to the KEAC

10. Next meetings

Next KEQC meeting will be held in Montreal on September 7, 2023

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

APPENDIX A

277th Meeting

<u>June 29, 2023, 9:00 pm to 5:00 pm. —Montreal</u>

AGENDA

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 276**

MATTERS ARISING FROM PREVIOUS MEETINGS

4. **Project of Deployment of Two Wind Turbines at the Nunavik Nickel Mining Complex, by TUGLIQ Énergie SARF (3215-22-018)**
   4.1. Request of a certificate of authorization—complementary information
   Task: For discussion, decision

5. **Innavik Hydroelectric Project in Inukjuak (3215-10-005)**
   5.1. Follow-up to Condition 4 of the August 23, 2019, Certificate of Authorization
   Task: For discussion, decision

6. **Innavik Hydroelectric Project in Inukjuak (3215-10-005)**
   6.1. Follow-up to Condition 13 of the August 23, 2019, Certificate of Authorization
   Task: For discussion, decision

7. **Meeting with a representative of Makivik corporation concerning mining exploration in Nunavik**
   Task: For information

8. **Project of Underground Mining of the Mesamax Deposit, of Expansion of the Mesamax Waste-rock Stockpile, of Operation of the Expo Quarries 2 and 2b, Operation of Esker 2b and the Construction of Two Helipads—Project Nunavik Nickel by Canadian Royalties Inc. (3215-14-007)**
   8.1. Request to Amend the Certificate of Authorization—Complementary information
   Task: For discussion, decision

9. **Varia**
   9.1. Request for collaboration about the Strange Lake project by Métaux Torngats
   Task: For information, discussion

9.2. Decarbonation plan of the Ragan Mine by Glencore
Task: For information, discussion

9.3. Letter from Adamie Alaku concerning the Salluit Oil deposit
Task: For information, discussion

9.4. Letter from KEQC concerning Nunavik nickel project's phase 2b
Task: For information, discussion

10. Next meeting

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 « 2 a » (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)

Innavik Hydroelectric Project in Inukjuak—Follow-up to Condition 4 of the August 23, 2019, certificate of authorization 93215-10-005)

Innavik Hydroelectric Project in Inukjuak—Follow-up to Condition 13 of the August 23, 2019, certificate of authorization 93215-10-005)

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Appendix B

Follow-up of the correspondence from May 16, 2023, to June 20, 2023.

PROJECT	FROM/TO	DOCUMENT	DATE	COMMENTS	ACTION
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.	MELCCFP to KEQC	Complementary information (answers to the Q&C)	rec'd May 2, 2023		
Nunavik Nickel Project by Canadian Royalties Inc.	MELCCFP to KEQC	Restauration plan update	rec'd May 24, 2023		
Strange lake Rare earth Minig Project, by Torngat Metals ltd.	MELCCFP to KEQC	preliminary information (request for authorization)	rec'd May 24, 2023		
Expansion of an existing quarry as part of maintenance and improvement work on airport infrastructure in Kangiqsualujjuaq	MELCCFP to KEQC	Preliminary information (request of exemption)	rec'd May 25, 2023		
Project to expand and modernize the Salluit Oil Depot, by the Fédération des Coopératives du Nouveau-Québec	KEQC to MELCCFP	authorization	sent May 25, 2023	A/R May 25, 2023	
Nunavik Nickel Project by Canadian Royalties Inc.	MELCCFP to KEQC	social and environmental report 2022	rec'd June 1, 2023		
Nunavik Nickel Project by Canadian Royalties Inc. Phase 2a	MELCCFP to KEQC	Complementary information (answers to the Q&C)	rec'd June 6, 2023		

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Appendix C

Decision Report

Environmental and Social Impact Assessment Report for the Proposed Deployment of Two Wind Turbines at the Nunavik Nickel Mining Complex, by TUGLIQ Énergie SARF

Courtesy translation

Dossier # 3215-10-016

June 2023

TABLE OF CONTENTS

Introduction

Project to Deploy Two Wind Turbines at the Nunavik Nickel Mining Complex, by TUGLIQ Energy SARF (hereinafter TUGLIQ) was subject to the environmental and social impact assessment and review procedure set out in Title II of the *Environment Quality Act* (EQA). Consequently, an impact study concerning the project to deploy two wind turbines at the Nunavik Nickel Mining Complex was filed on November 21, 2022, with the Provincial Administrator of the *James Bay and Northern Quebec Agreement* (JBNQA).

Background and rationale for the project

Canadian Royalties Inc (CRI), a private mining company based in Montréal, operates a copper and nickel mine in Nunavik, under the name Nunavik Nickel Inc. Project (NNiP). CRI is the third-largest consumer of fossil fuels in the Canadian Arctic. Most of this fuel is used to generate electricity. The Expo site is currently 100% dependent on diesel for the generation of electrical and thermal energy. This energy is used for the mine's operating needs (electricity and heat production, underground ventilation, exploration and construction) and its personnel's needs (housing, transportation, drinking water and wastewater filtration, and maintenance).

