

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE I. LAND RESOURCES

CHAPTER 77. NONCOAL MINING

Subchapter A. GENERAL PROVISIONS

§ 77.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Mine opening blasting--Blasting conducted for the purpose of constructing a shaft, slope, drift or tunnel mine opening for an underground mine, either operating or under development, from the surface down to the point where the mine opening connects with the mineral strata to be or being extracted.

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Subchapter I. ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

USE OF EXPLOSIVES

§ 77.564. Surface blasting requirements.

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(b) Blasting shall be conducted between sunrise and sunset, at times announced in the blasting schedule, except that mine opening blasting conducted after the second blast, for that mine opening, may be conducted at any time of the day or night as necessary to maintain stability of the mine opening to protect the health and safety of mine workers. For mine opening blasting conducted after the second blast,

for that mine opening, the Department may approve GROUND OR AIRBLAST vibration limits at a dwelling, public building, school, church or commercial or institutional structure, that are less stringent than those specified in subsections (f) and (i) if consented to, in writing, by the affected building owner and lessee, if leased to another party.

(c) The Department may specify more restrictive time periods, **AIRBLAST or GROUND vibration limits**, based on public requests or other relevant information, according to the need to adequately protect the public from **[excessive noise] the adverse affects of GROUND vibration, AIRBLAST, or safety hazards.**

(f) Airblasts shall be controlled so that they do not exceed **[the noise level specified in this subsection at] 133 dBL** a dwelling, public building, school, church or commercial or institutional structure, unless the structure is owned by the person who conducts the surface mining activities and is not leased to another person. The lessee may sign a waiver relieving the operator from meeting the airblast limitations of this subsection.

[~~(1) Maximum allowable noise levels.~~

<i>Lower Frequency Limits of Measuring System</i>	<i>Maximum Level in dB</i>
.1 Hz or lower flat response	134 peak
2 Hz or lower flat response	133 peak
6 Hz or lower flat response	129 peak
e-weighted, slow response	105C }

[~~(2)~~] (1)*****

[~~(3)~~] (2)*****

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CHAPTER 87. SURFACE MINING OF COAL

Subchapter A. GENERAL PROVISIONS

§ 87.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings unless the context clearly indicates otherwise:

* * * * *

Mine opening blasting--Blasting conducted for the purpose of constructing a shaft, slope, drift or tunnel mine opening for an underground mine, either operating or under development, from the surface down to the point where the mine opening connects with the coal seam to be or being extracted.

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Subchapter E. SURFACE COAL MINES: MINIMUM ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

§ 87.124. Use of explosives: general requirements.

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(b) Blasts that use more than 5 pounds of explosive or blasting agents shall be conducted according to the schedule required by § 87.~~125~~**126** (relating to use of explosives: **[preblasting survey] public notice of blasting schedules**).

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§ 87.126. Use of explosives: public notice of blasting schedule.

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(b) *Blasting schedule contents.*

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(2) The blasting schedule **[shall] must** contain at a minimum the following:

* * * * *

(ii) Dates and time periods when explosives are to be detonated. **[Each period may not exceed 4 hours.]**

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§ 87.127. Use of explosives: surface blasting requirements.

(a) Blasting shall be conducted between sunrise and sunset, at times announced in the blasting schedule, except that mine opening blasting conducted after the second blast, for that mine opening, may be conducted at any time of day or night as necessary to maintain stability of the mine opening to protect the health and safety of mineworkers. For mine opening blasting conducted after the second blast, for that mine opening, the Department may approve GROUND OR AIRBLAST vibration limits at a dwelling, public building, school, church or commercial or institutional structure, that are less stringent than those specified in subsection (e) or ~~(n)~~(m) if consented to, in writing, by the structure owner and lessee, if leased to another party.

(b) The Department may specify more restrictive time periods, AIRBLAST or GROUND vibration limits, based on public requests or other relevant information, according to the need to adequately protect the public from [excessive noise] the adverse affects of GROUND vibration, AIRBLAST, or safety hazards.

