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(5) The regulatory authority may require changes to the design submitted.

[48 FR 9492, Mar. 4, 1983, and 48 FR 9809, Mar. 8, 1983, as amended at 51 FR 19461, May 29, 1986]

§817.62 Use of explosives: Preblasting survey.

- (a) At least 30 days before initiation of blasting, the operator shall notify, in writing, all residents or owners of dwellings or other structures located within ½ mile of the permit area how to request a preblasting survey.
- (b) A resident or owner of a dwelling or structure within ½ mile of any part of the permit area may request a preblasting survey. This request shall be made, in writing, directly to the operator or to the regulatory authority, who shall promptly notify the operator. The operator shall promptly conduct a preblasting survey of the dwelling or structure and promptly prepare a written report of the survey. An updated survey of any additions, modifications, or renovations shall be performed by the operator if requested by the resident or owner.
- (c) The operator shall determine the condition of the dwelling or structure and shall document any preblasting damage and other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data.
- (d) The written report of the survey shall be signed by the person who conducted the survey. Copies of the report shall be promptly provided to the regulatory authority and to the person requesting the survey. If the person requesting the survey disagrees with the contents and/or recommendations contained therein, he or she may submit to both the operator and the regulatory authority a detailed description of the specific areas of disagreement.
- (e) Any surveys requested more than 10 days before the planned initiation of blasting shall be completed by the operator before the initiation of blasting.

§ 817.64 Use of explosives: General performance standards.

- (a) The operator shall notify, in writing, residents within ½ mile of the blasting site and local governments of the proposed times and locations of blasting operations. Such notice of times that blasting is to be conducted may be announced weekly, but in no case less than 24 hours before blasting will occur.
- (b) Unscheduled blasts may be conducted only where public or operator health and safety so requires and for emergency blasting actions. When an operator conducts an unscheduled surface blast incidental to underground coal mining operations, the operator, using audible signals, shall notify residents within ½ mile of the blasting site and document the reason in accordance with \$817.68(p).
- (c) All blasting shall be conducted between sunrise and sunset unless night-time blasting is approved by the regulatory authority based upon a showing by the operator that the public will be protected from adverse noise and other impacts. The regulatory authority may specify more restrictive time periods for blasting.

[48 FR 9809, Mar. 8, 1983]

§817.66 Use of explosives: Blasting signs, warnings, and access control.

- (a) Blasting signs. Blasting signs shall meet the specifications of §817.11. The operator shall—
- (1) Conspicuously place signs reading "Blasting Area" along the edge of any blasting area that comes within 100 feet of any public-road right-of-way, and at the point where any other road provides access to the blasting area; and
- (2) At all entrances to the permit area from public roads or highways, place conspicuous signs which state "Warning! Explosives in Use," which clearly list and describe the meaning of the audible blast warning and all-clear signals that are in use, and which explain the marking of blasting areas and charged holes awaiting firing within the permit area.
- (b) Warnings. Warning and all-clear signals of different character or pattern that are audible within a range of

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½ mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within ½ mile of the permit area shall be notified of the meaning of the signals in the blasting notification required in \$817.64(a).

- (c) Access control. Access within the blasting areas shall be controlled to prevent presence of livestock or unauthorized persons during blasting and until an authorized representative of the operator has reasonably determined that—
- (1) No unusual hazards, such as imminent slides or undetonated charges, exist; and
- (2) Access to and travel within the blasting area can be safely resumed.

[48 FR 9810, Mar. 8, 1983]

§817.67 Use of explosives: Control of adverse effects.

- (a) General requirements. Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of surface or ground water outside the permit area.
- (b) Airblast—(1) Limits. (i) Airblast shall not exceed the maximum limits listed below at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area, except as provided in paragraph (e) of this section.

Lower frequency limit of measuring system, in Hz (±3 dB)	Maximum level, in dB
0.1 Hz or lower—flat response ¹	134 peak. 133 peak. 129 peak. 105 peak dBC.

¹Only when approved by the regulatory authority.

- (ii) If necessary to prevent damage, the regulatory authority may specify lower maximum allowable airblast levels than those of paragraph (b)(1)(i) of this section for use in the vicinity of a specific blasting operation.
- (2) Monitoring. (i) The operator shall conduct periodic monitoring to ensure compliance with the airblast standards. The regulatory authority may require airblast measurement of any or all blasts and may specify the locations

- at which such measurements are taken.
- (ii) The measuring systems used shall have an upper-end flat-frequency response of at least 200 Hz.
- (c) Flyrock. Flyrock travelling in the air or along the ground shall not be cast from the blasting site—
- (1) More than one-half the distance to the nearest dwelling or other occupied structure:
- (2) Beyond the area of control required under §817.66(c); or
 - (3) Beyond the permit boundary.
- (d) Ground vibration—(1) General. In all blasting operations, except as otherwise authorized in paragraph (e) of this section, the maximum ground vibration shall not exceed the values approved by the regulatory authority. The maximum ground vibration for protected structures listed in paragraph (d)(2)(i) of this section shall be established in accordance with either the maximum peak-particle-velocity limits of paragraph (d)(2), the scaleddistance equation of paragraph (d)(3), the blasting-level chart of paragraph (d)(4) of this section, or by the regulatory authority under paragraph (d)(5) of this section. All structures in the vicinity of the blasting area, not listed in paragraph (d)(2)(i) of this section, such as water towers, pipelines and other tunnels, dams, impoundutilities. ments, and underground mines shall be protected from damage by establishment of a maximum allowable limit on the ground vibration, submitted by the operator and approved by the regulatory authority before the initiation of blasting.
- (2) Maximum peak-particle velocity. (i) The maximum ground vibration shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area:

Distance (<i>D</i>), from the blasting site, in feet	Maximum allowable peak particle velocity (V max) for ground vibration, in inches/second 1	Scaled-distance factor to be applied without seismic monitoring 2 (Ds)
0 to 300	1.25	50
301 to 5,000	1.00	55