CRI is under unprecedented economic pressure as the cost of diesel delivered to the mining complex has risen considerably in recent years. Energy is the second greatest cost for this mining complex after labour. In addition, diesel poses the risk of marine and land-based spills, the impact of which is growing as a result of the increasing quantities CRI uses.

The wind in this region are powerful and could be harnessed to produce energy from wind turbines. CRI therefore called on TUGLIQ to reduce the carbon footprint of its Expo site within NNiP by substituting fossil fuels with renewable energies. The project is part of an energy diversification strategy being implemented by CRI. It aims to reduce the cost and impact of using fossil fuels, among other things. It will also foster a new vector of economic development for remote communities and improve the quality of life of the workers and communities working there.

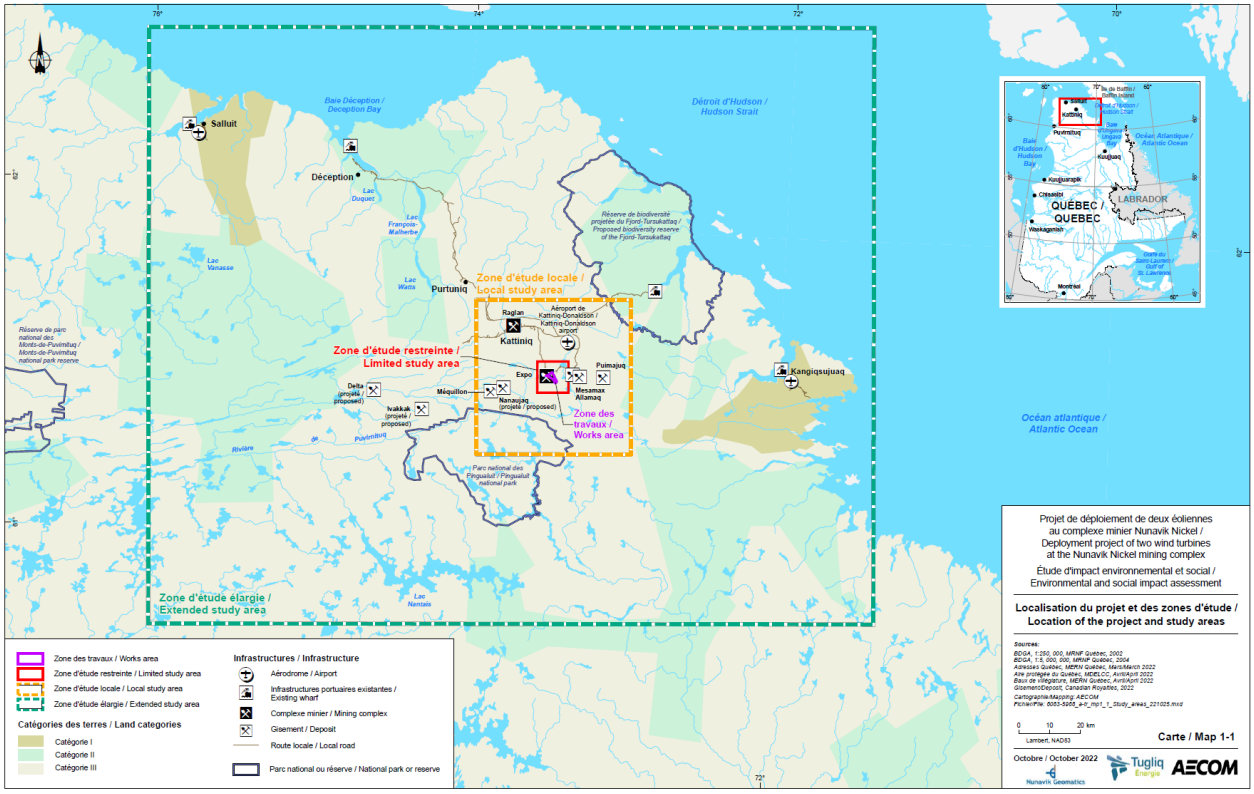
Presentation of the project setting

The closest northern villages to the project site are Kangiqsujuaq, about 75 km to the east, and Salluit, just under 140 km to the northwest. According to data from the 2021 Census by Statistics Canada, the northern villages of Kangiqsujuaq and Salluit had 837 and 1,580 inhabitants, respectively. Their working populations were around 535 and 410 people (34% and 49% of the population), respectively. The unemployment rate was 23.7% in Kangiqsujuaq and 15.1% in Salluit.

