

Rouyn-Noranda, May 17th, 2019

Marc Croteau
Administrateur provincial de la Convention de la Baie-James et du Nord québécois
Sous-ministre de l'Environnement et de la Lutte contre les changements climatiques
Édifce Marie-Guyart, 30th Floor
675 Boul. René-Lévesque Est, Box 02
Quebec City QC, G1R 5V7

**Re: Application to amend the Global Certificate of Authorization (V/Ref.: 3214-14-042) –
Expansion of Quarry C-02 – Éléonore mine**

Dear Mr. Croteau,

Les Mines Opinaca Ltée (MOL) hereby files an application for amendment of the Global Certificate of Authorization (Global CA) No. 3214-14-042 under section 122.2 of the *Environment Quality Act* (EQA) for the above-mentioned project.

The Global CA was initially issued on November 10, 2011, and was amended on February 11, 2013, as part of the first expansion of Quarry C-02.

1. Background

Quarry C-02 is located near km 58 of the permanent road that connects the Éléonore mine site to La Sarcelle Road. This quarry was operated by MOL between 2012 and 2014 for the construction of the Éléonore mine site. After this period, MOL continued to operate the quarry on an ad hoc basis to maintain the roads and infrastructures of the Éléonore mine site.

Operation of the quarry will soon reach the limits currently set in the Global CA (V/Ref.: 3214-14-042). This application for the expansion of Quarry C-02 is required as MOL expects to need more materials for maintenance of the roads and infrastructure at the Éléonore mine site over the lifetime of the mine. These materials will also be used for the construction of phases that have been authorized but not yet built at the tailings management facility.

2. Description of expansion

The total area of the currently authorized operating site is 15.8 ha, while the extraction site is 4.6 ha. The current authorized extraction volume is 800,000 m³.

The changes related to the operation of Quarry C-02 covered by this application concern expansion of the operating site, the extraction site and the total extraction volume.

More specifically, the operating site will be expanded to the south. In addition, the extraction level will be reduced by 10 m (the height of a bank) over the entire area of the current and proposed extraction sites.

The expansion of the quarry will increase the extraction volume to a total of 2,950,000 m³. The operating site will reach 21 ha and the extraction site 11.8 ha after expansion. The extraction rate, however, will remain lower than or equal to the currently authorized rate of 500,000 m³/yr. Lastly, since the expansion area is adjacent to the current Quarry C-02 operating site, no new access roads are required, and existing access roads will be used.

A summary of the changes made to Quarry C-02 operations is presented in Table 1. The general expansion plan is attached.

Table 1 Proposed Expansion of Quarry C-02

Name	Currently authorized	Proposed increase	Total after increase
Operating site	15.8 ha	5.2 ha	21 ha
Extraction area	4.6 ha	7.2 ha	11.8 ha
Extraction volume	800,000 m ³	2,150,000 m ³	2,950,000 m ³
Annual extraction rate	500,000 m ³ /yr	No expansion	500,000 m ³ /yr

3. Description of environment

This section briefly describes the biophysical and human environments in the Quarry C-02 sector. The information presented mainly comes from the environmental and social impact study of the Éléonore project (Golder, 2010)¹ and the initial application for authorization to operate the Quarry C-02 (Golder, 2011).²

3.1 Use of environment

¹Golder, 2010. Projet Éléonore: Développement et exploitation d'un gisement aurifère - Étude d'impact environnementaux et sociaux. 07-1222-3010

²Golder, 2011. Identification des impacts environnementaux et sociaux et des mesures d'atténuation reliées à l'exploitation de la carrière C-02 (07-1222-3011; November 4, 2011)

The Quarry C-02 site is located on Class III public lands, more specifically in Cree hunting territory VC 29, a territory under the responsibility of tallyman Angus Mayappo.

Ms. Jacynthe Lafond, Community Commitment and Corporate Social Responsibility Coordinator, and Ms. France Trépanier, Environment Coordinator, had a discussion regarding the project on April 30, 2019, with tallyman Angus Mayappo and his spouse, Ms. Stéphanie Georgekish. In particular, this meeting was an opportunity to explain the proposed location of the expansion and the intended use of the extracted materials. Mr. Mayappo did not express major concerns regarding the project. However, he asked MOL to assess the possibility that he might carry out the deforestation work required for this expansion.

The tallyman's permanent camp is located along the site access road, about 3.5 km northeast of Quarry C-02. There is no hunting, fishing or trapping activity in this sector of the quarry. No burial site or permanent camp is inventoried there.

In addition, no archaeological sites or areas of archaeological potential have been identified in or near the proposed operating site.

Quarry C-02 is located more than 1.6 km from the Éléonore mine workers' camp. The nearest drinking water well, which is used to supply the Éléonore mine, is located approximately 1.1 km west of Quarry C-02.

3.2 Biophysical environment

3.2.1 Bodies of water

The main body of water present in the Éléonore mine sector is the Opinaca Reservoir. The main river in this sector is the Opinaca River, a tributary of the reservoir located to the north of it. Quarry C-02 is located more than 1 km from the Opinaca River and more than 2 km from the Opinaca Reservoir.

The body of water closest to Quarry C-02, an unnamed stream flowing toward the Opinaca River, is located more than 500 m east of the proposed operating site.

3.2.2 Vegetation and wetlands

The Éléonore property is located in the boreal taiga, more specifically in the spruce-lichen forest domain. This domain is characterized by low-density forest cover, where black spruce punctuates the mat of lichen. Here, balsam fir and jack pine reach the northern limit of their range. Vegetation is sparse in the sector due to the presence of a rocky outcrop on most of the site.

Wetlands are abundant in the sector and are mainly composed of ombrotrophic bogs. The nearest inventoried wetland is located more than 400 m northwest of the proposed operating site.

