

6132.2900 AIR OVERPRESSURE AND GROUND VIBRATIONS FROM BLASTING.

Subpart 1. **Goal.** Effects of air overpressure and ground vibrations from production blasts shall be kept at levels that will not be injurious to human health or welfare and property outside mining areas.

Subp. 2. **Requirements.** Air overpressure standards must meet the requirements in items A and C. Ground vibration control must meet the requirements in items B and C.

A. Air overpressure standards must meet the requirements in subitems (1) to (5).

(1) Air overpressure on lands not owned or controlled by the permittee shall not exceed 130 decibels as measured on a linear peak scale, sensitive to a frequency band ranging from six cycles per second to 200 cycles per second.

(2) All open pit blasts shall be monitored by the operator. Monitoring stations shall be located adjacent to the nearest structure located on lands not owned or controlled by the permittee, and where the commissioner considers necessary to investigate complaints.

(3) All open pit mining operators shall keep a blaster's log of production blasts, which shall be retained for at least six years, containing the following:

- (a) date and time of blast;
- (b) type of explosive used;
- (c) ignition layout with locations of blast holes and time intervals of delay;
- (d) pounds of explosives per each delay of eight milliseconds or more;
- (e) total pounds of explosives;
- (f) type of material blasted;
- (g) monitoring locations and results of monitoring when conducted;
- (h) meteorological conditions, including temperature inversions, wind speed, and directions as can be determined from the United States Weather Bureau, and ground-based observations;
- (i) directional orientation of free faces of bench to be blasted; and
- (j) other information that the commissioner finds necessary to determine if the standards of this subpart and subpart 1 are achieved.

(4) If a focusing condition is detected that could cause the blast to adversely affect populated areas, blasting shall be postponed until the condition is no longer present.

(5) Blasting in open pits shall take place only during daylight hours unless a hazardous condition requires blasting at another time.

B. Ground vibration control must meet the requirements in subitems (1) to (4).

(1) The maximum peak particle velocity from blasting shall not exceed one inch per second at the location of a structure located on lands not owned or controlled by the permittee.

(2) The permittee shall monitor production blasts for peak particle velocity using a seismograph capable of measuring three mutually perpendicular peak particle velocities, with the peak particle velocity being the largest of these measurements.

(3) Seismic measurements shall be conducted adjacent to the nearest structure located on lands not owned or controlled by the permittee and where the commissioner considers necessary to investigate complaints.

(4) If a complaint is received, or when ground vibrations have or are likely to exceed the one inch per second standard, the commissioner shall require permittees using underground mining methods to maintain a blaster's log for the purpose of assessing ground vibration control.

C. All monitoring data collected shall be made available to the commissioner on request.

Statutory Authority: *MS s 93.44 to 93.51; 103G.222*

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