Overall, the region has an arctic climate. Average monthly temperatures range from -24.2 °C in January to 11 °C in July. Records between 1980 and 2004 show an annual cycle of precipitation, with higher amounts in the summer months. The project is located in an area of continuous permafrost and where the thaw last 111 days on average.

The project is located on Category III lands. The assessment carried out by the proponent as part of the impact study considered four distinct zones (Figure 1): 1) the construction zone, an irregularly shaped polygon with a surface area of approximately 4 km^2; 2) the restricted study zone, with a surface area of 100 km^2; 3) the local study zone, with a surface area of 2,500 km^2; and, 4) the extended study zone with an area of 2,500 km^2. This assessment describes the administrative entities and socio-economic characteristics of the human environment, as well as the migratory movements of caribou, a sensitive species covering a very broad territory.

Fig. 1: Location of project and study areas



Presentation by the proponent

A Canadian company based in Montréal, TUGLIQ offers alternative energy solutions for self-sufficient and micro-grids, such as those on islands, in remote communities and on mining operations, that are currently relying heavily on fossil fuels for their energy production.

TUGLIQ has a proven track record in renewable energies, such as wind, solar and energy storage, that are specifically adapted to extreme climates in remote, difficult-to-access and logistically challenging environments, like the Canadian Arctic, the Caribbean and remote regions of Africa.

As mentioned in Section 1 of this report, CRI commissioned TUGLIQ to install two, 3 MW wind turbines coupled with a battery energy storage system to reduce the carbon footprint of its Expo site within the NNiP. As a result, TUQLIG is to be the only proponent named in the certificate of authorization. However, as certain of the project's commitments and obligations fall to CRI, a letter listing all these commitments has been sent to this effect.

Project description

General description of the project and its components

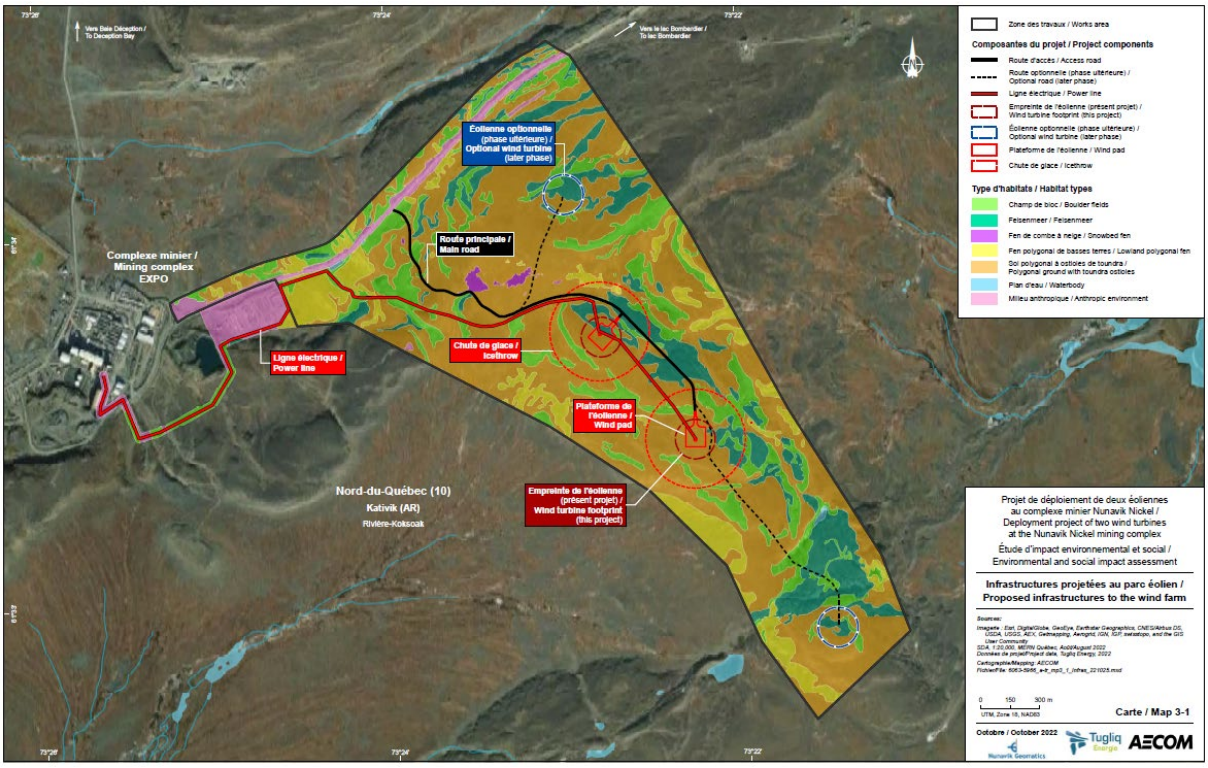
The project consists of installing two, 3 MW wind turbines coupled with a battery energy storage system. These turbines are slated to be installed around 2–3 kilometres to the east of the Expo site. Once installed, it is estimated that they will produce an annual 17,500 MWh of electricity and save 4.5 million litres of diesel from being burned by the generators currently in place. This is a reduction of over 14,000 tonnes of CO_2 equivalent in the atmosphere, representing a reduction of 10.5% in the current total GHG emissions of the CRI mining complex.

