

DRAFT TECHNICAL GUIDANCE: BLASTING ACTIVITY PERMITS AND PERMITS-BY-RULE

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF MINING AND RECLAMATION**

DOCUMENT NUMBER: 562-2100-002

TITLE: Alternative Peak Particle Velocity or Airblast Level

EFFECTIVE DATE:

AUTHORITY: Administrative Code of 1929 (Section 1917-A) and 25 PA Code alternative peak particle velocity airblast levels Chapter 211

POLICY: The Department may establish alternative peak particle velocity or airblast levels. Blasting Activity Permittees or Blasting Activity Permit applicants may request that the Department establish alternative peak particle velocity or airblast levels. The Bureau of District Mining Operations shall, in a consistent way, process, review, and dispose of requests for the Department to establish alternative peak particle velocity or airblast levels. The Department will only establish levels that with a reasonable degree of certainty that will not jeopardize the safety of persons and property.

PURPOSE: To provide standardized review and approval methods for request of the Department to establish alternative peak particle velocity or airblast limits.

APPLICABILITY: This guidance applies to all blasting activities and is to be implemented by District Mining Operations staff.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

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TECHNICAL GUIDANCE

Requests

Requests for the Department to establish and alternative peak particle velocity or airblast limit must be written. The request must reference the appropriate blasting activity permit or requests may be in the form of an attachment to a Blasting Activity Permit application. The request must be submitted to the appropriate District Mining Office.

Initial Processing

When a written request for the Department to establish alternative peak particle velocity or airblast level is not a an attachment to a Blasting Activity Permit application the request must be forwarded to the Blasting and Explosives Inspector. If the request is an attachment to a Blasting Activity Permit application it will be forwarded to the Blasting and Explosives Inspector with the application.

Review

The request must include information affirmatively demonstrating ground vibrations below or at the alternative peak particle velocity level will not damage the building. For example, use both U.S. Bureau of Mines research to describe the limit for dwellings with interiors finished in drywall and a pre-blast survey that shows the home has interior walls of drywall construction. Building design plans, a pre-blast survey demonstrating the condition of the building, and a consultant's explanation of how the design of the building makes it resistant to the seismic activity caused by the blasting would be appropriate for an engineered building.

The Blasting and Explosives Inspector will obtain the concurrence of his supervisor and the Chief, Explosives and Safety Section for approval or denial of the request if research other than U.S. Bureau of Mines research is used to demonstrate that the alternative peak particle velocity limit will not damage buildings designed to be occupied dwellings. The Chief, Explosives and Safety Section will respond within 5 days unless he is not available. A Blasting and Explosives Inspector from another District Mining Office will be designated to review the request for concurrence during the Chief, Explosives and Safety Section's absence.

If U. S. Bureau of Mines research is used to demonstrate that the alternative peak particle velocity limit will not damage the building, the Blasting and Explosives Inspector may approve or deny the requests with the concurrence of his supervisor.

Requests for buildings such as engineered structures, or other buildings not designed to be occupied dwellings, will be evaluated by the Blasting and Explosives Inspector. The Blasting and Explosives Inspector will obtain the concurrence of his supervisor for approval or denial of the request.

According to U. S. Bureau of Mines research there is little probability of damage occurring to buildings at airblast levels below 140 decibels. Although there is little probability of airblast levels below 140 decibels causing damage to a building, consideration must be given to nuisance caused by airblast levels over 133 decibels. The regulatory limit in Pennsylvania and the maximum level recommended in U. S. Bureau of Mines research is 133 decibels. Additionally, it must be taken into consideration that the effects of airblast do not diminish as rapidly over short distances as the effects of ground vibration do.

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The Blasting and Explosives Inspector will obtain the concurrence of his supervisor for approval or denial of the request for an alternative airblast limit if U. S. Bureau of Mines research is used to demonstrate that the alternative airblast limit will not damage the building.

Final Determination

The Monitoring and Compliance Manager will sign all final actions. If the request is denied, the Blasting and Explosives Inspector will prepare a standardized letter that will be sent to the requestor indicating the reason for denial. If the request is approved, the Blasting and Explosives Inspector will prepare a standardized letter that will be sent to the requestor indicating approval.