

Rouyn-Noranda, March 23rd 2017

Ms. Mireille Paul

Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques

Édifice Marie-Guyart, 6th floor

675, Blvd René-Lévesque Est

Quebec City, Quebec G1R 5V7

Subject: Answers to MDDELCC questions and comments – Request for exemption from Chapter II of the Québec Environment Quality Act for mining exploration (stripping and trenching) at James Bay by Les Mines Opinaca Ltée (Your Ref.: 3214-14-042)

Ms. Paul,

Les Mines Opinaca Ltée (MOL) hereby present you with answers to questions and comments issued by the MDDELCC on January 24, 2017, with regards to the request for exemption from Chapter II of the Québec Environment Quality Act for the project mentioned in the subject line.

***QC-1:** The developer must define the actual area which will be affected by their exploration project, including possible destruction of wetland areas. They must propose mitigation measures in such an event. They must also provide details and maps of roads to be built, including water crossings as the case may be, as well as describe related potential impacts.*

Answer:

Scope of project

Maps supplied with the request for exemption present an important number of drilling sites, i.e. 165 in the Vieux Camp sector and 711 in the East sector. These are in fact potential drilling sites representing maximum coverage of the zones or areas to be explored. Drilling or stripping is not expected to occur at all of these sites. Drilling is planned at only 11 sites per sector during the 2017 winter campaign. This will provide us with a preliminary portrait of the sectors' geological potential. The results of this drilling campaign will allow us to define the actual scope of mining exploration for each sector by the spring of 2017. The stripping areas and volumes indicated in the request for exemption are approximate estimates.

Diamond drilling carried out since the beginning of the year revealed a greater than expected thickness of overburden. The thicknesses measured in the boreholes vary from 1 to 3 meters, which considerably increases the potential volumes to be stripped over the next three years. So the overburden volumes to be excavated may reach a maximum of 10 000 m³ for each of the two exploration sectors, compared to the 1 000 m³ indicated in the initial application. However, the area remains unchanged with a maximum of 1 ha per sector.

Wetlands and mitigation measures

The actual area of wetlands that may potentially be affected by stripping is at present unknown, as the exact location of stripping sites will be determined based on the results obtained from the ongoing drilling campaign. Identification and characterization of wetland environments in each sector will be conducted as soon as field conditions allow by summer 2017. This study will allow us to better plan and locate potential stripping sites in such a way as to avoid or minimize infringement on wetlands. The above is particularly important inasmuch as work within wetland areas presents important technical constraints (potential loss of machinery). Stripping areas will be limited to minimum size as strictly required by the mapping and sampling of zones of interest.

Stripping in both sectors of exploration will be carried out by means of a small excavator brought in by helicopter. Pumping and washing equipment will also be brought in by this means. Transportation time, ground impact and the total area of excavation will thus be minimized.

Access roads

Access roads to both sectors of exploration will remain the same for now and as identified on maps supplied along with the request for exemption. Note that they have been located in such a manner as to minimize infringement on wetlands, water habitats and waterways. The routes that have been elaborated also minimize tree cutting and promote the use of existing roads. New roads could be built based on exploration phase evolution and results yielded. Any new road will be built in compliance with the “*Règlement sur les normes d’intervention dans les forêts du domaine de l’État (RNI)*”. The attached map indicates the location of winter roads currently in use and the location of existing and potential roads under evaluation for summer use. The main impacts associated with the implementation of roads have previously been discussed in section 5 of the original request.

Water crossings

No waterways or water bodies will be crossed in the Vieux Camp sector, with the exception of drill sites 10, 65, 66 and 82 located on a peninsula. The latter can be reached by building an ice bridge in winter or by barge or helicopter in summer.