The site targeted for the project will occupy an area of 0.25 km^2 of the 1,039 km^2 covered by CRI's mining leases. A battery-based energy storage system will be installed within the mine infrastructure and connected to the wind turbines through an underground collector system. Roads are required to transport the equipment and access the site designated as the turbine site. The use of existing roads will be 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.

TUGLIQ and CRI could eventually develop in partnership a second phase of the project by installing two additional wind turbines over the next few years. The first two turbines form Phase 1, while the next two will form Phase 2. As a reminder, to proceed with the installation of additional wind turbines (Phase 2), the proponent will have to request an amendment to the certificate of authorization to obtain the authorization for these additions.

The wind turbines for Phase 2 would be identical to those installed during Phase 1 of the project. Similarly, the electrical cables to the collector system would be identical to those already in place. If the electrical engineering so requires, the battery energy storage system could be scaled to support the load of four wind turbines on the collector system. In this case, an additional battery would be installed on the Expo mining site, in a man-made environment. Construction and equipment installation methods for Phase 2 would be similar to those for Phase 1 of the project.

Fig. 2: Infrastructure foreseen at the wind farm.



Project schedule and cost

Site development and construction works will extend over an eight-month period, from moving the first equipment on the Expo mining site to its hook-up to the mine's electric grid. The works are scheduled to start as soon as possible in 2023, so that the wind farm can be commissioned as early as January 2024. The wind turbines will be operated for the mine's lifespan, as long as their maximum operating life of 25 years is not exceeded.

Community consultations by the proponent

The proponent has implemented a consultation program focused on informing and consulting groups affected by the project. This program aimed to raise awareness about the project, learn the community's concerns and meet the information needs of the various stakeholders.

Various forms of consultation were held with local actors, including the northern villages of Kangiqsujuaq and Salluit, the surrounding mining companies (Canadian Royalties Inc. and Glencore Canada), the Kattiniq-Donaldson airport and Parc national des Pingualuit. In its documents, the proponent presents a summary table showing the consulted stakeholders and groups' comments, concerns and questions by category, as well as its answers to the latter. The table also specifies the adjustments it has made to the project in response to these concerns.

Consultations with representatives of Kangiqsujuaq and Salluit revealed that the latter want to be informed of the results of the various monitoring studies carried out as part of the project. In order to do so, the proponent undertook to send the results of the various environmental monitoring activities during the construction and operation phases to the elected officials of the two northern villages, as well as to the representatives of their respective landholding corporations. Each local representative will be invited to share their comments, questions or concerns at this time. In addition, environmental monitoring reports will be made available to the public via the TUGLIQ website.

Main issues

The following sections present the analysis of the project's main issues, as per the documents submitted by the proponent and the expert opinions obtained during the intergovernmental consultation.

Collision with avian fauna

Inventories carried out in the local study area (including the Raglan Sud, Ivakkak, Expo and Méquillon mining sites) recorded 51 bird species. The presence of the golden eagle and peregrine falcon, two endangered species, has been confirmed in the local study area. Both species are migratory and use the study area for nesting.

During the operations phase, the structures, blade movement, noise, vibrations and light sources of wind turbines could impact avian fauna. One of the main issues is the risk of birds colliding with the wind turbines and being killed. This risk increases during nesting and migration periods.

Bird mortality caused by collisions with wind turbines depends on three main factors: proximity to bird movement and concentration zones, site characteristics and weather conditions. The number of turbines and the configuration of the wind farm are also factors to consider.

6.1.1 Proximity to bird movement and concentration zones

The location of wind turbines in relation to areas of movement, such as migratory corridors, and in relation to areas of bird concentration, such as wintering, nesting and staging areas, is a factor that influences the risk of collision with wind turbines.

The greatest concerns stems from the behaviour of certain diurnal migratory species, such as birds of prey, that are vulnerable to collisions with wind turbines, particularly during prey-seeking or hunting periods. It would seem that the new wind turbines, which are taller with wider blades, pose

less of a risk to these species. Moreover, diurnal migrants, such as birds of prey, easily avoid the structures in favourable weather conditions. During migration, certain species, such as the peregrine falcon, can fly up to 600 metres high (i.e. above the wind turbines).

