

**WEST VIRGINIA**  
**SECRETARY OF STATE**  
KEN HECHLER  
**ADMINISTRATIVE LAW DIVISION**

Form #5

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FILED  
1991 MAY -2 PM 2:58  
OFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

**NOTICE OF AGENCY ADOPTION OF A PROCEDURAL OR INTERPRETIVE RULE  
OR A LEGISLATIVE RULE EXEMPT FROM LEGISLATIVE REVIEW**

AGENCY: Board of Coal Mine Health and Safety TITLE NUMBER: 36

CITE AUTHORITY: 22-6-4

RULE TYPE: PROCEDURAL XX INTERPRETIVE \_\_\_\_\_

EXEMPT LEGISLATIVE RULE \_\_\_\_\_  
CITE STATUTE(S) GRANTING EXEMPTION FROM LEGISLATIVE REVIEW

22-6-4c

AMENDMENT TO AN EXISTING RULE: YES X, NO \_\_\_\_\_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 40

TITLE OF RULE BEING AMENDED: Rules and Regulation Governing The Use Of  
Sheathed Explosives Units For Underground Mines

IF NO, SERIES NUMBER OF NEW RULE BEING ADOPTED: \_\_\_\_\_

TITLE OF RULE BEING ADOPTED: \_\_\_\_\_

THE ABOVE RULE IS HEREBY ADOPTED AND FILED WITH THE SECRETARY OF STATE. THE  
EFFECTIVE DATE OF THIS RULE IS May 2, 1991

Stephen A. Edes

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
BOARD OF COAL MINE HEALTH AND SAFETY  
TITLE 36 SERIES - 41

TITLE: RULES AND REGULATIONS GOVERNING THE USE OF SHEATHED  
EXPLOSIVE UNITS FOR UNDERGROUAND MINES

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
BOARD OF COAL MINE HEALTH AND SAFETY

TITLE 36 SERIES ~~40~~ 41

TITLE: Rules and Regulations Governing The Use of Sheath  
Explosive Units for Underground Coal Mines

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General

Section 36.~~40~~<sup>41</sup>

Scope	1.1
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TITLE 36  
LEGISLATIVE RULES  
BOARD OF COAL MINE HEALTH AND SAFETY  
SERIES 41  
RULES AND REGULATIONS GOVERNING SHEATHED  
EXPLOSIVE UNITS

FILED  
1991 MAY -2 PM 2:59  
OFFICE OF THE SECRETARY OF STATE  
WEST VIRGINIA

36.40.1 General.

1.1 Scope: Rules And Regulations Governing The Use Of Sheath Explosive Units For Underground Coal Mining In The State Of West Virginia.

1.2 Authority: WV Code 22-6-4

1.3 Effective Date: The rules and regulation were filed with the office of the Secretary of State this 2nd day of May, 1991 and become effective on the 2nd of June, 1991.

36.40.2 Effect Of Regulations:

2.1 These rules and regulations shall have the effect of law and violations shall be deemed a violation of the law and so cited with the same effect as law. All provision of Chapter 22A, Article 1A, of the Code relative to enforcement are applicable to the enforcement of the rules and regulations.

36.40.3 Definitions:

3.1 All terms used in these rules and regulation, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1A, Section 1 of the West Virginia Code.

36.40.4 Preparation Of Shots; Blasting Practices And Requirements For Sheathed Explosive Units:

4.1 Only a certified "shot firer" designated by mine management shall be permitted to handle explosives and do blasting. Only electric detonators of proper strength fired with permissible shot firing units shall be used except under special permits as hereinafter provided, and drillholes shall be stemmed with at least twenty-four inches on incombustible material, or at least one half of the length of the hole shall be stemmed if the hole is less than four feet in depth, unless other permissible stemming devices or methods are used. Drillholes shall not be drilled beyond the limits of the cut, and as far as practicable, cuttings and dust shall be cleaned from the holes before the charge is inserted. Charges of explosives exceeding one and one half pounds, but not exceeding three pounds, shall be used only if drillholes are six feet or more in depth. Ample warning shall be given before shots are fired, and care shall be taken to determine that all persons are in the cleat before firing. Miners shall be removed from adjoining places and

other places when there is danger of shots blowing through. Shots shall be fired in any place known to liberate explosive gas, until such place has been properly examined by a competent person who is designated by mine management for that purpose, and no shots shall be fired in any place where gas is detected with a permissible flame safety lamp until such gas has been removed by means of ventilation. After firing any shot, or shots, the person firing the same shall not return to the working face until the smoke has been cleared away and then he shall make a careful examination of the working face before leaving the place or before performing any other work in the place.