Other than the two crossings of the Opinaca Reservoir planned this winter, two waterways have, however, been identified in the East sector along the alternate route, which traverses the right-of-way for a Hydro-Quebec transmission line. The eventual building of bridges, bridging or culverts

will be implemented as need be and according to provisions established by the “*Règlement sur les normes d’intervention dans les forêts du domaine de l’État (RNI)*”. Considering the importance of determining the best possible access route for the East sector and eventual drilling/stripping sites, a hydrological study of the East sector and a planning and design study of water crossing works may be required. Required requests for authorization will be made to relevant government bodies based on routes decided upon and on the scope of the works to be undertaken.

QC-2: *As pertains to the management of wash water used for stripping, the developer has indicated that intake will take place on an as-needed basis at the edge of Opinaca Reservoir and runoff will be intercepted around the stripping area and directed toward a vegetation zone that is far enough from all water habitats or wetlands, so as to allow for settling of suspended solids in in water. What specific measures will be put in place to ensure the protection of sensitive habitats, most notably the Opinaca Reservoir?*

Answer:

Wash water and all other runoff will be collected in settling ponds or trenches before being directed by gravity toward vegetation zones located at least 30 m away from all water or sensitive habitats. Ponds and trenches will be dug in sufficient number downstream from stripping areas so as to allow suspended solids in water to settle slowly. Sediment barriers will be installed upstream from settling structures. The settled water may be reused as wash water or be allowed to drain naturally by gravity through spillways. Sediment barriers will be added as required downstream of pond and trench spillways so as to decrease release of suspended solids into vegetation zones. The latter will act as the final buffer and filtration zone before water eventually runs back into Opinaca Reservoir. If drainage does not occur naturally, settled water will be mechanically pumped to ensure that wash water runoff is expelled sufficiently far away from water and sensitive habitats.

QC-3: *Notwithstanding measures taken to manage wash water, will the building of trenches promote runoff and erosion toward the Opinaca Reservoir? The developer should elaborate on this point.*

Answer:

We deem it important to specify the following:

- a) The term stripping refers to the removing of vegetation and soil from a rocky outcrop so as to expose a greater area of the underlying rock surface. The thickness of the surface material to be stripped typically varies from a few centimetres to 2 m in deeper areas. The site perimeter is usually asymmetrical and the transformation often permanent.

The term trench refers to the excavating of land that presents no obvious or visible outcrop of rock material. Trench edges are supported or dug on an angle to prevent them from caving in, thereby ensuring worker safety. Trenches generally cover less surface area than stripping and run deeper (up to 3–4 m). They are usually rectangular in formation and are backfilled at the end of the campaign.

Soil composition, type of surface vegetation, topography, layout of waterways and water bodies as well as runoff patterns within the immediate vicinity are taken into consideration during the planning of trenching and stripping and the elaboration of the site layout plan.

This plan must include:

- the location where excavated materials will be piled and the formation of the said piles;
- measures to be implemented so as to prevent soil erosion and runoff into waterways, vegetation zones or other sensitive habitats;
- sediment retention measures (geotextile membranes, bales of straw, etc.);
- the location of settling ponds for wash and runoff water.

This plan must be submitted to the excavator operator before the commencement of work so that they may assess its feasibility.

As a preventative measure, temporary piling of excavated materials will always take place over 30 m away from any water or sensitive habitats. The management of drainage and runoff water occurring at the foot of a pile will be handled in a manner similar to methods applied to stripping areas.

Soil piles will be placed around excavation sites so as to, whenever possible, form ponds or berms to prevent wash or runoff water from flowing toward sensitive habitats.

***QC-4:** According to the information obtained from the COMEV, the developer should undertake to further investigate the possible presence of burial sites within the sectors marked for exploration. Should evidence arise indicating the presence of such sites, agreements will have to be made with the families concerned.*

Answer:

Ms. Jacynthe Lafond, Commitment and Corporate Social Responsibility Coordinator for Les Mines Opinaca Ltée voiced these concerns by telephone to Mr. Johnny Mark, Wemindji Cree Community Environmental Director on February 16, 2017.