The proponent states, based on the flight altitudes taken from the literature of certain migrating bird species, that the risk of collisions by the majority of birds of prey, waterfowl and passerine birds would appear to be limited for the present project, at least during migration. In fact, the wind turbines have a planned height of 80 metres for the tower. The total height including blades is planned at 120 metres; i.e. below the critical height of 150 metres identified in the literature.

The only known nesting site for birds of prey within a 20 km radius of the proposed turbine site is that of the peregrine falcon, which lies 15.8 km south of the nearest proposed turbine. A single individual was also seen on a perch within 10 km of the turbine site. Monitoring of female peregrine falcons using satellite transmitters in four regions of southern Quebec (Montérégie, Bas-Saint-Laurent, Chaudière-Appalaches, Abitibi-Témiscamingue) showed that, during the nesting period, the risk of collision with wind turbines was highest when the turbines were less than 2.5 km from the nest, and negligible when the turbines were more than 16 km away. By comparison, no impact on peregrine falcons was observed during the environmental monitoring studies carried out between 2015 and 2019 for the wind turbines at the Raglan Mine, despite a confirmed peregrine falcon nesting site about 21 km northwest of the turbines.

In short, the proponent has deemed the risk of collision with wind turbines to be relatively low, given the movement corridors, flight altitude during migration and the absence of nearby bird concentration areas, including birds of prey. Monitoring results from the Raglan Mine wind farm, which also includes two turbines and is located about 20 kilometres northwest of the project, did not identify any bird mortality during the monitoring from 2015 to 2019.

6.1.2 Site characteristics

The characteristics of the site where the turbines are to be installed influence the risk of collision for avian fauna (e.g. relief, presence of bodies of water).

The sites targeted for this project are located on hills and within 5 kilometres of certain bodies of water (e.g. Rocbrune and Bombardier lakes). During the operational phase, it is therefore possible that some of the species that frequent these bodies of water will have to adapt their flight paths. However, the north—south axis of the turbines will reduce the risk of collision, at least for migratory birds. Migratory flight altitude also makes many migratory species less susceptible to collision, as is the case for peregrine falcons, snow geese and Canada geese. However, the golden eagle could be slightly more at risk of collision, given its flight pattern, which follows the terrain and therefore the area's rocky ridges. However, this species was not recorded during inventories carried out in summer 2022 within a 20 km radius of the targeted sites.

6.1.3 Weather conditions

Weather conditions can affect the risk of collision, by reducing visibility and forcing birds to adapt their flight altitude. For example, precipitation, fog and low cloud ceilings could force birds to fly at lower altitudes, closer to wind turbines. Strong winds are also a consideration, as they reduce manoeuvrability during flight, and wind turbines are frequently installed in high-wind areas.

According to available data, precipitation in the project area is low, given the cold climate and low humidity. Precipitation tends to fall mainly in June and July. Episodes of fog occur in early summer with the arrival of warm air masses, and this can affect visibility. In winter, gusts of wind and blizzards can also reduce visibility. Average wind speeds are considered high.

The risk of collision from poor visibility would therefore be more likely to occur during fog or rain in summer and strong winds in winter. These conditions fall outside the migration periods of several species likely to pass through the area, including the golden eagle, the peregrine falcon, the Canada goose and the snow goose. The risk of collisions caused by this factor for these and other avian species is therefore low. However, the risk of collision could be slightly higher in summer for species that breed locally.

6.1.4 Number of turbines and configuration of the wind farm

According to the literature, the more a wind farm has turbines, the greater the risk of collision for birds, given the turbines intercept more air. However, it has been shown that a reduced number of large wind turbines, as is the case for the present project, causes less harm than a large number of small wind turbines. That the planned wind farm has only two large turbines therefore reduces risk of collision.

The layout of the turbines also influences the risk of collision. For this project, two wind turbines are to be installed on a north—south axis. This is the general migration axis of several species passing through Nunavik southward in autumn or northward in spring (notably, the greater snow goose and the short-eared owl). This limits the risk of collision, as compared to a line of wind turbines perpendicular to migratory axes. Further, the two proposed wind turbines will be close together (around 750 metres apart), leaving plenty of space for birds to avoid them. This space also reduces the risk of avian fauna getting caught in the turbulence created by wind turbines installed too close together.

Light sources installed on high infrastructure can also pose an additional risk of collision. Avian fauna can become disoriented by the light and find themselves trapped in the illuminated area. This phenomenon is even more significant when weather conditions are poor (periods of fog, dense clouds, etc.). Red flashing lights (during the night) will be installed on the two proposed wind turbines, given that this type of lighting is less attractive to birds than continuous lighting and also that Kattiniq-Donaldson airport is nearby.

