WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #3

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SECRETARY OF STATE

NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: West Virginia Department of Energy TITLE NUMBER: 38

CITE AUTHORITY West Virginia Code 22-1-15 and 22A-1A-2

AMENDMENT TO AN EXISTING RULE: YES X NO ___

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 10

TITLE OF RULE BEING AMENDED: Rules & Regulations Governing Roof Control

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: NA

TITLE OF RULE BEING PROPOSED: NA

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

Roger T Hall

Roger D. Hall
Administrator

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Rules and Regulations Governing Roof Control

Type of Rule: x Legislative _____ Interpretive _____ Procedural

Agency West Virginia Department of Energy Address 1615 Washington Street, East Charleston, WV 25311

1. Effect of Proposed Rule	ANNUAL Increase	ANNUAL Decrease	FISCAL YEAR Current	FISCAL YEAR Next	FISCAL YEAR Thereafter
Estimated Total Cost	$ -0-	$ -0-	$ -0-	$ -0-	$ -0-
Personal Services					
Current Expense					
Repairs and Alterations					
Equipment					
Other					

2. Explanation of above estimates.

This rule as proposed will not result in any additional cost on revenues to the State of West Virginia.

3. Objectives of these rules:

This rule as proposed will repeal and repromulgate Title 38 Series 10. Such action is being taken in response to changes in Federal Mine Safety and Health Administration (MSHA) regulations at 30 CFR Part 75 Subpart C.

4. Explanation of Overall Economic Impact of Proposed Rule.

A. Economic Impact on State Government.

NONE

B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups of citizens.

NONE

C. Economic Impact on Citizens/Public at Large.

NONE

Date May 27, 1988

Signature of Agency Head or Authorized Representative

Roger D Hall
Administrator

DATE: August 5, 1988

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: West Virginia Department of Energy

LEGISLATIVE RULE TITLE:

1. Authorizing statute(s) citation

West Virginia Code 22-1-15 and 22A-1A-2

2. a. Date filed in State Register with Notice of Hearing:

May 27, 1988

b. What other notice, including advertising, did you give of the hearing?

See attached list

c. Date of hearing(s): July 1, 1988

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached Yes No comments received

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

August 5, 1988

f. Name and phone number of agency person to contact for additional information:

Roger T. Hall, Administrator 348-3500

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

   a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

      N/A

   b. Date of hearing: N/A

   c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

      N/A

   d. Attach findings and determinations and reasons:

      Attached N/A

WEST VIRGINIA LEGISLATIVE RULE
DEPARTMENT OF ENERGY
TITLE 38 SERIES 10

TITLE: Rules and Regulations Governing Roof Control

Type of Rule: Legislative

Section 38-10-1 General.

1.1 Scope. This series sets forth requirements for controlling roof, face, and ribs, including coal or rock bursts, in underground coal mines. Roof control systems installed prior to the effective date of this series are not affected so long as the support system continues to effectively control the roof, face, and ribs.

1.2 Applicability. These rules and regulations apply to all underground mining operations throughout the State of West Virginia as they relate to control of mine roof, face, and ribs.

1.3 Authority. West Virginia Code 22-1-15 and 22A-1A-2

1.4 Filing Date. August 5, 1988

1.5 Effective Date.

1.6 Repeal of Former Rule This legislative rule repeals West Virginia rules and regulations governing roof control, Title 38, Series 10, filed with the Office of the Secretary of State on December 16, 1986, passed by the West Virginia Legislature March 12, 1988, and became effective May 1, 1988.

38-10-2 Definitions: As used in these regulations, unless used in a context that clearly requires a different meaning, the term:

2.1 Pillar recovery means any reduction in pillar size during retreat mining.

38-10-3 Protection from falls of roof, face, and ribs.

(a) The roof, face, and ribs of areas where persons work or travel shall be supported or otherwise controlled to protect persons from hazards related to falls of the roof, face, or ribs and coal or rock bursts.

(b) No person shall work or travel under unsupported roof unless in accordance with this series.

38-10-4 Mining methods.

(a) The method of mining shall not expose any person to hazards caused by excessive widths of rooms, crosscuts and entries, or faulty pillar recovery methods. Pillar dimensions shall be compatible with effective control of the roof, face, and ribs and coal or rck bursts.

