

Environmental Assessment Approval

Approval Date: *Original Dated April 7, 2008*

Panuke Quarry Expansion

**Municipal Enterprises Limited, Proponent
Three Mile Plains, Hants County
Nova Scotia**

Panuke Quarry Expansion (the "Undertaking"), proposed by Municipal Enterprises Limited (the "Proponent"), in Hants County, Nova Scotia is approved pursuant to Section 13(1)(b). This Approval is subject to the following conditions and obtaining all other necessary approvals, permits or authorizations required by municipal, provincial and federal acts, regulations, by-laws, guidelines, policies or standards before commencing work on the Undertaking. It is the responsibility of the Proponent to ensure that all such approvals, permits or authorizations are obtained before commencing work on the Undertaking.

This Environmental Assessment Approval is based upon the review of the conceptual design, environmental baseline information, impact predictions, and mitigation presented in the Registration Information.

Terms and Conditions for Environmental Assessment Approval

1.0 General Approval

- 1.1 The Environmental Assessment Approval for the project is limited to the project as described in the registration document. Any proposal by the Proponent for expansion, modification or relocation of any aspect of the project from that proposed in the registration document must be submitted to the Environmental Assessment Branch for review and may require an environmental assessment.
- 1.2 The Proponent must, within two years of the date of issuance of this approval, commence work on the undertaking unless granted a written extension by the Minister.
- 1.3 The Proponent must not transfer, sell, lease, assign or otherwise dispose of this approval without the written consent of the Minister. The sale of a controlling interest of a business or a transfer of an approval from a parent company to a subsidiary or an affiliate is deemed to be a transfer requiring consent.
- 1.4 The Proponent must implement all mitigation and commitments in the

Registration Document, unless approved otherwise by Nova Scotia Environment (NSE).

2.0 Rare & Sensitive Flora

- 2.1 Prior to the expansion of the quarry, the Proponent must provide results of a field survey conducted to determine the distribution of Hickey's clubmoss both inside and outside of the quarry expansion area to determine the presence and/or abundance of the species. Based on the survey results, the Proponent must make necessary modifications to quarry operations to prevent unacceptable environmental effects to the satisfaction of NSDNR and NSE.

3.0 Wildlife

- 3.1 The Proponent must conduct a follow-up survey to determine if the Common Nighthawk is actually nesting within the clear-cut in which it was observed, prior to any project-related activity. Should any new clear-cuts be created as a part of quarry development activities, the Proponent must conduct a Common Nighthawk breeding survey place prior to the commencement of any project-related activities within that area. If Common Nighthawks nest in the clear-cut, no development of the clear-cut will be permitted until the habitat is no longer used as nesting habitat by this species. In addition, a buffer zone would be established around the perimeter of the clear-cut to reduce disturbance associated with quarrying activities. The size of the buffer zone will be confirmed in consultation with NSDNR and/or CWS.
- 3.2 Clearing and grubbing of areas to be used as quarry sites must be conducted outside of the breeding season for most bird species (May 1 to August 31).
- 3.3 A 30 metre vegetative buffer zone must established around any nest discovered and project activities in the immediate area minimized until nesting is complete and the chicks have migrated naturally from the area.
- 3.4 If a nest is found in piled overburden, nests must not be hydroseeded and alternate measures must be taken to reduce potential for erosion, protecting the nest until chicks have fledged and left the area.

4.0 Groundwater Resources

- 4.1 The Proponent, as part of the application for Part V approval under the *Environment*

Act, must provide for review and approval:

- a) Details of a groundwater monitoring program including location of monitoring wells and parameters. This program must be designed to evaluate potential impacts to both groundwater levels and groundwater quality. Based on the results of the monitoring, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSE.
- 4.2 The Proponent must replace, at their expense, any water supply which has been lost or damaged as a result of extracting aggregate.
- 4.3 The Proponent must obtain, from the Minister, an approval amendment prior to excavating below the watertable.