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(e) [An airblast] Airblast shall be controlled so that it does not exceed the [noise] level specified in this subsection at a dwelling, public building, school, church or commercial or institutional structure, unless the structure is [owned by the person who conducts the surface mining activities and is not leased to another person. The lessee may sign] located on the permit area when the structure owner and lessee, if leased to another party, have each signed a waiver relieving the operator from meeting the airblast limitations of this subsection.

(1) [Maximum] The maximum allowable [noise] AIRBLAST [levels: Lower frequency limit of measuring system in Hz (+ 3 dB) Maximum level (dB) 0.1 Hz or lower flat response 134, peak 2 Hz or lower flat response] level is 133[, peak 6 Hz or lower flat response 129, peak c-weighted, slow response 105 peak dBC] dBL.

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(f) Requirements for blasting are as follows:

(1) Public highways and entrances to the operation shall be barricaded and guarded by the operator if the highways and entrances to the operations are located within [1,000] 800 feet of a point where a blast is about to be fired. The operator may use an alternative measure to this

requirement if the operator demonstrates, to the Department's satisfaction, that the alternative measure is at least as effective at protecting persons and property from the adverse affects of a blast. Alternative measures are measures such as:

(i) Slowing or stopping traffic in coordination with appropriate State or local authorities, including local police.

(ii) Using mats to suppress fly rock.

(iii) Designing the blast to prevent damage or injury to persons and property located on the public highways or at the operation's entrances by using design elements such as:

(A) Orienting the blast so that the direction of relief is away from public highways or operation entrances.

(B) Adjusting blast design parameters including:

(I) The diameter of holes.

(II) The number of rows.

(III) The number of holes.

(IV) The amount and type of explosive.

(V) The burden and spacing.

(VI) The amount and type of stemming.

(VII) The powder factor.

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(j) When seismographs are not used to monitor peak particle velocity, the maximum weight of explosives to be detonated within an 8 millisecond period may be determined by the formula $W = (D/D_s)^2$ where W equals the maximum weight of explosives, in pounds, that can be detonated in any 8 millisecond period or greater, D equals the distance, in feet, from the blast to the nearest dwelling, school, church, commercial or institutional building and D_s equals the scaled distance factor. The development of a modified scaled-distance factor may be authorized by the Department on receipt of a written request by the operator, supported by seismographic records of blasting at the minesite. The modified scaled- distance factor shall be determined so that the particle velocity of the predicted ground

vibration will not exceed the prescribed maximum allowable peak particle velocity of subsection ~~(n)~~ (m) at a 95% confidence level.

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[(l)] (l) ***
The use of a formula to determine maximum weight of explosives per delay for blasting operations at a particular site may be approved by the Department if the peak particle velocity of 1 inch per second required in § 87.126 (relating to use of explosives: public notice of blasting schedule) would not be exceeded.]**

~~(m)~~ (l) *****

~~(n)~~ (m) *****

~~(o)~~ (n) *****

~~(p)~~ (o) *****

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§ 87.129. Use of explosives: records of blasting operations.

A record of each blast shall be retained for at least 3 years and shall be available for inspection by the Department and the public on request. Seismographic reports, if applicable, **[shall] must** be made a part of that record. The record **[shall] must** contain the following data:

* * * * *

(4) The **identification of and the** direction and distance, in feet, to the nearest dwelling, public building, school, church, commercial or institutional building or other structure.

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CHAPTER 88. ANTHRACITE COAL

Subchapter A. GENERAL PROVISIONS

PRELIMINARY PROVISIONS

§ 88.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Mine opening blasting--Blasting conducted for the purpose of constructing a shaft, slope, drift or tunnel mine opening for an underground mine, either operating or under development from the surface down to the point where the mine opening connects with the coal seam to be or being extracted.

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Subchapter B. SURFACE ANTHRACITE COAL MINES: MINIMUM ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

§ 88.135. Blasting: surface blasting requirements.