(b) A sightline or other method of directional control shall be used to maintain the projected direction of mining in entries, rooms, crosscuts, and pillar splits.

(c) A sidecut shall be started only from an area that is supported in accordance with the roof control plan.

(d) A working face shall not be mined through into an unsupported area of active workings, except when the unsupported area is inaccessible.

(e) Additional roof support shall be installed where:

(1) The width of the opening specified in the roof control plan is exceeded by more than twelve (12) inches; and

(2) The distance over which the excessive width exists is more than five (5) feet.

(f) The diameter of finishing bits shall be within a tolerance of plus or minus 0.030 inch of the manufacturer's recommended hole diameter for the anchor used.

(g) When separate finishing bits are used, they shall be distinguishable from other bits.

(h) Tensioned roof bolts:

(1) Roof bolts that provide support by creating a beam of laminated strata shall be at least thirty (30) inches long.

Roof bolts that provide support by suspending the roof from overlying stronger strata shall be long enough to anchor at least twelve (12) inches into the stronger strata.

(2) Test holes, spaced at intervals specified in the roof control plan, shall be drilled to a depth of at least twelve (12) inches above the anchorage horizon of mechanically anchored tensioned bolts being used. When a test hole indicates that bolts would not anchor in competent strata, corrective action shall be taken.

(3) The installed torque or tension ranges for roof bolts as specified in the roof control plan shall maintain the integrity of the support system and shall not exceed the yield point of the roof bolt nor anchorage capacity of the strata.

(4) In each roof bolting cycle, the actual torque or tension of the first tensioned roof bolt installed with each drill head shall be measured immediately after it is installed. Thereafter, for each drill head used, at least one roof bolt out of every four installed shall be measured for actual torque or tension. If the torque or tension of any of the roof bolts measured is not within the range specified in the roof control plan, corrective action shall be taken.

(5) In working places from which coal is produced during any portion of a twenty-four (24) hour period, the actual torque or tension on at least one out of every ten previously installed mechanically anchored tensioned roof bolts shall be measured from the outby corner of the last open crosscut to the face in each advancing section. Corrective action shall be taken if the majority of the bolts measured:

(A) Do not maintain at least seventy (70) percent of the minimum torque or tension specified in the roof control plan, fifty (50) percent if the roof bolt plates bear against wood; or

(B) Have exceeded the maximum specified torque or tension by fifty (50) percent.

(6) The mine operator or a person designated by the operator shall certify by signature and date that measurements required by Subsection (h)(5) of this section have been made. This certification shall be maintained for at least one year and shall be made available to an authorized representative of the Director of the Division of Health, Safety and Training and representatives of the miners.

(7) Tensioned roof bolts installed in the roof support pattern shall not be used to anchor trailing cables or used for any other purpose that could affect the tension of the bolt. Hanging trailing cables, line brattice, telephone lines, or other similar devices which do not place sudden loads on the bolts are permitted.

38-10-5 Roof Bolting.

(a) For roof bolts and accessories addressed in ASTM F432-83, "Standard Specification for Roof and Rock Bolts and Accessories", the mine operator shall:

(1) Obtain a manufacturer's certification that the material was manufactured and tested in accordance with the specifications of ASTM F432-83; and

(2) Make this certification available to an authorized representative of the Director of the Division of Health, Safety and Training.

(b) Roof bolts and accessories not addressed in ASTM F432-83 may be used provided they:

(1) Have been successful in supporting the roof in an area of a coal mine with similar strata, opening dimensions, and roof stresses; or

(2) Have been tested and shown to be effective for supporting the roof in an area of the affected mine which has similar strata, opening dimensions and roof stresses as the area where the roof bolts are to be used. During the test process, access to the test area shall be limited to persons necessary to conduct the test.

(c) (1) A bearing plate shall be firmly installed with each roof bolt.

(2) Bearing plates used directly against the mine roof shall be at least six (6) inches square or the equivalent, except that where the mine roof is firm and not susceptible to sloughing, bearing plates five (5) inches square or the equivalent may be used.

(3) Bearing plates used with wood or metal materials shall be at least four (4) inches square or the equivalent.

