

Expert Report of David Estrin

APPENDIX M

**ELMSDALE QUARRY EXPANSION PROJECT, NOVA SCOTIA
ENVIRONMENTAL ASSESSMENT APPROVAL TERMS AND
CONDITIONS**

Appendix M

Environmental Assessment Approval

Approval Date: *Original Dated July 24, 2007*

Elmsdale Quarry Expansion

Gallant Aggregate Limited, Proponent

Elmsdale, Hants County
Nova Scotia

Elmsdale (the "Undertaking"), proposed by Gallant Aggregate 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

& Labour (NSEL).

2.0 Surface Water

- 2.1 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 programs, the Proponent shall make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSEL.
 - 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 criteria shall include 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 an adaptive management strategy, developed in consultation with DFO, which will consider baseline results and the potential options or alternatives for project activities and development.
- 2.2 All surface water protection and management programs must be resubmitted over the lifetime of the project, at a schedule to be established by NSEL, and revised as determined by NSEL.
- 2.3 The Proponent must not undertake any quarry related activities within 30 metres of a watercourse without receiving all necessary approvals and/or authorizations from NSEL and all other applicable jurisdictions.

3.0 Groundwater

- 3.1 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 programs, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSEL. The program must be resubmitted over the lifetime of the project, at a schedule established by NSEL, and revised as determined by NSEL.
 - b) Details of a monitoring program to determine the potential for and extent of sulphide bearing material and plan to manage any exposed acid generating material and associated drainage (in consultation with NSEL).
- 3.2 The Proponent must replace, at their expense, any water supply which has been lost or

damaged as a result of extracting aggregate.

- 3.3 The Proponent must obtain written permission from all property owners with structures located off-site within 800m of a point of blast
- 3.4 The Proponent must secure, from the Minister, an approval amendment prior to excavating below the watertable.

4.0 Wildlife

- 4.1 The Proponent must provide DNR with information on additional sites (Alton and Stewiacke) to validate their claim that the Alderleaf Buckthorn (Yellow listed species) is not as restricted as its status indicates
- 4.2 The Proponent must implement standard mitigative measures to minimize the environmental effects of the Project on plant communities including the use of native plants and/or seed mixtures free of noxious weeds.
- 4.3 Clearing and grubbing of areas to be used as quarry sites must be conducted outside of the breeding season for most bird species (April 1 to August 1)

5.0 Wetlands

- 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 of the wetland compensation program, developed in consultation with NSEL and DNR;
 - b) a detailed functional analysis showing how flow regimes are maintained to downstream wetlands (ie. Wetlands A and B); and
 - c) details of mitigation/salvage and monitoring plans.
- 5.2 The Proponent must not undertake quarry related activities within 30 metres of any wetland, unless otherwise approved by NSEL.

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, including ambient air and dust emissions. Based on the results of the monitoring programs, conducted at the request of NSEL, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSEL.
 - b) Details of baseline and on-going noise monitoring programs. Based on the results of the monitoring programs, conducted at the request of NSEL, the Proponent must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSEL.
 - c) Details of an updated blast design plan. The plan must demonstrate that air concussion and ground vibration limits are capable of being met.
 - d) Details of a complaint resolution program whereby public concerns are tracked and resolved in a satisfactory manner.
- 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 NSEL.
- 7.3 The Proponent must, at the request of NSEL, 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 erosions and sedimentation plans, progressive reclamation plans, etc. A site hydrology plan should be developed based on the overall quarry development plan.
 - b) An acceptable contingency plan that meets NSEL's Contingency Planning Guidelines, September 2004 and addresses:
 - accidental occurrences, including but not limited to contingencies for spills, including spill equipment kept on-site and location of emergency phone numbers
 - training to be delivered to staff
 - 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 NSEL 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 NSEL.
- 8.5 All plans related to quarry operation must be resubmitted over the lifetime of the project, at a schedule to be established by NSEL, and revised as determined by NSEL.
- 8.6 The Proponent must apply for renewals to the Part V Approval at intervals established by NSEL, and provide additional information as deemed necessary by NSEL.

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 NSEL and other appropriate regulatory departments.

Original Signed By

Mark Parent
Minister of Environment and Labour