



## COALEX STATE INQUIRY REPORT - 214

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### TOPIC: DEFINITION OF "TIMING AND FREQUENCY OF BLASTS"

**INQUIRY:** Is there any discussion in the legislative history of the meaning of the phrase "timing and frequency of blasts" as used in SMCRA Sec. 515(b)(15)(C) [30 USC 1265(b)(15)(C)]? Does "timing" refer to times of the day when blasting may occur or timing of delays? Does "frequency" refer to the number of blasts in a given time period or to the vibration frequency?

**SEARCH RESULTS:** Research was conducted using the COALEX Library and the publicly available materials in LEXIS. In searching the legislative history (Congressional Record, congressional reports, hearings, bills, etc.) and preambles to federal proposed and final rules, only one entry was identified that addressed the phrase in question.

In discussing the limitation of blasting periods to an aggregate of four hours in any one day [816.64(b)(2)(ii)] in the preamble to the permanent rules, OSM stated:

"Regardless of possible inhibition of operation and costs associated with these limitations, the Office must establish some time limitations on blasting under the Act. Section 515(b)(15)(A) of the Act requires that the person conducting surface mining activities '...provide adequate advance written notice to local governments and residents...of planned blasting schedule.'

"Thus, some limitation on the frequency of blasting must be imposed, to ensure that predictions are made by the operator for the purpose of including in the schedule 'adequate advance written notice.' Secondly, Section 515(b)(15)(c) of the Act requires that blasting be limited with respect to the 'timing and frequency of blasts...' Therefore, limitations on the total duration in which blasting may occur in any one daylight period is appropriate to implement this Section of the Act."

**44 FR 14902 (MARCH 13, 1979). Permanent Program Final Preamble -- Final Rule. Sec. 816.64 Use of Explosives: Public notice of blasting schedule.**

In other legislative history materials and Federal Register notices, "timing" and "frequency" are used as separate terms. The terms are used in multiple contexts. "Timing" is used in the discussion of "blast schedules" and "blast delays"; "frequency" is used most often in technical



discussions of noise levels and vibrations, but is also used in discussions of blast schedules. Sometimes the use of the terms in question is ambiguous. Examples of the use of the two terms follows [highlighting added]. Copies of the documents listed below are attached.

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## LEGISLATIVE HISTORY

Congress required blasting regulations in order to protect health, property and the environment. Testimony before the House and Senate subcommittees detailed incidence of personal injury and property damage due to poorly regulated blasting. The need for a blasting plan and adequate notification were stressed though the details of the requirements varied. [HR REP 218, 95th Cong, 1st Sess 174 (April 22, 1977) and 123 CONG REC S8802 (daily ed. May 26, 1977)(statement of Sen. Bayh).]

Gerard McMahon, representing CSPI-Appalachia, suggested to the House Subcommittee on Energy and the Environment that the following provisions be added to paragraph 15 of section 515:

"1) that operators must notify, through the mail, the residents living within two miles of the proposed mining area of all blasting activity, including the time and location at which blasts occur;

"2) that the operator maintain a log detailing the location of blasts, depth of drill holes, amount of explosive used per hole and pattern and time length of the delay mechanisms, and that these records be available for public inspection."

**Surface Mining Control and Reclamation Act of 1977: HEARINGS ON HR 2** Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, 95th Cong, 1st Sess, Part II 282-320 (February 8, 1977) (Panel Discussion).

During the same hearings, John C. Doyle, Jr. of the Environmental Policy Institute stated the importance of the inclusion of a detailed blasting plan and schedule as part of the permit application. Doyle's language is less ambiguous:

"Such a plan should include: the names and qualifications of all employees supervising and setting explosive charges; specifications for the setting, spacing and location of charges; expected duration and frequency of blasting periods, including time of day; impacts to underlying geology and ground water supplies; stated ground velocity and possible fatigue damage to off-site structures for the duration of blasting operations...."

**Surface Mining Control and Reclamation Act of 1977: HEARINGS ON HR 2** Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, 95th Cong, 1st Sess, Part IV 299 (February 8, 1977) (statement of John C. Doyle, Jr., Environmental Policy Institute).



At hearings in 1973 and 1971, testimony was presented suggesting control of blasting by such means as "delayed timing devices". [Regulation of Surface Mining Operations Part 2: HEARINGS Before the Senate Comm. on Interior and Insular Affairs, 93rd Cong, 1st Sess 942 (March 13, 1973)(statement of John Franson, National Audubon Society) and HEARINGS on Surface Mining Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs, 92nd Cong, 1st Sess 195 (November 16, 1971)(statement of Hon. Hollis M. Dole, Ass't Sec., Mineral Resources, Dept. of Interior).]

