

## APPROVAL

Province of Nova Scotia  
*Environment Act, S.N.S. 1994-95, c.1*

**APPROVAL HOLDER:** Scotian Materials Limited  
**SITE PID:** 00505941  
**APPROVAL NO:** 2015-093150  
**EXPIRY DATE:** September 2, 2025

Pursuant to Part V of the *Environment Act, S.N.S. 1994-95, c.1* as amended from time to time, approval is granted to the Approval Holder subject to the Terms and Conditions attached to and forming part of this Approval, for the following activity:

Construction, operation and reclamation of a Quarry, and associated works, at or near Perrin Drive, Goffs, Halifax Regional Municipality in the Province of Nova Scotia.

Administrator  Date Signed September 15, 2015

Name (please print): Norma Bennett

The Minister has delegated his powers and responsibilities under the *Act* with respect to this Approval to the Administrator named above. Therefore any information or notifications required to be provided to the Minister under this Approval can be provided to the Administrator unless otherwise advised in writing.



# TERMS AND CONDITIONS OF APPROVAL

## Nova Scotia Environment

**Approval Holder:** Scotian Materials Limited  
**Project:** Quarry  
**Site:** Perrin Drive,  
Goffs, Halifax Regional Municipality  
PID # 00505941

**Approval No:** 2015-093150

**File No:** 92100-30BED-093150

**Map Series:** 11D/14

**Grid Reference:** E455519 N4965963

### Reference Documents:

- Application dated May 29, 2015 and attachments.
- Monitoring Plan for Effects of Quarry Development on Wetland Habitat prepared by Golder Associates and dated July 21, 2015.
- Correspondence (e-mail and Golder report) to NavCanada dated August 10, 2015.

### 1. Definitions

- a) "Abandonment" means cessation of production of aggregate for a period of twelve (12) months, unless authorized by the Minister.
- b) "Act" means Environment Act, Chapter 1 of the Acts of 1994-95, and includes, unless the context otherwise requires, all regulations made pursuant to the *Act*.
- c) "Active Area" means the area required to operate a quarry and includes the working face and associated works.
- d) "Administrator" means a person appointed by the Minister for the purpose of this *Act*, and includes an acting administrator.

- e) "Approval" means an approval issued pursuant to this Act with respect to an activity.
- f) "Associated Works" means any building, structure, processing facility, pollution abatement system or stockpiles of aggregate (material) associated with the Facility.
- g) "Department" means the Western Region, Bridgewater Office, of Nova Scotia Environment located at the following address:

Nova Scotia Environment  
Compliance Division  
Central Region, Bridgewater Office  
Suite 115, 30 Damascus Road,  
Bedford, Nova Scotia, B4A 0C1.

Phone: (902) 424-7773  
Fax: (902) 424-0597

- h) "Disturbed Area" means any area on a quarry site that has been stripped of vegetation and is susceptible to erosion.
- i) "Extension" means an increase in size, volume or other physical dimensions of an activity such that the increase may cause an adverse effect if not properly mitigated.
- j) "Facility" means the Quarry and associated works.
- k) "Minister" means the Minister of Nova Scotia Environment and includes any person appointed as a designate of the Minister.
- l) "Modification" means a change to an activity that may cause an adverse effect if not properly mitigated and includes, but is not limited to, the expansion of the same process, addition of product lines and replacement of equipment with different technology other than that presently in use.
- m) "Reclamation" means work performed or to be performed in accordance with an approved plan, and includes rehabilitation of a site or facility.
- n) "Site" means the lands where an activity or proposed activity will take place.

- o) "Structure" includes but is not limited to a private home, a cottage, an apartment building, a school, a church, a commercial building or a treatment facility associated with the treatment of municipal sewage, industrial or landfill effluent, an industrial building, infrastructure or construction, a hospital, and a nursing home, etc.
- p) "Water Resource" means all fresh and marine waters comprising all surface water, groundwater and coastal water.
- q) "Watercourse" means the bed and shore of every river, stream, lake, creek, pond, spring, lagoon, or other natural body of water, and the water therein, within the jurisdiction of the Province, whether it contains water or not, and all groundwater.
- r) "Wetland" means land commonly referred to as a marsh, swamp, fen or bog that either periodically or permanently has a water table at, near or above the land's surface or that is saturated with water, and sustains aquatic processes as indicated by the presence of poorly drained soils, hydrophytic vegetation and biological activities adapted to wet conditions.

## 2. Scope of Approval

- a) This Approval (the "Approval") relates to the Approval Holder and their application and supporting documentation, as listed in the reference documents above, to construct, operate and reclaim the Facility, situated at or near Perrin Drive, Goffs, Halifax Regional Municipality (the "Site").
- b) The Facility shall be constructed and operated as outlined in the application for industrial approval dated May 29, 2015 and supporting documentation.
- c) The Site and/or Facility shall not exceed the area as outlined in the application and supporting documentation.