6.1.5 Mitigation measures and monitoring

To ensure that no active nests are destroyed, the proponent has undertaken to carry out an inventory of the areas to be stripped five days before the scheduled start of the works between mid-May and the end of July. If an active nest is noted, the area will be marked and protected until fledging (for nest-dwelling species, such as the snow bunting) or the departure of the chicks (for precocious species such as the willow ptarmigan).

The proponent must implement a protection system for avian fauna, based on the programming of various environmental parameters, to reduce the risk of collision. Quick adjustments to turbine operation can be made if a particular problem is observed in relation to birds. A programmable shutdown system will be integrated and activated should bird mortality be detected. The turbines will be programmed to restart gradually, rather than abruptly.

Monitoring of spring and autumn bird migration and telemetric tracking of peregrine falcons in 2023 will further document avian use of the area. This data will enable anticipation of site-specific issues and potential turbines shutdown requirements.

The proponent has undertaken to monitor bird mortality in accordance to recommendations laid out in the *Protocole de suivi des mortalités d'oiseaux et de chiroptères dans la cadre de projets d'implantation d'éoliennes au Québec.* The potential cause of death of the birds will be noted during the monitoring. This monitoring will be carried out during the first 3 years of wind turbine operation, and every 10 years thereafter. Analysis of data from the first few years of operation will reveal whether significant mortality problems occur during particular periods (migration, nesting) or under particular weather conditions.

Maintenance of Landscape Quality

The various stages of the construction phase, such as building the access road and platforms and erecting wind turbines, will involve machinery (cranes, concrete mixers, etc.), which will occupy a significant place in the landscape during the works and adversely affect the natural landscape. However, this visual impact will be one-off (only during construction). The dismantling phase will have a similar impact. It is therefore unlikely that impacts to the landscape will affect various users, including visitors to Parc national des Pingualuit.

During the operations, the impact will mainly be the visibility of the turbines in the landscape and light pollution. The proponent presented various visual simulations. Saint-Germain Lake is more than 10 km from the Parc national des Pingualuit. The visual impact of the turbines will therefore be low. The park's most popular sites, such as the Lake Pingualuk crater and the Sangummaaluk and Paarutivik camps, are almost 30 km from the proposed turbines. Their visual impact will therefore be negligible. During the day, the white lights of the turbines will blend in with the colour of the turbines, of the sky and the sun, and the lights of the Expo Mine site. At night, the lights will be more visible, as they will be red and flashing to contrast with the surroundings. This impact would be tangible, since it would affect the "dark sky preserve" accreditation the Parc national des Pingualuit is seeking, though it would not compromise any use of the park. The proponent is in discussion with the national park as part of its project.

The landscape's characteristics make it impossible to propose mitigation measures adapted to the setting. The tundra vegetation makes it impossible to plant trees to conceal the turbines. It would be possible to add built features at key viewing sites to conceal the turbines from view, but this would result in changes to the existing landscape. Consequently, the proponent has proposed no landscape mitigation measures for this project.

The proponent mentions that a light pollution monitoring program is already underway as part of CRI's environmental monitoring activities for NNiP operations. It also confirms that the impact of light pollution generated by adding the two proposed wind turbines would 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.

Given the community's concerns and the importance it attributes to the region's natural areas, particularly the Parc national des Pingualuit, and its concerns about the light pollution caused by the wind turbines, the proponent undertook to round out the landscape monitoring program by surveying perceptions of these modifications to the landscape. The survey will be conducted among Parc national des Pingualuit representatives, employees and visitors. It is slated to be carried out after the first year of operation of the two turbines and will document national park users' and representatives' perceptions of the visual impact of the turbines. The survey will also include photographs to document the visuals of the wind turbines. In the event two additional wind turbines are installed, a new survey would be carried out after the first year of their operation.

Reducing Greenhouse Gas Emissions

The proponent states that the entire project (the construction, operations and dismantling phases) will generate greenhouse gas (GHG) emissions estimated at a total of 327 tonnes of CO_2 equivalent. In addition, emissions related to the loss of wetlands as a result of project implementation amount to 0.034 tonnes of CO_2 equivalent per year before wetland restoration, which will take place 25 years after wind farm commissioning. Thus, over the lifetime of the wind turbines, this value is expected to be: 0.85 tonnes of CO_2 equivalent, bringing the total greenhouse gas emissions for this project from 327 to 328 tonnes.

That said, the project aims to reduce the diesel currently used by generators to produce electricity. Over the course of a year, it is estimated that the two wind turbines will generate 17,500 MWh of energy. Thus, according to the data presented by the proponent, the project will eliminate the need for over 5 million litres of diesel each year and thus avoid the annual emission of 14,096 tonnes of CO_2 equivalent. This represents an annual reduction of 10.5% of current GHG emissions from the CRI mining complex. Over the 25-year lifespan of the wind turbines, this accounts to an overall reduction in GHG emissions of more than 350,000 tonnes of CO_2 equivalent. The installation of additional wind turbines would enable an even greater reduction in GHG emissions in future.

