



January 14, 2014

*Via email*

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**Re: Opportunity to address comments received regarding “Amaruq (IVR)” project proposal**

Agnico Eagle wants to thank the Nunavut Impact Review Board (NIRB) for giving the opportunity to provide supplementary information regarding the exploration project.

NIRB suggests providing information on the following elements:

- **Additional clarity regarding the timing and use of the current and proposed winter routes;**

*The winter road would be used annually to transport material and equipment between Meadowbank and the Amaruq exploration project from February to April-May (depending on the temperature). AEM has requested the authorization to add a second path as an alternative in case the winter access authorized by the LUP N2013F0030 does not have enough snow to pass with the tracked tractors. The alternative access is mainly located on lakes and is, according to our transport contractor based at Baker Lake, more suitable during a winter with less snow. This alternative path is longer and will be used only if the primary path, already authorised, is not usable.*

*Only one road would be used at a time; the two winter roads would not be used together. No excavation is related to the using of these roads. In using tracked tractors to transport the material and equipment, no soil scraping or removal are required, the equipment will pass directly on the snow.*

- Completed NIRB Part 2 forms relevant to the proposed activities with the specific sections completely filled in:
  - Section C: Pits and Quarries to be filled out with all known information at this time including additional detail with regards to proposed remediation activities and size of proposed quarries.

## **Pitting**

2 gravel pits are planned to be opened and used near of the Amaruq exploration site, as indicated on the map "Amaruq plan 2015-2016".

## **Overburden removal**

The overburden removed for the pitting activities will be stockpiled near the pits for site rehabilitation, but the quantity is anticipated to be very low.

## **Explosives transportation and storage**

No explosives will be used for the project presented.

### **1. Describe any field investigations and the results of field investigations used in determining new extraction sites.**

Presently, the first extraction site planned to be used is the gravel deposit located at  $\pm 800$  meters south of the Amaruq camp. Gravel samples were taken to evaluate the granulometry and compaction potential and the results show that this material is suitable for our needs.

The second proposed gravel pit, is located at  $\pm 3.5$  km east of the Amaruq camp. This site has been less investigated, but sample taking and topography are planned for next summer. Following these analyses, the area will be reduced to represent only the exploitable area.

### **2. Identify any carving stone deposits.**

No carving stone inventoried within the gravel deposit, at this moment.

### **3. Provide a conceptual design including footprint.**

The "Amaruq plan 2015-2016" shows the location of the 2 proposed gravel pits.

### **4. Describe the type and volume of material to be extracted.**

The proposed gravel pit, located at  $\pm 800$  meters south of the camp has a potential area of 1.3 hectare for the gravel exploitation. The estimated volume needed for the next two years for the exploration project is estimated at 15 000m<sup>3</sup> and this volume is available in this gravel deposit. For the next five years, we could estimate the needs to 40 000m<sup>3</sup> for the exploration, but the volume will be more precise eventually. At this moment, the second gravel pit would be needed.

### **5. Describe the depth of overburden.**

The overburden thickness on the gravel is very thin. A large part of the gravel on the proposed pit is already exposed.



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6. **Describe any existing and potential for thermokarst development and any thermokarst prevention measures.**

*Thermokarst development is not expected due to the soil type and the location of the gravel. Monitoring of the exploited area will be conducted to assure that no thermokarst development is ongoing.*

7. **Describe any existing or potential for flooding and any flood control measures.**

*Gravel pit exploitation will advance with layers of material being ripped by the machinery. The borrow pits will have gently sloping walls and will be designed for positive drainage.*

8. **Describe any existing or potential for erosion and any erosion control measures.**

*To prevent potential erosion, the areas exploited will be leveled. This leveling will avoid the canalisation of the water coming from precipitations.*

9. **Describe any existing or potential for sedimentation and any sedimentation control measures.**

*To prevent potential sedimentation in water bodies, exploitation will be located outside of a 31 meter protection buffer from any water body. The leveling will also be helpful to reduce the sedimentation potential.*

