Vermonters for a Clean Environment
Jan. 14, 2020

# Act 250 9(E) Guidance for Completing an Earth Extraction Plan, Blasting Plan, and Reclamation Plan for Act 250 Projects

Projects undergoing Act 250 review that involve or require the use of blasting, ongoing quarrying or excavation operations require an "extraction plan," "blasting plan," and/or "reclamation plan" to be submitted with an Act 250 application for the proposed project. The purpose of this guidance document is to describe the required information that the plan shall contain.

**For projects involving regular blasting activities and/or primarily involve earth extraction** - such as quarry operations, ongoing earth extraction projects, and/or projects where extracting minerals is the primary objective of the permit, the plan shall address the requirements listed below.

**For other projects which include only a short term period of modest blasting or extraction processing**, consult with the District Coordinator to determine which of the requirements listed below will be appropriate.

1. **Introductory Site Information**
    a. Describe the site and surrounding area.
    b. Identify property lines, surrounding uses, structures, and areas of frequent use within 1,000 feet of the blasting area. And a plan for a setback of a minimum of 200' from the adjoining property lines will be required.

2. **Operational Parameters**

Please provide the following information regarding the operation of the earth resource extraction facility.

a. Identify the proposed seasonal opening and closing date of operations and the proposed hours of operation during the operational season.
b. If using explosives, identify the following:
    i. The explosive material to be used.
    ii. The maximum explosive weight per delay.
    iii. The maximum total explosive weight for the largest single blast event.
    iv. The maximum calculated ground velocity expected to be produced during the largest single blast event expressed in inches per second.
    v. The maximum number of blast events per day and the days/time periods during which blasting is proposed to be conducted.

vi. Describe the safety measures to be employed before and during blast events (e.g. warning alarms, blast mats to prevent flyrock, handling and storage of explosives, etc.).

c. Provide the total cubic yards sought to be extracted over the life of the permit.

d. Provide the total cubic yards proposed to be extracted annually.

e. Estimate the proposed maximum number of total daily truck trips to and from the site.

f. Identify the depth to seasonal high groundwater, and how this depth was this measured.

g. Identify how the project will not impact groundwater.

**3. Vibration Monitoring Practices**

a. Pre- and Post-blast structural surveys

i. For all homes and structures located within 1,000 feet of the blasting activity, perform and document a pre-blast and post-blast structural survey upon offer and acceptance by the owners of those properties.

ii. For those homes and wells within 1,000 feet, perform and document a pre-blast well yield (quality and quantity) of the all such neighboring wells upon offer and acceptance by the homeowners of such testing.

iii. Post-blast surveys shall be conducted if deemed necessary by the blaster, or if requested by a homeowner(s).

b. For each blast event, place a reliable, calibrated seismograph instrument at the property line of the home or homes most likely to experience significant ground vibration from the largest event. Record and document the results, expressed in inches per second.

**4. Noise Monitoring Practices**

a. Prepare a noise impact assessment detailing how the operation of the earth extraction facility will affect the surrounding community

i. Describe the model methodology used to predict noise levels.

ii. List all assumptions and include all modeling data.

iii. Identify background noise.

iv. Identify the noise standard used to predict noise at areas of frequent use, like homes and backyards, and property lines. (one of those standards must be measured using the dBA Lfmax (fast response, 0.125 ms).

v. Display model results using isoline mapping of area.

vi. Describe any noise mitigation plans to achieve desired results and recommendations.

b. For each blast event, place a reliable, calibrated noise meter at the property line of the nearest residence. Record and document the results, expressed in dBA and Lmax.

**5. Blast Monitoring Reports**

a. Develop a blast monitoring report for each blast event. Blast monitoring reports shall include observer identification, location, time, date, charge weight per delay, total charge weight per blast, monitor instrumentation location and information, particle velocity readings, and any other readings deemed relevant by the blaster.

b. Written reports of the results of the blasts shall be filed with the Commission and parties within 10 days of the blast event.

**6. Reclamation and Financial Surety**

For quarries, gravel pits and/or other long term earth extraction projects, a detailed reclamation plan will be required, which identifies the following:

a. Identify the procedure and specifications for temporary stockpiling of slag (waste), and for subsequent removal and reclamation and stabilization (e.g. reduction in slope, topsoiling, seeding and mulching).

a. Identify any phasing for reclamation procedures.

b. Identify who is responsible for completing reclamation.

c. Will reclamation include a bond or escrow agreement to ensure that funds will be available at the conclusion of operation to reclaim the site. Consult with the District Coordinator to determine whether or not financial surety will be required to achieve the permit requested.

d. Propose a protocol whereby the District Coordinator will be invited to conduct a site inspection to review reclamation sufficiency, and, at the conclusion of the permit life, to make a formal determination that reclamation is complete and Act 250 jurisdiction is removed.