In order to monitor GHG-emission gains, TUGLIQ will produce an annual balance sheet of GHG emissions generated by the construction, operations and dismantling of the project. This balance sheet will show, during operations, the green energy produced by the wind turbines in relation to the amount of GHGs produced by the mining complex, and the amount of GHGs removed from the system during turbine operation.

Other considerations

The following sections present the analysis of the project's secondary issues, as per the documents submitted by the proponent and the expert opinions obtained during the governmental consultation.

Wetlands and water environments

According to data presented by the proponent, wetlands occupy 9.8% of the work area and are composed of polygonal lowland fens and snow-comb fens. Water environments occupy a very small area of the work zone (0.1%). They consist of five intermittent streams and two permanent streams. The watercourses in the work area are not hydroconnected to a larger body of water (lake or river) and their fish habitat potential is therefore considered inexistent.

During the project design phase, the route of the access road to be built in the work area was optimized to minimize its encroachment into wetlands and watercourses. The project is not expected to have any impact on water resources. The planned encroachment into wetlands is very

small, amounting to just 0.05 ha (467m ^{2}). No wetlands will be impacted by the construction of the turbine platforms. Wetlands will be impacted by the construction of the access road and the routing of the electric cable, most of which will be laid directly on the ground.
The proponent mentions an indirect impact (i.e. temporary loss) of 3,944m^{2}on wetlands during the operations phase. Indirect impacts have been considered in areas where ice may fall from rotating turbine blades. An area of around 500 metres in diameter around the turbines has been considered for this indirect impact. Although the risk of falling ice is only present in winter when the ground is frozen, this impact was nevertheless considered, since ice fall could slightly modify the configuration of the terrain or damage vegetation when this latter is only lightly covered with snow.

The proponent undertakes to apply various mitigation measures to minimize impacts on wetlands, such as:

- Preventing machinery from circulating outside work-area boundaries (unless specifically authorized);
- Protecting habitats bordering on the work areas;
- Limiting the extent of soil stripping to the strict minimum required for construction;
- Performing general maintenance and refuelling machinery at locations identified by the site supervisor. The storage of petroleum products and the maintenance, refuelling and cleaning of machinery and equipment must be carried out more than 30 metres from a watercourse or wetland, on a site designed for this purpose where there is no risk of contamination of soil, surface water or groundwater.

Finally, the wind farm's dismantling and site restoration will be part of the cessation of mining activities and therefore will be handled by CRI. This latter has undertaken to adhere to the *Guide de préparation du plan de réaménagement et de restauration des sites miniers au Québec*. In addition and as a further enhancement measure to compensate for permanent wetland losses, CRI will offer financial compensation to fund research projects intended to improve site restoration in northern environments.

Caribou

The migratory woodland caribou is a species found in the extended study zone and of great importance to the Inuit. Two distinct populations belong to this ecotype in Quebec: the Georges River herd and the Rivière-aux-Feuilles (TRAF) herd, which occupies the extended study zone. The TRAF herd uses the area affected by this project during its calving period and as a summering ground, between May and September.

The TRAF herd therefore uses the local study zone as a summering and calving ground, but this zone is not legally bound by the wind turbine sites. Legal wildlife habitat (i.e. the calving grounds legally protected by the Government of Québec under the *Act respecting the conservation and development of wildlife*) was expanded in 2004 and is since unchanged, covering an area of 153,400 km². Although the legal limit of this habitat begins approximately 24 km southwest of the zone where the wind turbines are to be installed, the site is nonetheless frequented by caribou. However, the proponent points out that legal caribou calving habitat will not be affected in any way by this project.

Signs of caribou presence were observed on the ground during the vegetation inventory carried out in the summer of 2022 on the NNiP site, more specifically at the Expo Sud site, and on the site designated for the project. Traces, feces and fur were found at some vegetation monitoring sites. Two caribou, one mature and one juvenile, were also observed.

7.2.1 Caribou habitat

Construction activities have a high potential for disturbing caribou and other land mammals. Construction of the wind turbines, the access road and the electric transport cable may cause loss of habitat and food. In addition to the fragmenting of their territory by construction of the access road, the increased road traffic from the transportation of materials during the construction phase will increase the risk of collision. Disturbance caused by human activity and noise from construction and land transportation can also lead to temporary or permanent avoidance of certain habitats located on the periphery of the wind turbine site. Further, the habitats that will be stripped during construction are mostly land habitats that are less appealing to caribou for feeding, so habitat losses are considered minimal for this species.