5.0 Surface Water Resources

5.1 The Proponent, as part of the application for Part V approval under the *Environment Act*, must provide for review and approval:

- a) Details regarding the program to monitor surface water, including location and parameters. Based on the results of monitoring, the Proponent shall make necessary modifications to mitigation plans and/or quarry operations to prevent unacceptable environmental effects to the satisfaction of NSE.
 - b) Details of the erosion and sediment control plan.
 - c) Details regarding the monitoring, maintenance, replacement and/or upgrading of the settling ponds. Settling pond design must consider increased likelihood of more intense precipitation events in coming decades.
 - d) Details of the Stormwater Management Plan, detailing drainage patterns and outfall locations.
 - e) Details of pre and post development water quality and quantity monitoring program. Sampling methods and/or protocols should be provided.
- 5.2 The Proponent must not undertake any quarry related activities within 30 metres of the banks of all streams identified on the property (natural vegetation must be maintained within this buffer) without receiving all necessary approvals and/or authorizations from NSE and all other applicable jurisdictions.

6.0 Archaeological & Heritage Resources

6.1 The Proponent must cease work and contact the Director, Heritage Division, Nova Scotia Department of Tourism, Culture and Heritage, the Executive Director, Confederacy of Mainland Mi'kmaq and the Executive Director, Union of Nova Scotia Indians immediately upon discovery of an archaeological site or artifact unearthed during any phase of the proposed project.

7.0 Noise, Vibration & Dust

7.1 The Proponent, as part of the application for Part V approval under the *Environment Act*, must provide for review and approval:

- a) Details of the air monitoring programs (particulate emissions), to be conducted at the request of NSE. If required, based on the results of the monitoring programs, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSE.
- b) Details of sound monitoring programs, to be conducted at the request of NSE. If required, based on the results of the monitoring programs, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSE.
- c) Details of an updated blast design plan. The plan must demonstrate that air concussion and ground vibration limits are capable of being met.

7.2 Dust generated by truck movement on site shall be minimized via speed control, proper truck loading, application of dust suppressants, proper construction of on-site roads, appropriate rehabilitation planning (including windscreens), and/or other means as required by NSE.

7.3 The Proponent must, at the request of NSE, form a Community Liaison Committee to facilitate communications between the company and the community.

8.0 Quarry Operation

8.1 The Proponent, as part of the application for Part V approval under the *Environment Act*, must provide for review and approval:

- a) A detailed quarry development plan including but not limited to the sequence of quarry development, soil erosion and sedimentation plans, stormwater management plan, progressive reclamation plans, etc.
- b) An acceptable contingency plan that meets NSEL's Contingency Planning Guidelines, September 2004 and addresses:
 - i) accidental occurrences, including but not limited to contingencies for spills, including spill equipment kept on-site and location of emergency phone numbers
 - ii) training to be delivered to staff
 - iii) procedures for responding to incidents occurring during times when the facility is not staffed (e.g. evenings, weekends, holidays).

8.2 The Proponent must operate the quarry within all NSE requirements.

8.3 The Proponent must plan and design the quarry according to NSEL Pit and Quarry Guidelines, 1999, and any subsequent updates.

8.4 No hazardous materials or petroleum products are to be stored on the site unless otherwise approved by NSE.

8.5 All plans and programs related to quarry operation must be resubmitted over the lifetime of the project, at a schedule to be established by NSE, and revised as determined by NSE.

8.6 The Proponent must apply for renewals to the Part V Approval at intervals established by NSE, and provide additional information as deemed necessary by NSE.

9.0 Site Reclamation

9.1 The Proponent, as part of the application for amendments to the Part V Approval under the *Environment Act*, shall provide for review and approval a preliminary reclamation plan, that includes progressive reclamation and details of future land use.

9.2 Quarry operations must be completed and reclaimed to the satisfaction of NSE and other appropriate regulatory departments.

Original Signed By

Mark Parent
Minister of Environment