(4) Wooden materials that are used between a bearing plate and the mine roof in areas which will exist for three (3) years or more shall be treated to minimize deterioration.

(d) (1) When washers are used with roof bolts, the washers shall conform to the shape of the roof bolt head and bearing plate.

(2) Angle compensative devices shall be used to compensate for the angle when tensioned roof bolts are installed at angles greater than five (5) degrees from the perpendicular to the bearing plate.

(e) Non-tensioned grouted roof bolts. The first non-tensioned grouted roof bolt installed during each roof bolting cycle shall be tested during or immediately after the first row of bolts has been installed, If the bolt tested does not withstand at least one hundred fifty (150) foot-pounds of torque without rotating in the hole, corrective action shall be taken.

38-10-6 Installation of roof support using mining machines with integral roof bolters. When roof bolts are installed by a continuous mining machine with integral roof bolting equipment:

(a) The distance between roof bolts shall not exceed ten (10) feet crosswise.

(b) Roof bolts to be installed nine (9) feet or more apart shall be installed with a wooden crossbar at least three (3) inches thick and eight (8) inches wide, or material which provides equivalent support.

(c) Roof bolts to be installed more than eight (8) feet but less than nine (9) feet apart shall be installed with a wooden plank at least two (2) inches thick and eight (8) inches wide, or material which provides equivalent support.

38-10-7 Conventional roof support.

(a) When conventional roof support materials are used as the only means of support:

(1) The width of any opening shall not exceed twenty (20) feet;

(2) The spacing of roadway roof support shall not exceed five (5) feet;

(3) (A) Supports shall be installed to within five (5) feet of the uncut face;

(B) When supports nearest the face must be removed to facilitate the operation of face equipment, equivalent temporary support shall be installed prior to removing the supports;

(4) Straight roadways shall not exceed sixteen (16) feet wide where full overhead support is used and fourteen (14) feet wide where only posts are used;

(5) Curved roadways shall not exceed sixteen (16) feet wide; and

(6) The roof at the entrance of all openings along travelways which are no longer needed for storing supplies or for travel of equipment shall be supported by extending the line of support across the opening.

(b) Conventional roof support materials shall meet the following specifications:

(1) The minimum diameter of cross-sectional area of wooden posts shall be as follows:

Post length (in inches)	Diameter of round posts (in inches)	Cross-sectional area of split posts(in square inches)
60 or less	4	13
Over 60 to 84	5	20
Over 84 to 108	6	28
Over 106 to 132	7	39
Over 132 to 156	8	50
Over 156 to 180	9	64
Over 180 to 204	10	79
Over 204 to 228	11	95
Over 228	12	113

(2) Wooden materials used for support shall have the following dimensions:

(A) Cap blocks and footings shall have flat sides and be at least two (2) inches thick, four (4) inches wide and twelve (12) inches long.

(B) Crossbars shall have a minimum cross-sectional area of twenty-four (24) square inches and be at least three (3) inches thick.

(C) Planks shall be at least six (6) inches wide and one (1) inch thick.

(3) Cribbing materials shall have at least two (2) parallel flat sides.

(c) A cluster of two or more posts that provide equivalent strength may be used to meet the requirements of paragraph (b)(1) of this section, except that no post shall have a diameter less than four (4) inches or have a cross-sectional area less than thirteen (13) square inches.

(d) Materials other than wood used for support shall have support strength at least equivalent to wooden material meeting the applicable provisions of this section.

(e) Posts and jacks shall be tightly installed on solid footings.

(f) When posts are installed under roof susceptible to sloughing a cap block, plank, crossbar, or materials that are equally effective shall be placed between the post and the roof.

(g) Blocks used for lagging between the roof and crossbars shall be spaced to distribute the load.

(h) Jacks used for roof support shall be used with at least thirty-six (36) square inches of roof bearing surface.

38-10-8 Pillar recovery. Pillar recovery shall be conducted in the following manner, unless otherwise specified in the roof control plan:

(a) Full and partial pillar recovery shall not be conducted on the same pillar line, except where physical conditions such as unstable floor or roof, falls of roof, oil and gas well barriers or surface subsidence require that pillars be left in place.