4.2 Multiple shooting in coal or rock or both is authorized only under permit issued by the director. Permission to shoot more than ten shot simultaneously may be granted by the director only after consultation with interested person, and the deputy director of safety, health and training, and such shooting will be performed by special methods and under precautions prescribed by the director. All multiple shooting in bottom or roof rock shall be performed in intake air, except by special permit from the director, after consultation with interested persons and the deputy director of safety, health and training, as hereto provided. Multiple blasting of more than ten shots performed under any permit granted by the director under this section shall be done only on noncoal-producing shifts or idle days, except as may be provided as a condition of the permit granted.

4.3 Regular or short-interval delay detonators may be used for blasting purposes with written permission from the director after consultation with the deputy director of safety, health and training. Regular delay detonators shall not be used for blasting coal, but may be used for grading above or below coal seams and during shaft, slope, tunnel work and in faults or wants. Where short-interval delay detonators are permitted by said directors to be used, the shot firing circuit must be tested with a blasting galvanometer before firing, and the leg wires connected in series. No instantaneous, regular, or zero-delay detonators are to be fired in conjunction with short-interval delay detonators. The delay interval between dependant rows must not be less than twenty-five milliseconds or more than one hundred milliseconds, and the entire series on any one round shall not provide a delay of more than five hundred milliseconds between the first and last shot. The total number of charged holes to be fired during one round must not exceed the limit permitted by the director. Misfires must be tested with a blasting galvanometer before removing.

4.4 Electrical equipment shall not be operated in the face areas, and only work in connection with timbering and general safety shall be performed in connection with timbering and general safety shall be performed while boreholes are being charged. Shots shall be fired promptly after charging. Mudcaps (adobes) or any other unconfined shots shall not be permitted in any coal mine. No solid shooting shall be permitted without written permission of the division.

4.5 Blasting cables shall be well insulated and shall be as long as may be necessary to permit persons authorized to fire shots to get in a safe place out of the line of fire. The cable, when new, shall be at least one hundred twenty-five feet in length and never less than one hundred feet. Shooting cables shall be kept away from power wires and all other sources of electric current, connected to the leg wires by the person who fires the shot, staggered as to length or well separated at the detonator leg wires, and shunted at the battery until ready to connect to the blasting unit.

36.4~~5~~.5 Requirements For The Use Of Sheathed Explosives In Underground Mining:

(a) Notwithstanding W. Va. Code §22A-2-33(d), sheathed explosives that are approved by the U.S. Bureau of Mines shall be permitted for use in West Virginia coal mines, provided however that they are used in accordance with subsection (a,b,c,d,e,f,g,h) as stated.

(b) Sheathed explosives units shall be primed and placed in a position for firing and detonated by a certified shot firer designated by mine management. To prime a sheathed explosive unit, the entire detonator shall be inserted into the well of the unit and be held securely in place.

(c) A separate instantaneous detonator shall be used to fire each sheathed explosive unit.

(d) Use of transportation of handling and storage of sheath explosives shall be in accordance with the manufacturers specifications and applicable to State and Federal Law.

(e) Sheathed explosive units shall not be primed until immediately before units are placed where they are to be fired. A sheathed explosive unit shall not be primed if it is damaged or deteriorated.

(f) No more than three sheathed explosive units shall be fired at one time.

(g) No sheathed explosive unit shall be fired in contact with another sheathed explosive unit.

(h) Certified shot firers and all persons responsible for the use, transportation and handling of sheathed blasting explosives shall be trained in the care and use of sheathed explosives.

SHEATHED EXPLOSIVES UNITS FOR UNDERGROUND MINES (36.40.1)

Findings of Fact:

1. The Coal mine Safety and Technical Review Committee (Committee) is created pursuant to WV Code §22-6-4c.
2. The purposes of the Committee are to:
  - (a) Assist the Board of Coal Mine Health and Safety (Board) in the development of technical data relating to mine safety issues, including related mining technology;
  - (b) Provide suggestions and technical data to the Board and propose rules and regulations with general mining industry applications;
  - (c) Accept and consider petitions submitted by individual mine operators or miners seeking site specific rulemaking pertaining to individual mines and made recommendations to the Board concerning such rulemaking; and
  - (d) Provide a forum for the resolution of technical issues encountered by the Board.