Once construction is complete, the turbines will require periodic maintenance basis. The access road will therefore be used infrequently and should not cause any additional disturbance to land based wildlife. In terms of disturbance of wildlife by the use of machinery and increased transport on access roads, the dismantling phase will have impacts similar to those of the construction phase. Once the dismantling is complete and the site has been restored, the caribou will have a habitat similar to the one prior to the construction phase.

Considering the small areas of habitat that will be impacted, and the intensive use of the surrounding environment by mining activities that already generate noise and road traffic, it is unlikely that the presence of the two wind turbines will induce significant additional behavioural changes for the caribou. The residual impact on caribou is therefore considered minor for all phases of the project. However, it should be noted that the proponent's analysis of the impact on caribou was not based on the most recent data, and certain gaps in the information presented in the impact study were noted. Nevertheless, since caribou is considered a concern and not a major issue for the project and since the information that could have been updated or presented otherwise does not alter the environmental acceptability of the project, the significance of the project's impact on caribou is still considered minor.

7.2.2 Mitigation measures and monitoring

The proponent plans to restrict traffic to work areas and carry out machinery inspections in order to avoid excessive noise, thereby reducing the impact on caribou. The proposed measures are based on those already in place for NNiP. Mitigation measures during the construction and dismantling phases also include best practices in the event of caribou sightings near access roads. A decision tree concerning the presence of caribou on or along access road is also available to all road workers driving in the NNiP area. Drivers are under the obligation to follow this decision-making process at all times.

CRI conducts annual monitoring to document collisions between caribou and trucks on roads, including the one linking the Expo site to Deception Bay. Between 2011 and 2022, five collisions occurred between caribou and trucks travelling on these roads, but none in the operations area of the NNiP site. All collisions took place in July, at the height of migration. Caribou can usually be spotted in the area until late August. We also note that the collisions took place in the evening or at night, when visibility is lower. Further, in 2014, a collision took place in fog when visibility virtually nil. CRI has already implemented mitigation measures on the access road between its port and mining facilities to minimize the risk of collision with caribou.

As part of this project, the proponent plans to monitor the use of the site by wildlife, including caribou. It has proposed to visit the construction area four times during the first year of turbine operation to identify the presence of wildlife (feces, regurgitation pellets, grazing, direct observations, etc.) and to document animal behaviour in relation to the turbines. The results will then be compared with observations during the 2022 biological environment inventories. To determine whether or not further monitoring and mitigation measures are required, the results must be submitted to the Provincial Administrator for information purposes.

Environmental monitoring and follow-up

Environmental monitoring will involve ensuring compliance with environmental commitments and obligations. It will verify the integration of TUGLIQ's mitigation measures and commitments, and ensure compliance with the laws, regulations and other environmental considerations laid out in the various government authorizations in terms of plans and specifications, and subcontracts. Environmental monitoring will fall to TUGLIQ, in collaboration with CRI's environmental department.

The environmental monitoring program the proponent has proposed is intended to verify the accuracy of certain impact assessments and the effectiveness of planned mitigation measures. It also aims to clarify the impacts that continue to be uncertain, mainly the use of the site by the peregrine falcon during nesting and feeding, and by birds of prey in general during the spring and autumn migrations. Monitoring will also be carried out for bird mortality, wildlife use of the site, gains in GHG emissions, and light pollution and visual impacts.

All monitoring results will be presented in an environmental monitoring report made available to the public on the TUGLIQ website. In addition, the proponent confirms that CRI will share updated project information and all environmental and social monitoring results with the Nunavik Nickel Monitoring Committee, of which Canadian Royalties is a member, as well as with the local

communities of Puvirnituq, Kangiqsujuaq and Salluit. This project will be treated as an integral part of the mine's operations.

DECISION AND CONDITIONS

In accordance with section 23 of the *James Bay and Northern Quebec Agreement* and Title II of the *Environment Quality Act*, and after analysis of the documents provided by the proponent and considering the public consultations:

The Kativik Environmental Quality Commission has ruled that TUGLIQ Énergie SARF's project to deploy two wind turbines at the Nunavik Nickel mining complex must be authorized.

This decision relates to the first phase of the project (the deployment of two wind turbines), as presented in the environmental and social assessment and impact study and related documents. Any changes or additions to the authorized project must be presented to the KEQC for ruling.

This decision is conditional upon compliance with the conditions listed in this document as well as upon commitments made by the proponent in its documents.

Condition 1: At the end of the first year of operation, the proponent must submit an environmental monitoring report to the Provincial Administrator, for information purposes. This report must include all monitoring activities the proponent has foreseen for the project, as well as follow-up on the commitments and mitigation measures it has implemented. The proponent will also propose a frequency for submitting this report to the Provincial Administrator.

Condition 2: No later than one year after project authorization, the proponent must submit to the Provincial Administrator, for information purposes, the final protocol for the landscape change perception survey, and present the results of this survey in its environmental monitoring report.