Plant inventories carried out in 2002, 2008 and 2015 in the area of the Éléonore mine site (Golder, 2010 and Englobe, 2015³) did not reveal the presence of any species at risk.

Moreover, no exceptional forest ecosystem is present in the study sector.⁴

3.2.3 Fauna

Among the mammals, there may be moose, woodland caribou (forest-tundra and forest-dwelling ecotypes), wolf, black bear and certain mustelids, such as otter, weasel, ermine, fisher, marten and mink, could be found in the quarry sector. In addition, several micromammals belonging to the field mouse, shrew, vole and lemming genera could be present.

Among amphibians and reptiles, the wood frog, the American toad and the common garter snake are species that could be present.

Many bird species have been identified at the Éléonore project site, belonging to different groups of waterfowl, shorebirds, forest birds or birds of prey. Among these, two species are designated as vulnerable according to the *Act respecting threatened or vulnerable species*: the bald eagle (*Haliaeetus leucocephalus*) and the peregrine falcon (*Falco peregrinus*).

4. Description of work

The nature of the work remains the same as that presented in previous applications for the C-02 Quarry, including the Golder report (2011).⁵

4.1 Site preparation

Prior to operations, the existing vegetation will be cleared and the topsoil and overburden will be stripped within the proposed expansion of the operating site. The stripped topsoil and overburden will be stored in windrows within the operating site. These materials will be reused during the restoration phase of the quarry.

4.2 Operations phase

During the operations phase, the materials will be extracted by blasting and then transported to the place of use. Crushing and screening activities could be carried out to obtain the appropriate grain size. Access to the operating site will be via the existing access road.

³Englobe, 2015. Mine Éléonore. Inventaires biophysiques. Rapport d'étude. [Éléonore Mine. Biophysical inventories. Study report] Ref. No. : 046-2344-1-EN-R-0002-0B.doc. Preliminary document. August 2015.

⁴Ministère des forêts, de la faune et des parcs. Carte des écosystèmes forestiers exceptionnels du Québec en 2017

⁵Golder, 2011. Identification des impacts environnementaux et sociaux et des mesures d'atténuation reliées à l'exploitation de la carrière C-02 (07-1222-3011; November 4, 2011)

Quarry C-02 operations will remain at least 1 metre above the groundwater table. The fixed benchmarks currently in place and occasional technical monitoring by survey will ensure this.

4.3 Restoration phase

The Quarry C-02 operating site will be restored as specified in documents initially sent to MELCC, as soon as rock extraction activities in this quarry have ceased altogether.

The final vertical cuts shall never exceed 10 metres and the terraces between each cut shall be at least 4 m wide. The topsoil set aside during the site preparation phase will be reused to promote the recovery and growth of vegetation. Shrub and tree species will then be replanted to reforest the entire affected area.

5. Project impacts and mitigation measures

The potential impacts remain the same as those presented in the documents already sent to MELCC for the operation of Quarry C-02. For this reason, all mitigation measures listed in these documents will be implemented and are not listed in detail in this document.

Quarry C-02 is located on a rocky outcrop where vegetation is sparse. As a result, vegetation loss and disturbance to avian and small mammal habitat will be very limited.

Large mammals occupy territories with much larger areas than those that will be disturbed by the activities of Quarry C-02. Thus, no impact is expected regarding large wildlife. It should be noted that the quarry site has no unusual features compared to other environments found in this region. In addition, no fish habitat is located within or near the new operating site since the nearest watercourse is more than 400 metres away.

We believe that the potential impacts on the biophysical environment will be negligible given the scale of the surrounding natural territory.

Lastly, since the Quarry C-02 site will be restored as soon as it is no longer in operation, no significant impact is expected for the operation of this quarry.

A summary of the potential impacts and mitigation measures is presented in Table 2.

Table 2 Potential Impacts and Mitigation Measures

Potential impacts	Mitigation measures
Dust	Watering, if necessary, of aggregates before crushing or screening, and of access roads

Potential impacts	Mitigation measures
Groundwater table	Operations will always be carried out more than one metre above the groundwater table.
Landscape	A strip of vegetation will be kept between the cuts and the road.
Water accumulation	Where necessary, drainage ditches and basins will be created to prevent any form of water accumulation and sediment transport.
Accidental spill	Accidental spill kits and procedures will be available at all times at the work site. Machinery will be inspected regularly.
Risk to user safety	Clearing of a 35 m border around the quarry and installation of signs indicating the presence of an open hole.

Based on Golder 2011.⁶

6. Timeline

Work on the expansion of Quarry C-02 will begin once all required environmental approvals have been obtained. MOL currently plans to begin this expansion before the end of 2019.

7. Analysis costs

A cheque in the amount of \$2,834, payable to the Quebec Minister of Finance, is attached to this application, pursuant to section 13.1 of the Ministerial Order concerning the fees payable under the Environment Quality Act.

According to this Ministerial Order, this application for an amendment to the Global CA is type 3 (Rates for any other amendment) and class 1 (All borrow and sand pits and quarries, with areas of three hectares or more).

For additional information, please contact the undersigned at 819-865-4051. We trust that the above meets your requirements.

Best regards,



Ms. France Trépanier
Environment Coordinator
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819-865-4051

⁶Golder, 2011. Identification des impacts environnementaux et sociaux et des mesures d'atténuation reliées à l'exploitation de la carrière C-02 (07-1222-3011; November 4, 2011)



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Encl. 1 - Location plan of the expansion of Quarry C-02
2 - Applicant's declaration
3 - Cheque for \$2,834

cc: By email
Ms. Suzanne Larouche, Les Mines Opinaca Ltée
Mr. Martin Bussière, Les Mines Opinaca Ltée
Lucas Del Vecchio, CNG
Document control