10. **Describe any existing or potential for slumping and any slump control measures.**

*With the exploitation technic that will be used, by layers, no slumping is possible for these gravel pits.*

11. **Describe the moisture content of the ground.**

*This information has not been evaluated at this moment.*

12. **Describe any evidence of ice lenses.**

*No ice lenses were visible in the gravel deposit during the visits.*

13. **If blasting, describe methods employed.**

*No blasting.*

14. **Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.**

N/A

15. **Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.**

*Gravel samples will be taken next summer and sent to an external laboratory to evaluate the acid rock drainage (ARD) and the metal leaching potential. The results will be analysed and submitted to the regulatory organization before starting to use the gravel.*



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### **16. Discuss safety measures for the workforce and the public.**

*Since the exploration project is located in a remote area from the nearest community and is only accessible with difficulty, we expect the public to visit rarely. In such cases, the visitors would be met by the manager on site to discuss the safety related to the site.*

*For the workforce safety, a risk analysis, a training development plan, an emergency plan, management plans and procedures were developed to minimize the risks.*

#### **o Section B-8: Stockpiles (if applicable)**

##### **1. Indicate on a map the location and conceptual design of all stockpiles.**

*The overburden removed from the gravel pits, if any, will be stocked near the gravel pits to be put back on the pits as a part of the rehabilitation. Based on our preliminary observations, the overburden thickness is very low to absent, so the stockpile would be really limited.*

##### **2. Describe the types of material to be stockpiled. (i.e. ore, overburden)**

*Only the overburden will be stockpiled.*

##### **3. Describe the anticipated volumes of each type of material to be stockpiled.**

*Only the overburden will be stockpiled and the volume will be directly dependant on the thickness present on the gravel. The first observation shows that the overburden thickness is very low to absent on the gravel.*

##### **4. Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.**

*The overburden recuperated will be stocked at least 31 meters from any water body, where sedimentation in the water is not possible.*

##### **5. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.**

*Acid rock drainage (ARD) and metal leaching potential has not been tested yet for these two proposed gravel pits. Samples will be taken and results sent to the regulatory organisation before starting the gravel exploitation.*

#### **o Section 4: Description of the Existing Environment**

*Environmental monitoring has started in the area with the first exploration works. Wildlife monitoring shows the variety of mammals present or passing in the area. Foxes, wolves, wolverines, muskox, caribous and small mammals were seen in the exploration area. Wildlife monitoring and a management plan were developed for this project to assure the protection of the fauna and the workers.*

*Archaeological investigations were conducted in the area in 2013 and 2014. The major part of the actual exploration area is considered to have a low potential of revealing archaeological sites. We will continue to work with an*



archaeologist to assure the respect of the archaeological sites located in the area.

○ **Section 5: Identification of impacts and proposed mitigation measures (including any monitoring plans)**

*To limit, reduce or avoid impacts on the wildlife, the soil, the water, the air and on the community, mitigation measures are and will be applied during this exploration project.*

*Management plans and procedures for the wildlife, the waste, the spill contingency and for the closure of the projects were developed and will be applied. The documents describe the actions done and to do to mitigate the impact on the environment.*

○ **Section 6: Cumulative Effects**

*To limit and reduce cumulative effects on environment, a principle of ongoing rehabilitation is applied. For example, when a drill site is completed, the site is cleaned and the casing is removed to leave the site mostly restored to its original state. To assure the application of this process, each drilling site is revisited after the drilling completion. Reports with pictures are completed and filed to document the rehabilitation carried out.*

*For the gravel pits, the exploitation and the rehabilitation will be done in such a manner as to reduce the effects on the landscape. The exploitation will advance with layers of material being ripped by the machinery. There will be no pits dug or sharp drop-offs within the quarry; it will follow the contours of the natural topography.*

Regards,

David Frenette  
Environmental Coordinator