Mr. Mark informed Ms. Lafond that three Wemindji Cree Community elders had been consulted as to the possible presence of burial grounds within the Vieux Camp sector. Said consultations

took place during the week of February 13, 2017. Following discussion of the matter with Mr. Isaac Visitor, Ms. Alice Mayappo and Mr. Billy Gilpin, Mr. Mark received confirmation that no one had ever heard talk of there being burial grounds located within the sector in question.

With regards to the East sector, Mr. Mark confirmed to Ms. Lafond that his family had never camped within this sector and that therefore there was no possibility of burial grounds being located there.

QC-5: The developer will specify the duration of the exploration work.

Answer:

The results of preliminary findings obtained during the winter and summer 2017 campaigns will determine the duration of the exploration work. It is quite probable that drilling, stripping and trenching work will continue intermittently until autumn of 2019. During this period, a new request for exemption will be presented to the administrator should the scope of the exploration exceed that outlined in the present request.

QC-6: The developer will describe planned restoration measures.

Answer:

Excavated, segregated and piled materials (humus and mineral soil) will generally be put back in place (backfilled) in trenches and stripped areas in successive layers according to the original stratification. Backfilling will normally occur once the analysis and sampling of exposed surfaces have been completed. Once backfilling is completed, topsoil will be stabilized on an as-needed basis by means of herbaceous seeding containing indigenous and rustic plant species so as to prevent wind and water erosion. The soil surface will be contoured according to the existing topography of the land so as to promote natural drainage present before work was undertaken.

Should a stripping area or site present particular or exceptional geological interest, prior authorization will be sought from the Ministère de l'Énergie et des Ressources Naturelles du Québec (MERN) to get the said site recognized. Should such an occurrence take place, excavated materials will be left in place for an undetermined period (over a year) and stabilized by means of herbaceous seeding containing indigenous and rustic plant species so as to prevent wind and water erosion. Excavations presenting a safety hazard to workers, users of the territory or animals will be secured. In the event that it is impossible to ensure the stability and safety of excavations, these will have to be backfilled and restored as previously described.

More information can be obtained by contacting the undersigned at the following number: 819-865-4051.

