

# TIR Supervision of Pits and Quarries

## Background

Nova Scotia Environment (NSE) has agreed that Nova Scotia Transportation and Infrastructure Renewal (TIR) would be exempt from obtaining approvals (for pits and quarries) under the Nova Scotia Environment Act providing that:

1. TIR ensures that the Pit and Quarry (P&Q) Guidelines are incorporated into all contracts
2. TIR enforces the P&Q Guidelines for all operations providing aggregates and other stone derived products (e.g. armour stone) for TIR contracts
3. TIR ensures that all operations described above are only temporary in nature and that they are rehabilitated at the end of each construction season (for rehabilitation requirements refer to the Pit and Quarry Requirements, Appendix B of the Standard Specification)
4. TIR ensures that materials from temporary pits and quarries are only used for TIR contracts. No sale to private parties is allowed.

## Checklist for TIR

1. If contractors indicate they will be purchasing aggregate from a pit or quarry approved by NSE, the Project Engineer (PE) will require the contractor to provide a copy of the approval.
2. If the approval is current, NSE will regulate; the PE should check the source of aggregate to ensure it is being provided from the site indicated by contractor.
3. If the contractor proves a proposed pit (**not quarry**) is, and will be less than 2 hectares in size at the end of a contract with TIR, and the contractor/owner of site does not have an approval from NSE, the PE will advise NSE of existence of pit. The PE has nothing more to do with site: NSE will regulate,
4. Pits >2ha, and all quarries that are being used to supply aggregate and/or other stone products solely to TIR, are to be supervised by the PE to ensure P&Q Guidelines and rehabilitation requirements included in contract Special Provisions are followed.

## Checklist for Contractors

In order to determine if a proposed temporary pit or quarry can be operated in a manner that meets the Pit and Quarry Guidelines and TIR contracts, contractors shall:

1. Contact TIR in advance of their interest in utilizing TIR's exemptions from environmental legislation.
2. Identify the source of the aggregate(s).
3. For pits; provide a scaled site plan showing separation distances from adjacent properties – see P&Q Guidelines. Include as well, the location of the haul road.
4. For quarries; provide a scaled site plan showing separation distances from adjacent properties, watercourses, wetlands and all residential or commercial structures within 800 metres of the proposed quarry face. Include as well, the location of the haul road.
  - a. if there are residences or commercial structures within 800 metres of quarry face, contractor must provide letters of authorization to blast at site from all of those owners
5. For pits and quarries; provide proof that contractors have provided at least two weeks notice to the Department of Labour and Workforce Development of their intent to begin operations.
  - a. a Site Specific Hazard Assessment that addresses potential issues in temporary pits and quarries.
6. Provide an approved access plan for commercial vehicles.
7. Provide a Breaking Soil Permit and Work Within Right of way Permit and any and all other permits that may be required to open the site.

## Recommendations for TIR

The PE's should inspect the sites of proposed for temporary pits/quarries and take photos of the existing site(s) if the contractor is re-opening a temporary site. NSE will need to know how much of the site needs to be rehabilitated at the end of the contract (contractor only required to rehabilitate that portion of the site used in current construction season).

If the PE thinks there may be Erosion and Sediment control issues at a temporary aggregate source they will require the contractor to hire an independent person/company to take water quality samples up and downstream of the aggregate operation.

Operating sound level limits at the property boundaries shall be in accordance with P&Q Guidelines. If the PE thinks the contractor may be exceeding noise levels the PE will require the contractor to hire an independent person/company to set up noise level monitoring at the property boundaries.

If there are residences, schools, etc. close to pit/quarry, dust level monitoring may be required. PE's may require contractors to hire an independent person/company to set up noise level monitoring at property boundaries.

The PE will require that the contractor conduct a pre-blast survey of all structures that are within 800 metres of a quarry face and provide evidence of the survey to the PE.

The PE will require that the contractor monitor all blasts for concussion and ground vibration. Concussion to be measured within 7 metres of the nearest structure not located on the property where the blasting occurs; ground vibration to be measured below grade or less than one metre above grade in any part of the nearest structure not located on the property where blasting occurs.

The PE will require that the contractor provide blast monitoring results to PE within a maximum of two days of each blast that is conducted.

- If results are close to limits, contractor should be warned to take steps to ensure there are no exceedances
- if results exceed limits, no further blasting will be done until the contractor explains the reason(s) for exceedance(s) and steps that will be taken to prevent further exceedances.

If the owner/contractor of a quarry can not obtain letters of authorization from the owners of all structures within 800 metres of the quarry face, TIR can not allow the contractor to generate aggregate from the site for TIR contracts.

TIR cannot purchase aggregate or other stone sourced products from a site from which material is being sold to any parties other than TIR.

## Rehabilitation

Prior to finalizing contracts, PE's should ensure that temporary pits and quarries are rehabilitated at the end of each construction season as described in the Special Provisions section of the contract. If the contractor does not rehabilitate temporary pits or quarries the PE will retain the holdback (as per Pit and Quarry Requirements).

There may be instances where TIR purchases excess recycled asphalt pavement and/or gravel(s) from the contractor and the conclusion of the contract. Should this occur the Rehabilitation Plans and/or Applications for an Industrial Approval shall provide for the storage of these materials until they are removed by TIR.

Pits	Actions
<2 ha	PE requires contractor to prove site is <2 ha: is so, NSE will regulate
>2 ha	PE requires contractor to show NSE approval status for site – if approval in place, NSE regulates
	if no NSE approval, pit must be operated as a temporary site; PE enforces Pit and Quarry Guidelines and rehabilitation requirements in Special Provisions
	pit must be rehabilitated at the end of construction season
	if contractor does not rehabilitate pit, PE retains holdback (as per Pit and Quarry Requirements) and/ or applies liquidated damages
Quarries	Actions
Any size	PE requires contractor to show NSE approval status for site. If approval in place, NSE regulates
	if no NSE approval, quarry must be operated as a temporary site; PE enforces Pit and Quarry Guidelines and rehabilitation requirements in Special Provisions
	quarry must be rehabilitated at the end of construction season
	if contractor does not rehabilitate quarry, PE retains holdback (as per Pit and Quarry Requirements) and/or applies liquidated damages