(a) Blasting shall be conducted between sunrise and sunset, **except that mine opening blasting conducted after the second blast for that mine opening may be conducted at any time of day or night as necessary to maintain stability of the mine opening to protect the health and safety of mine workers. For mine opening blasting conducted after the second blast, for that mine opening, the Department may approve GROUND OR AIRBLAST vibration limits at a dwelling, public building, school, church or commercial or institutional structure, that are less stringent than those specified in subsection (h) if consented to, in writing, by the structure owner and lessee, if leased to another party.**

(b) The Department may specify more restrictive time periods, **AIRBLAST or GROUND vibration limits**, based on public requests or other relevant information, according to the need to adequately protect the public from **[excessive noise] the adverse affects of GROUND vibration, AIRBLAST, or safety hazards.**

* * * * *

(f) Blasting operations **[shall] must** meet the following requirements:

(1) Public highways and entrances to the operation shall be barricaded and guarded by the operator if the highways and entrances to the operations are located within **[1,000] 800** feet of a point where a blast is about to be fired. **The operator may use an alternative measure to this**

requirement if the operator demonstrates, to the Department's satisfaction, that the alternative measure is at least as effective at protecting persons and property from the adverse affects of a blast. Alternative measures are measures such as:

(i) Slowing or stopping traffic in coordination with appropriate State or local authorities, including local police.

(ii) Using mats to suppress fly rock.

(iii) Designing the blast to prevent damage or injury to persons and property located on the public highways or at the operation's entrances by using design elements such as:

(A) Orienting the blast so that the direction of relief is away from public highways or operation entrances.

(B) Adjusting blast design parameters including:

(I) The diameter of holes.

(II) The number of rows.

(III) The number of holes.

(IV) The amount and type of explosive.

(V) The burden and spacing.

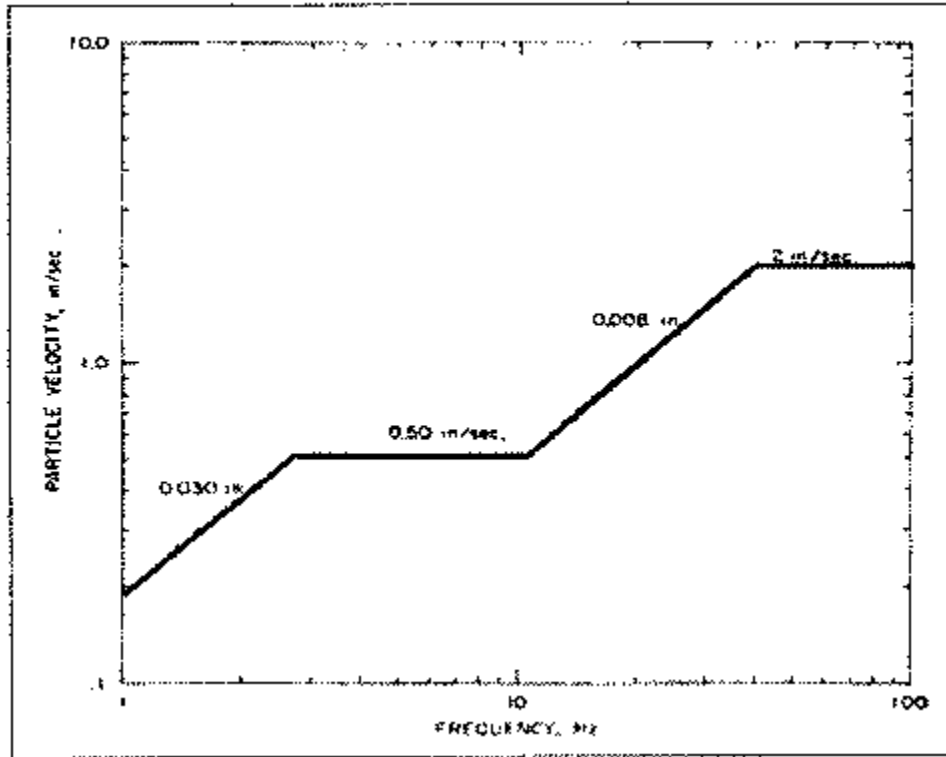
(VI) The amount and type of stemming.

(VII) The powder factor.