## 3. General Terms and Conditions

- a) The Approval Holder shall construct, operate and reclaim the Facility in accordance with the following provisions:
  - i) *Environment Act* S.N.S. 1994-1995, c.1, as amended from time to time;
  - ii) Regulations pursuant to the above *Act*, as amended from time to time;

- iii) *Nova Scotia Environment and Labour Pit and Quarry Guidelines, 2003*, or latest version unless otherwise varied by condition of approval.
- b) No authority is granted by this Approval to enable the Approval Holder to construct, operate and reclaim the Facility on lands which are not in the control or ownership of the Approval Holder. It is the responsibility of the Approval Holder to ensure that such a contravention does not occur.
- c) If there is a discrepancy between the reference documents and the terms and conditions of this Approval, the terms and conditions of this Approval shall apply.
- d) Any request for renewal or extension of this Approval is to be made in writing, to the Department, at least ninety (90) days prior to the Approval expiry.
- e) The Minister may modify, amend or add conditions to this Approval at any time pursuant to Section 58 of the *Act*.
- f) This Approval is not transferable without consent of the Minister.
- g)
  - i) If the Minister determines that there has been non-compliance with any or all of the terms and conditions contained in this Approval, the Minister may cancel or suspend the Approval pursuant to subsections 58A(1) and 58A(2) of the *Act*, until such time as the Minister is satisfied that all terms and conditions have been met.
  - ii) If the Minister cancels or suspends this Approval, the Approval Holder remains subject to the penalty provisions of the *Act* and regulations.
- h) The Approval Holder shall notify the Department prior to any proposed extensions or modification to the Facility, including, but not limited to, the active area, operating area, process changes or waste disposal practices which are not granted under this Approval. An amendment to this Approval may be required before implementing any change.
- i) Extensions or modifications to the Facility may be subject to the *Environmental Assessment Regulations*. Written approval from the Minister may be required before implementing any change.

- j) Pursuant to Section 60 of the *Act*, the Approval Holder shall submit to the Minister any new and relevant information respecting any adverse effect that actually results, or may potentially result, from any activity to which the Approval relates and that comes to the attention of the Approval Holder after the issuance of the Approval.
- k) The Approval Holder shall immediately notify the Department of any incidents of non-compliance with this Approval.
- l) The Approval Holder shall bear all expenses incurred in carrying out the environmental monitoring required under the terms and conditions of this Approval.
- m) Unless specified otherwise in this Approval, all samples required to be collected by this Approval shall be collected, preserved and analysed, by qualified personnel, in accordance with recognized industry standards and procedures.
- n) Unless written authorization is received otherwise from the Minister, all samples required by this Approval shall be analysed by a laboratory that meets the requirements of the Department's "Policy on Acceptable Certification of Laboratories" as amended from time to time.
- o) The Approval Holder shall ensure that this Approval, or a copy, is kept on Site at all times and that personnel directly involved in the Facility operation are made fully aware of the terms and conditions which pertain to this Approval.
- p) The Approval Holder may be required to register their project under Part IV of the *Environment Act* should the Facility and associated works, including access roads, exceed an area of four (4) hectares.
- q) Upon any changes to the Registry of Joint Stock Companies information, the Approval Holder shall provide a copy to the Department.

#### 4. **Surface Water**

- a) The Site shall be developed and maintained to prevent surface water contaminants from being discharged into a watercourse, wetland, water resource, or beyond the property boundary, in excess of the following criteria:
  - i) **Total Suspended Solids: Clear Flows (Normal Background**

**Conditions)**

- 1) Maximum increase of 25 mg/l from background levels for any short term exposure (24 hour or less);
- 2) Maximum average increase of 5 mg/l from background levels for long term exposure (inputs lasting between 24 hours and 30 days);

ii) **Total Suspended Solids: High Flow (Spring Freshets and Storm Events)**

- 1) Maximum increase of 25 mg/l from background levels at any time when background levels are between 25 mg/l and 250 mg/l;
- 2) Maximum increase of 10% over background levels when background is >250 mg/l;

iii) **pH (Outfall)**

- 1) Maximum 5 to 9 in grab sample;
- 2) Maximum 6 to 9 as a Monthly Arithmetic Mean;

b) The Approval Holder shall ensure surface water is monitored at the following locations and frequency:

i) **Monitoring Locations**

- 1) SM -1  
Effluent Discharge prior to release from the Facility or Site.

SM-2  
Upstream of the Facility on the unnamed stream east of Facility.