WV Code §22-6-4c (1) (a)-(d):

3. The Committee may review any matter relative to mine safety and mining technology, and may pursue development and resolution of issues related thereto. the Committee may make recommendations to the Board for the promulgation of rules and regulations with general mining industry application. WV Code §22-6-4c (5).
4. Any Committee adopted rule or regulations "shall not reduce or compromise the level of safety or protection below the level of safety or protection afforded by applicable statues and regulations." WV Code §22-6-4c (5).
5. The Board of Coal Mine Health and Safety (Board) is created pursuant to WV Code §22-6-1 et seq.
6. The Board is empowered to:
  - (a) Review rules and regulations governing the coal mining industry in West Virginia and to revise the same or develop and promulgate new rules and regulations dealing with the coal mine health and safety;
  - (b) Develop, promulgate and revise rules and regulations necessary to effectuate the purposes of WV Code §22A-2-1 et seq.

WV Code §22-6-4(b)(c):

7. The rules and regulations developed promulgated or revised by the Board may expand protections afforded by WV Code §22A-1-1 et seq. notwithstanding specific language therein, and such rules and regulations may deal with subject areas not covered by WV Code §22A-1-1 et seq. to the end of affording the maximum possible protection to the health and safety of miners. WV Code §22-6-4(c)(1).

8. Any rule or regulation promulgated by the Board shall not reduce or compromise the level of safety of protection afforded miner below the level of safety of protection afforded by WV Code §22-1-1 et seq. WV Code §22-6-4(c)(2).

9. The Board shall consider all regulation proposed by the Committee and adopt or reject, without modification, except as approved by the Committee, such rules and regulations. WV Code §22-6-4c (7).

10. The rules or regulations promulgated by the Board pursuant to the Committee's recommendations shall supersede the provisions of applicable statutes or regulations, notwithstanding the provisions of such applicable statutes and regulations. WV Code §22-6-4c (5).

11. The United States Bureau of Mines developed a prototype nonincendive explosive rock-breaker charge that can be fired unconfined in underground bituminous coal mines without the danger of igniting a flammable atmosphere that might be present. The prototype explosive and experimentation are summarized in Bureau of Mines Technical Progress Report 118, entitled "Evaluation of a Sheathed permissible Explosive Charge For Open Shooting in Flammable Atmospheres." Richard J. Mainero and J. Edmund Hay, U. S. Department of the interior, April 1982.

12. Incendivity tests in a gallery performed by the Bureau of Mines established that the prototype charge will not ignite a flammable methane-air atmosphere when fired.

13. The U. S. Bureau of Mine conducted additional testing regarding the use of sheathed explosive charges in breaking up large stones that can jam the feeder breaker or pan conveyors on longwalls and halt operations. Firing the sheathed charge at the face caused no significant damage to longwall equipment and use of the charge represented an improvement in safety by eliminating the exposure of miners to the inherent hazards of the face for extended periods of time. These findings are summarized in Report of Investigation, 9294, entitled "Use of Sheathed Explosive Charges on Longwalls," Richard J. Mainero and Lon D. Santis, U. S. Department of the Interior, 1990.

14. The U. S. Department of Labor promulgated a final rule, effective January 17, 1989, allowing the use of sheathed explosive units in underground coal mines under certain circumstances. See 30 C.F.R. 75.1314.

15. WV Code §22A-2-33(d) Provides:

Electrical equipment shall not be operated in the face areas, and only work in connection with timbering and general safety shall be performed while bore holes are being charged. Shots shall be fired promptly after charging. Mudcaps (adobes) or any other confined shots shall not be permitted in the coal mine. No solid shooting shall be permitted without written permission of the Division.

16. Acting within its statutory authority, the Committee has proposed the following regulation for consideration by the Boar:

36.40.1 Requirements For Sheathed Explosives Units:

(a) Notwithstanding WV Code §22A-2-33 (d), sheathed explosives that are approved by the U.S. Bureau of Mines shall be permitted for use in West Virginia coal mine, provided however that they are used in accordance with subsections (a,b,c,d,e,f,g,h) as stated.