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(h) In all blasting operations, **[the maximum peak particle velocity may not exceed 2 inches per second] the blasts shall be designed and conducted in a manner that achieves either a scaled distance of 90 or meets the maximum allowable peak particle velocity as indicated by Figure 1** at the location of any dwelling, public building, school, church or commercial or institutional building. Peak particle velocities shall be recorded in three mutually perpendicular directions--longitudinal, transverse and vertical. The maximum peak particle velocity shall be the largest of any of three measurements. The Department may reduce the maximum peak particle velocity allowed, if it determines that a lower standard is required because of density of population or land use, age or

type of structure, geology or hydrology of the area, frequency of blasts, or other factors. The ~~[sound pressure]~~ AIRBLAST level may not exceed [130 dB linear at a frequency 6 Hz or lower] 133 dBL.



(i) The maximum peak particle velocity ~~[limitation]~~ and [sound pressure] AIRBLAST limitations of this section do not apply at the following locations:

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[(l) The use of a formula to determine maximum weight of explosives per delay for blasting operations at a particular site, may be approved by the Department if the peak particle velocity of 2 inches per second would not be exceeded.]

[(m)] *****

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§ 88.137. Use of explosives: records of blasting operations.

A record of each blast shall be retained for at least 3 years and shall be available for inspection by the Department and the public on request. Seismographic reports, if applicable, [~~shall~~] **MUST** be made a part of that record. The record [~~shall~~] **MUST** contain the following data:

* * * * *

(4) The **IDENTIFICATION OF AND THE** direction and distance, in feet, to the nearest dwelling, school, church or commercial or institutional building if it is one of the following:

(i) Not located in the permit area.

(ii) Not owned nor leased by the person who conducts the surface mining activities.

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Subchapter F. ANTHRACITE UNDERGROUND MINES

§ 88.493. Minimum environmental protection performance standards.

A person who conducts underground mining activities shall comply with the performance standards and design requirements of this section. The following performance standards shall be met:

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(7) Use of explosives shall include:

(i) A person who conducts surface blasting activities incident to underground mining activities, including, but not limited to, [**initial rounds of slopes, shafts and tunnels,**] **mine opening blasting** shall conduct the activities in compliance with §§ 88.45 and 88.134--88.137.

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CHAPTER 89. UNDERGROUND MINING OF COAL AND COAL PREPARATION FACILITIES

Subchapter A. EROSION AND SEDIMENTATION CONTROL

GENERAL PROVISIONS

§ 89.5. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Mine opening blasting--Blasting conducted for the purpose of constructing a shaft, slope, drift or tunnel mine opening for an underground mine, either operating or under development, from the surface down to the point where the mine opening connects with the coal seam to be or being extracted.

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Subchapter B. OPERATIONS

PERFORMANCE STANDARDS

§ 89.62. Use of explosives.

Each person who conducts surface blasting activities incident to underground mining activities, including, but not limited to, **[initial rounds of slopes and shafts,] mine opening blasting**, shall conduct the activities in compliance with Chapter 87 (relating to surface mining of coal).

ARTICLE IV. OCCUPATIONAL HEALTH AND SAFETY

CHAPTER 210. BLASTERS LICENSE

§ 210.11. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Mine opening blasting--Blasting conducted for the purpose of constructing a shaft, slope, drift or tunnel mine opening for an underground mine, either operating or under development, from the surface down to the point where the mine opening connects with the mineral strata to be or being extracted.

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§ 210.12. Scope.

This chapter applies to persons engaging in the detonation of explosives within this Commonwealth. **[This] Except for persons engaging in mine opening blasting, this** chapter does not apply to persons authorized to detonate explosives or to supervise blasting activities under:

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§ 210.17. Issuance and renewal of licenses.

(a) A blaster's license is issued for a specific classification of blasting activities. The classifications will be determined by the Department and may include general blasting (which includes all classifications except demolition, **mine opening blasting** and underground noncoal mining), trenching and construction, seismic and pole line work, well perforation, surface mining, underground noncoal mining, **mine opening blasting**, industrial, limited and demolition.

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