SM-3  
Downstream of the Facility on the unnamed stream east of Facility.

ii) **Monitoring Frequency**

- 1) Monthly during discharge events or at the request of the Department.

c) Erosion and sedimentation control devices shall be installed prior to construction at the Site and shall remain in place and be maintained until disturbed areas are stabilized.



- d) The Department reserves the right to require modifications including, but not limited to, monitoring locations, monitoring frequency, contaminants of concern, and surface water criteria.
- e) No authority is granted by this Approval to enable the Approval Holder to discharge surface water onto adjoining lands without the authorization of the affected landowner(s). It is the responsibility of the Approval Holder to ensure authorizations are current and valid.
- f) The Approval Holder shall immediately contact the Department should sulphide bearing material be encountered on the Site and shall include planned remedial measures in conformance with the *Sulphide Bearing Material Disposal Regulations*.

**5. Particulate Emissions (Dust)**

- a) Particulate emissions shall not contribute to an ambient concentration of total suspended particulate matter that exceed the following limits (in micrograms per cubic metre of air) at or beyond the Site property boundaries:

Annual Geometric Mean	70 $\mu\text{g}/\text{m}^3$
Daily Average (24 hr.)	120 $\mu\text{g}/\text{m}^3$

- b) The use of used oil as a dust suppressant is prohibited.
- c) Monitoring of ambient total suspended particulate matter shall be conducted at the request of the Department. The location of the monitoring station(s) for total suspended particulate matter will be established by a qualified person retained by the Approval Holder and submitted to the Department for approval; this may include point(s) beyond the property boundary of the Site.
- d) When requested, suspended particulate matter shall be measured in accordance with EPA standard; EPA/625/R-96/010a; Sampling of Ambient Air for Total Suspended Particulate Matter (SPM) and  $\text{PM}_{10}$  shall be done using a High Volume (HV) Sampler.

**6. Sound Levels**

- a) Sound levels measured at the Site property boundaries shall not exceed the following equivalent sound levels (Leq):

Leq 65 dBA 0700-1900 hours  
60 dBA 1900-2300 hours  
55 dBA 2300-0700 hours

- b) Monitoring of sound levels shall be conducted at the request of the Department. The location of the monitoring station(s) for sound will be established by a qualified person retained by the Approval Holder and submitted to the Department for approval; this may include point(s) beyond the property boundary of the Site.

**7. Groundwater**

- a) The Approval Holder shall replace at their expense any water supply which has been lost or damaged as a result of extracting aggregate.
- b) The Approval Holder shall notify the Department prior to excavating below the water table. An amendment to this approval and/or written approval from the Minister may be required before excavating below the water table.
- c) If so directed by the Department, the Approval Holder shall be required to prepare and implement a groundwater monitoring program.

**8. Separation Distances**

- a) The Approval Holder shall not locate the Active Area of the Site within the following separation distances unless otherwise exempted or varied by condition of approval:
- i) 30 m of the boundary of a public or common highway;
  - ii) 30 m of the bank or ordinary high water mark of any watercourse or wetland;
  - iii) 30 m of the property boundary which does not form part of the Site active area.

- b) The Approval Holder shall not blast within the following separation distances unless the Approval Holder has obtained written letters of permission from the property owner of the structure on or before the date of Approval:
  - i) 800 m of the foundation or base of a structure located off site. This shall not apply to structures which are placed within the 800 metre separation distance following the date of which an application for approval is received from the Approval Holder.

## 9. **Blasting**

- a)
  - (i) The Approval Holder shall have a technical blast design prepared by a qualified person which ensures the ground vibration and air concussion limits in this Approval can be achieved.
  - (ii) At the request of the Department, the Approval Holder shall submit a copy of the blast design.
  - (iii) At the direction of the Department, the Approval Holder shall modify or cease blasting.
- b) The Approval Holder shall conduct a pre-blast survey of all structures within 800 metres of the point of blast including a water quality analysis of any wells serving these structures. The survey shall be conducted in accordance with the Department's 'Procedure For Conducting a Pre-Blast Survey' and the results of this survey sent to the Department prior to blasting on the Site. Additional water quality parameters may be required by the Department staff.
- c) The Approval Holder shall call the nearest weather office, to assess and record the climatic conditions prior to conducting any blasting. No blasting will be permitted if thermal inversion conditions are anticipated at the time of the proposed blast.
- d) No blasting shall occur on Sunday, on a statutory holiday prescribed by the Province, or on any day between 1800 and 0800 hours.
- e) The Approval Holder shall ensure that all blasts are monitored for concussion and ground vibration to ensure that the limits in Table 2 are not exceeded:

<b>Table 2</b>			
<b>Blasting Limits</b>			
<b>Parameters</b>	<b>Maximum</b>	<b>Monitoring Frequency</b>	<b>Monitoring Station</b>
Concussion (Air Blast)	128 dBL	Every Blast	Within 7 m of the nearest structure not located on the Site
Ground Vibration	0.5 in/sec (12.5 mm/s)	Every Blast	Below grade or less than 1 m above grade in any part of the nearest structure not located on the Site

- f) The monitoring station for blasting shall be as indicated in Table 2. Additional monitoring stations for blasting may be specified as required by the Department.
- g) (i) An annual summary of results of monitoring shall be submitted to the Department.  
(ii) The Approval Holder shall submit a record of individual blast results if so directed by the Department.

**10. Reclamation/Security**

- a) The Approval Holder shall post an interim security in a form acceptable to the Department in the amount of \$6,250.00 per hectare of the proposed area on or before November 2, 2016.
- b) The interim security shall not exceed one (1) year unless otherwise agreed in writing by the Administrator.
- c) The Approval Holder shall submit a rehabilitation plan to the Department for review by September 2, 2016. The rehabilitation plan shall be revised and updated every three years thereafter and submitted for review. The rehabilitation plan shall include the estimated total cost for labour, equipment, supplies and services of a third party contractor to undertake the following activities:
  - i) surface contouring
  - ii) establishing proper drainage
  - iii) revegetation work
  - iv) any work necessary to reclaim the quarry

- d) i) Before the expiry of the interim security, the Approval Holder shall post a reclamation security which shall be calculated using the reclamation plan and factors listed above. The reclamation security shall be revised every three years in accordance with the revised reclamation plan.
- ii) The reclamation security shall be posted in a form and value which is acceptable to the Department. In no case shall the value be less than \$6250 per hectare.
- e) The Approval Holder shall reclaim the Site within twelve (12) months of abandonment and in accordance with the latest reclamation plan submitted by the Approval Holder unless an alternate time frame is provided by the Department.
- f) The Department shall release the security to the Approval Holder after final reclamation of the Site has been completed to the satisfaction of the Minister. The Approval Holder shall notify the Department when reclamation has been completed.
- g) The Approval Holder shall ensure that any security posted for reclamation be kept valid for the term of the Approval. The expiry date of the Security shall be automatically renewed or coincide with the expiry date of the Approval.

#### **11. Site Specific Conditions**

- a) The boundaries of the Facility will be adequately marked, cut out and/or clear of new growth. Permanent visible markers shall be placed at changes in direction and be no more than 100 metres between markers along the Facility boundary.
- b) The Approval Holder shall be required to establish a Community Liaison Committee (CLC) at the direction of the Department.
- c) Refueling and vehicle maintenance shall only be carried out in a designated refueling area where conditions will allow the containment of any accidental spills.
- d) The surface of the refueling area shall be comprised of low permeability material and shall be sloped or bermed in such a way that spills will be captured prior to encountering a watercourse, wetland or water resource.

- e) (i) The Approval Holder shall implement a wetland monitoring program on Wetlands WL3, WL4 and WL5 as described in the report dated July 21, 2015 prepared by Golder Associates and entitled *"Monitoring Plan for Effects of Quarry Development on Wetland Habitat."*
- (ii) The Approval Holder shall complete baseline wetland monitoring prior to commencement of blasting operations.
- (iii) The Approval Holder shall submit baseline wetland survey results to the Department within 60 days of completion work.
- (iv) The Approval Holder shall complete annual wetland surveys and compare surveys to previous years.
- (v) The Approval Holder shall complete quarterly wetland water level measurements and report results in a chronological spreadsheet format.
- (vi) Should the results indicate that a significant alteration in wetland habitat and/or function has occurred, the Approval Holder shall provide the necessary wetland mitigation measures and/or compensation specified by the Department.

## 12. Reporting

- a) The Approval Holder shall provide an Annual Report summarizing the following information, as requested by the terms and conditions of this approval, each calendar year:
  - i) A summary of the results of any monitoring carried out under section 4 (Surface Water) of this approval with an interpretation of results.
  - ii) A summary of the results of any monitoring carried out under section 9 (Blasting) of this approval with an interpretation of results.
  - iii) A summary of the wetland monitoring results carried out under section 11 (Site Specific Conditions) of this approval with an interpretation of results.
  - iii) A summary of any monitoring carried out upon request by the Department.

- b) The Annual Report shall be submitted to the Department by February 2<sup>nd</sup> following the calendar year of operation.
- c) If no blasting takes place during the calendar operating year and no monitoring is carried out due to lack of discharge events and/or lack of request by the Department, then the Annual Report is to be submitted advising the Department of this.