(b) Sheathed explosives units shall be primed and placed in a position for firing only by a certified shot firer designated by mine management. To prime a sheathed explosive unit, the entire detonator shall be inserted into the well of the unit and be held securely in place.

(c) A separate instantaneous detonator shall be used to fire each sheathed explosive unit.

(d) Use of transportation of handling and storage of sheath explosives shall be in accordance with the manufacturers specifications and applicable to State and Federal Law.

(e) Sheathed explosives units shall not be primed until immediately before units are placed where they are to be fired. A sheathed explosive unit shall not be primed if it is damaged or deteriorated.

(f) No more than three sheathed explosive units shall be fired at one time.

(g) No sheathed explosive units shall be fired in contact with another sheathed explosive unit.

(h) Certified shot firers and all persons responsible for the use, transportation and handling of sheathed blasting explosives shall be trained in the care and use of sheathed explosives.

17. The Committee reviewed the issues regarding the use of sheathed explosive units in West Virginia underground coal mines, particularly the studies prepared by the U.S. Bureau of Mine and the Department of Labor's sheathed explosive unit regulations.

18. The Committee unanimously recommended that the use of sheathed explosive units in West Virginia underground coal mines in accordance with the guidelines set forth in proposed Regulation 36.40.1 will not reduce or compromise the level of safety or protection afforded by the applicable statutes and regulations.

Conclusions of Law:

1. Proposed Regulation Title 36, Series 40 and Title 36, Series 1, was adopted by the Committee on May 23, 1990, and proposed to the Board on May 24, 1990.

2. Proposed Regulation Title 30, Series 40 and Title 36, Series 1, was adopted as proposed rule by the Board on June 28, 1990.

3. The proposed Regulation Title 36, Series 40 and Title 36, Series 1, will not reduce or compromise the level of safety or protection afforded miners below the level of safety or protection afforded by WV Code §22A-2-33(d).

4. The proposed Regulation Title 36, Series 40 and Title 36, Series 1, enhances safety by eliminating the exposure of miners to the inherent hazards of the face for extended periods of time.

5. The proposed Regulation Title 36, Series 40 and Title 36, Series 1, expands the protections afforded miners by WV Code §22A-2-33(d) and supersedes the aforementioned statute.

6. Notice of proposed Regulation 36.40.1 shall be issued by the Commissioner of the Department of Energy in accordance with WV Code §22-6-4(c)(4)-(7).

KEN HECHLER  
Secretary of State

MARY P. RATLIFF  
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Special Assistant

is all the volunteer  
help we can get)

OFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

FILED  
1992 APR - 8 AM 7:58

TO: Dana Martin

AGENCY: Environmental Protection Agency

FROM: JUDY COOPER, DIRECTOR, ADMINISTRATIVE LAW DIVISION

DATE: March 19, 1992

THE ATTACHED RULE RECENTLY FILED BY YOUR AGENCY HAS BEEN ENTERED INTO OUR COMPUTER SYSTEM. PLEASE REVIEW, PROOF AND RETURN IT WITH ANY CORRECTIONS. IF THERE ARE NO CORRECTIONS, PLEASE SIGN THIS MEMO AND RETURN IT TO THIS OFFICE. YOU WILL BE SENT A FINAL VERSION OF THE RULE FOR YOUR RECORDS.

PLEASE RETURN EITHER THE CORRECTED RULE OR THIS FORM WITHIN TEN (10) WORKING DAYS OF THE DATE YOU RECEIVED THIS REQUEST. CALL IF YOU HAVE ANY QUESTIONS.

SERIES: 41 TITLE: Rules and Regulations Governing Sheathed Explosive Unites

\* THE ATTACHED RULE HAS BEEN REVIEWED AND IS CORRECT.

SIGNED: Kathy J. Sloan

TITLE OF PERSON SIGNING: Administrative Aide

DATE: 3/30/92

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\* THE ATTACHED RULE HAS BEEN REVIEWED AND NEEDS CORRECTING. THE CORRECTIONS HAVE BEEN MARKED.

SIGNED: Kathy J. Sloan

TITLE OF PERSON SIGNING: Administrative Aide

DATE: March 30, 1992