## REGULATORY HISTORY

### **44 FR 14902 (MARCH 13, 1979). Permanent Program Final Preamble -- Final Rule.**

#### 1. Introduction to Secs. 816.61-816.68 Use of explosives.

"These sections establish performance standards regulating the amounts, methods of use, timing, and monitoring of blasts in the course of conducting surface mining activities."

#### 2. 816.64 Use of explosives: Public notice of blasting schedule.

a. "Section 816.64(a)(1) does not prohibit loading of blasts at any time during the daylight hours; the schedule requirement refers only to periods of time when detonations are actually conducted."

b. 816.64(a)(3): "[R]enotification of blasting schedules will be needed on, at least, approximately annual frequencies as detailed information on blasting becomes available to the permittee."

#### 3. 816.65 Use of explosives: Surface blasting requirements.

a. "The regulatory authority will only be empowered under Paragraph (a) to impose more restrictive blasting time periods for the specific purpose of protecting the public from adverse noise."

b. 816.65(f) Airblast standards: Discusses "permissible noise levels, frequency specifications in Hertz (Hz)", ground vibrations and "the natural frequency" at which a "structure tends to vibrate". OSM rejected one proposed alternative because "a standard requiring compliance only 80 percent of the time could subject the public to potentially damaging airblast for 20 percent or all shots. Such a standard would not fulfill the provision of Section 515(b)(15)(C) of the Act, which requires prevention of damage to property outside the permit area by limiting the duration and frequency of blasting." [NOTE: This section was suspended on August 4, 1980 (45 FR 51549) in response to court decisions of May 2, 1980 (Court of Appeals for DC Circuit) and May 16, 1980 (DC District Court). The court decisions ruled on specific particle velocity and inch-per-second limitations.]

### **46 FR 6982 (JANUARY 22, 1981). Proposed amendments to interim and permanent rules. Use of Explosives.**



"Frequency" is used in its technical context in discussion of "blast vibration frequency", "frequency of particle velocity", etc. [NOTE: These proposed rules were withdrawn by notice at 46 FR 32455 (June 23, 1981); new rules were proposed by notice at 47 FR 12760 (March 24, 1982).]

**48 FR 9788 (MARCH 8, 1983). Final rule. Use of Explosives.**

1. 816.61 Signs and markers. 816.61(d): Additional information on blast design "serves as a tool for the operator, blaster, and the blasting crew to understand the blast layout and implementation and for the regulatory authority to be advised of the blast parameters and timing, to initiate monitoring, if appropriate, and to ensure compliance with performance standards."

2. 816.64 Use of explosives: Blasting schedules. 816.64(a)(1): This section was revised "to clarify the fact that the regulatory authority may limit the timing of blasts, the area covered by a blasting schedule, and the sequence of blasting." Blasting will be allowed "only at times approved by the regulatory authority and announced in the blasting schedule."

3. 816.67 Use of explosives: Control of adverse effects. Frequency is used in its technical context: in terms of Hertz and decibel levels, etc.

**ATTACHMENTS**

- A. 44 FR 14902 (MARCH 13, 1979). Permanent Program Final Preamble -- Final Rule. Sec. 816.64 Use of Explosives: Public notice of blasting schedule.
- B. HR REP 218, 95th Cong, 1st Sess 174 (April 22, 1977).
- C. 123 CONG REC S8802 (daily ed. May 26, 1977)(statement of Sen. Bayh).
- D. Surface Mining Control and Reclamation Act of 1977: HEARINGS on HR 2 Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, 95th Cong, 1st Sess, Part II 282-320 (February 8, 1977) (Panel Discussion).
- E. Surface Mining Control and Reclamation Act of 1977: HEARINGS on HR 2 Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, 95th Cong, 1st Sess, Part IV 299 (February 8, 1977) (statement of John C. Doyle, Jr., Environmental Policy Institute).
- F. Regulation of Surface Mining Operations Part 2: HEARINGS Before the Senate Comm. on Interior and Insular Affairs, 93rd Cong, 1st Sess 942 (March 13, 1973)(statement of John Franson, National Audubon Society).
- G. HEARINGS on Surface Mining Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs, 92nd Cong, 1st Sess 195 (November 16, 1971)(statement of Hon. Hollis M. Dole, Ass't Sec., Mineral Resources, Dept. of Interior).
- H. 46 FR 6982 (JANUARY 22, 1981). Proposed amendments to interim and permanent rules. Use of Explosives.
- I. 48 FR 9788 (MARCH 8, 1983). Final rule. Use of Explosives.