

# BLASTING PLAN GUIDANCE DOCUMENT

## JUNE 2017

This guidance document provides the basic elements generally included in a Blasting Plan. The District Environmental Commission may review a Blasting Plan in conjunction with the Agency of Natural Resources (Agency) **Best Management Practices for Blasting to Avoid Environmental Contamination** (BMP). For projects where blasting is necessary, the applicant is strongly encouraged to have the Blasting Plan developed by a licensed blasting company. The blasting process should be designed to safeguard personnel; evaluate and minimize noise, vibration, dust, and fly rock; and prevent undue harm to groundwater and surface water.

The applicant should review Act 250 requirements and the Agency's Blasting Decisions Flow chart to understand the full set of permits and procedures necessary for the review of a proposed project which involves blasting. Permits and information required by entities other than the Agency of Natural Resources or addressing other Act 250 Criteria are not described below, such as a Multi-Sector General Permit, Stormwater Construction General Permit, a Practice for Review of Groundwater Monitoring Plan, Best Management Practices for Blasting to Avoid Environmental Contamination, applicable local and municipal ordinances, etc. Rock quarries proposing to blast greater than 5,000 cubic yards of undisturbed bedrock in a year, should also follow the Agency's **Practice for Review of Groundwater Monitoring Plan under Act 250 Criteria 1 and 3**.

### BLASTING PLAN

A blasting plan describes, at a minimum:

- 1) **General Outline and Description:** describes general safety concerns and commits to follow all federal, local and state regulations related to use and transportation of explosives.
- 2) **Pre-Blast Surveys/Notifications:** describes process, notification, and documentation for pre- and post- blast surveys related to nearby structures.
- 3) **Blast Monitoring:** describes process for seismic monitoring during blasting.
- 4) **Sequence of Blasting:** discusses process to allow for minimal ground vibration and maximum protection of nearby structures.
- 5) **Blasting Procedures:** describes times, dates and hours of blasting; regulation of access to blasting area; notification of neighbors and signal use; and measures for prevention of fly rock.
- 6) **Blast Security and Warning Whistles:** discusses area security, communication of job site supervisors with local officials, and issuance of warning and all clear whistles.
- 7) **Explosives:** Documents that all blasting materials will be perchlorate free and describes storage of explosives.
- 8) **Blaster Qualifications:** specifies use of a blaster licensed by the State of Vermont plus knowledge of all OSHA, Federal, Local and State regulations regarding site safety,

transportation, use and handling of explosives.

- 9) Blaster Personnel: may include conditions related to experience, judgement, and training.
- 10) Licenses and Permits: specifies that drilling and blasting contractor be fully licensed and insured.
- 11) Blast Vibration: describes details of vibration monitoring, vibration limits as outlined in US Bureau of Mines (USBM) RI 8507 Appendix B; sets air blast overpressure level; and specifies that all blasting shall be performed in accordance with all applicable laws and regulations including, but not limited to, the Vermont Occupational Safety and Health Administration regulations. Vermont has adopted by reference, Code of Federal Regulations (“CFR”) OSHA regulations regarding explosives and blasting, and CVR 24 050 013 (Secretary of State Rule Log #92-041) (Rules Pertaining to VOSHA- Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents). Specifically, Vermont has incorporated by reference 29 CFR Part 1910.109 Explosives and Blasting Agents and 29 CFR Part 1910.119 Process Safety Management of Highly Hazardous Chemicals.