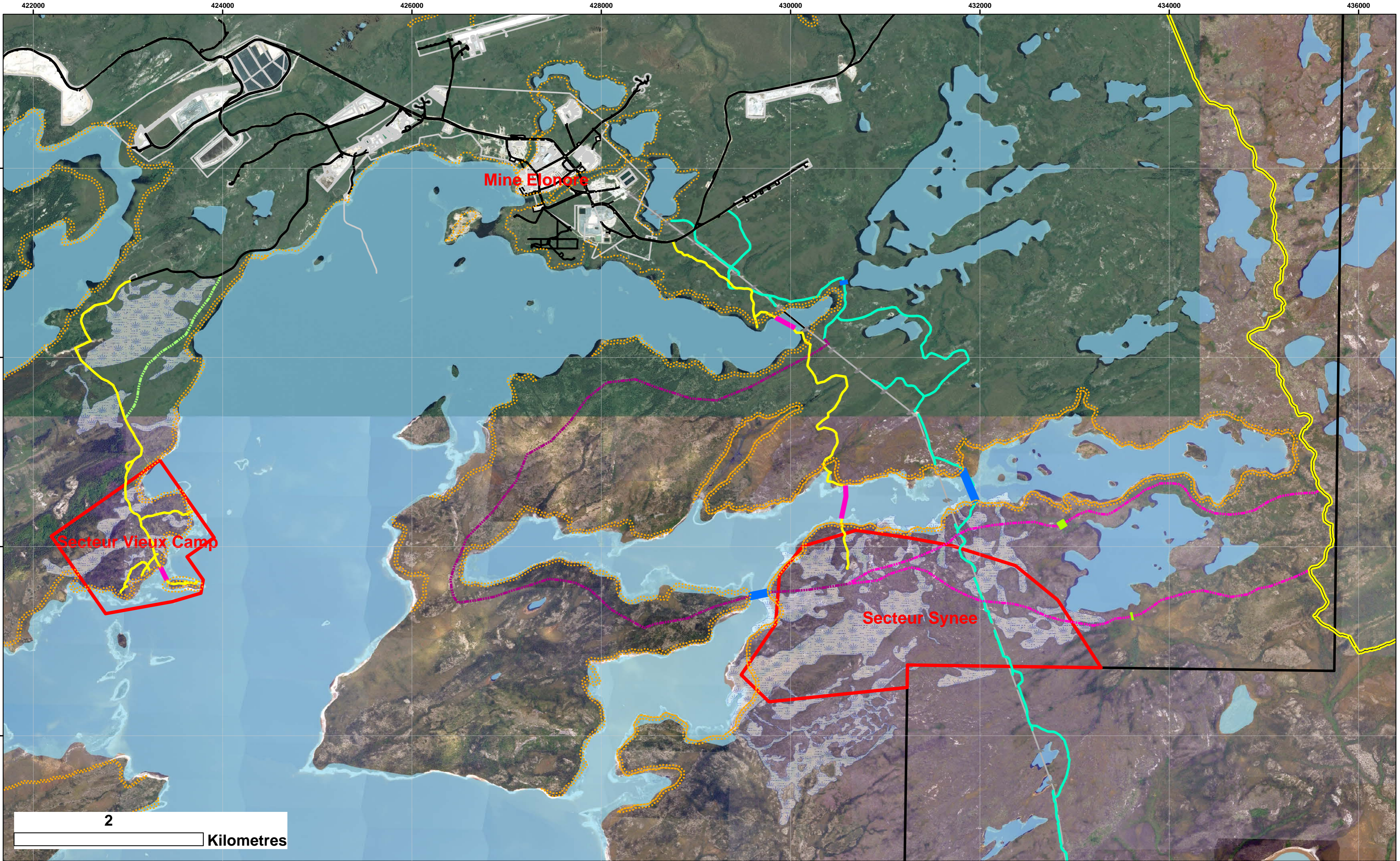
We hope everything meets your requirements. Ms. Paul, please accept our best regards.



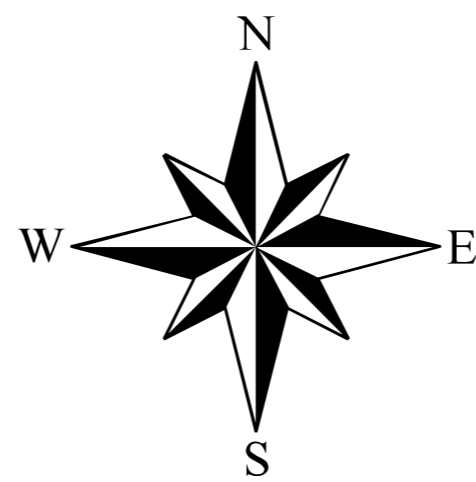
France Trépanier,
Environmental Coordinator
France.trepanier@goldcorp.com
819-865-4051

encl. Map indicating projected location of work and potential access roads

c.c. (by email)
Ms. Anik Pagé, MDDELCC
Ms. Aurora Maria Hernandez, CNG
Document control



Légende		
Bande riveraine	Accès à l'étude	Infrastructure site minier
Accès existants	Raccordement à l'accès de Cheechoo	Zone de forage
Pont de Glace	Nouvel accès Vieux-Camps	Propriété Eléonore
Accès d'hiver existants	Raccordement à l'accès d'Hydroquébec	Ligne haute tension
Accès projet Cheechoo	Pont Potentiel	Zone humide
Sentier Hydroquébec	Ponceau Potentiel	Lac



Carte de localisation des chemins	
Projection: NAD 1983 UTM Zone 18N	Échelle: 1:25,000
Date: 08/03/2017	
Auteur: S. Girardeau	
<small>Raccourci: M:\ArcGIS\Travaux en cours\Campagne de forage surface 2017\1 - Carte\ECOFA\Secteur Synee - itinéraire potentiel.mxd</small>	