(b) Before mining is started in a pillar split or lift:

(1) At least two rows of breaker posts or equivalent support shall be installed:

(A) As close to the initial intended breakline as practicable; and

(B) Across each opening leading into an area where full or partial pillar extraction has been completed.

(2) A row of roadside-radius (turn) posts or equivalent support shall be installed leading into the split or lift.

(c) Before mining is started on a final stump:

(1) At least two (2) rows of posts or equivalent support shall be installed on not more than four (4)- foot centers on each side of the roadway; and

(2) Only one (1) open roadway, which shall not exceed sixteen (16) feet wide, shall lead from solid pillars to the final stump of a pillar. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed fourteen (14) feet.

(d) During open-end pillar extraction, at least two (2) rows of breaker posts or equivalent support shall be installed on not more than four (4)- foot centers. These supports shall be installed between the lift to be started and the area where pillars have been extracted. These supports shall be maintained to within seven (7) feet of the face and the width of the roadway shall not exceed sixteen (16) feet. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed fourteen (14) feet.

38-10-9 Warning devices. Except during the installation of roof supports, the end of permanent roof support shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel beyond permanent support.

38-10-10 Manual installation of temporary support.

(a) When manually installing temporary support, only persons engaged in installing the support shall proceed beyond permanent support.

(b) When manually installing temporary supports, the first temporary support shall be set no more than five (5) feet from a

permanent roof support and the rib. All temporary supports shall be set so that the person installing the supports remains between the temporary support being set and two other supports which shall be no more than five (5) feet from the support being installed. Each temporary support shall be completely installed prior to installing the next temporary support.

(c) All temporary supports shall be placed on no more than five (5)- foot centers.

(d) Once temporary supports have been installed, work or travel beyond permanent roof support shall be done between temporary supports and the nearest permanent support or between other temporary supports.

38-10-11 Roof testing and scaling.

(a) A visual examination of the roof, face, and ribs shall be made immediately before any work is started in an area and thereafter as conditions warrant.

(b) Where the mining height permits and the visual examination does not disclose a hazardous condition, sound and vibration roof tests, or other equivalent tests, shall be made where supports are to be installed. When sound and vibration tests are made, they shall be conducted:

(1) After the ATRS system is set against the roof and before other support is installed; or

(2) Prior to manually installing a roof support. This test shall begin under supported roof and progress no further than the location where the next support is to be installed.

(c) When a hazardous roof, face, or rib condition is detected, the condition shall be corrected before there is any other work or travel in the affected area. If the affected area is left unattended, each entrance to the area shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel into the area.

(d) A bar for taking down loose material shall be available in the working place or on all face equipment except haulage equipment. Bars provided for taking down loose material shall be of a length and design that will allow the removal of loose material from a position that will not expose the person performing this work to injury from falling material.

38-10-12 Rehabilitation of areas with unsupported roof.

(a) Before rehabilitating each area where a roof fall has occurred or the roof has been removed by mining machines or by blasting:

(1) The mine operator shall establish the clean up and support procedures that will be followed;

(2) All persons assigned to perform rehabilitation work shall be instructed in the clean-up and support procedures; and

(3) Ineffective, damaged, or missing roof support at the edge of the area to be rehabilitated shall be replaced or other equivalent support installed.

(b) All persons who perform rehabilitation work shall be experienced in this work or they shall be supervised by a person experienced in rehabilitation work who is designated by the mine operator.

(c) Where work is not being performed to rehabilitate an area in active workings where a roof fall has occurred or the roof has been removed by mining machines or by blasting, each entrance to the area shall be supported by at least one row of posts on not more than five (5)- foot centers, or equally effective support.

38-10-13 Roof support removal.

(a) (1) All persons who perform the work of removing permanent roof supports shall be experienced in this work, or they shall be supervised by a person experienced in removing roof supports who is designated by the mine operator.

(2) Only persons with at least one (1) year of underground mining experience shall perform permanent roof support removal work.

(b) A person designated by the mine operator shall, prior to the removal of permanent roof supports, examine the roof conditions in the area where the supports are to be removed.

(c) Prior to the removal of crossbars, beams, or other similar supports, a row of temporary supports on not more than five (5)- foot centers or equivalent support shall be installed

across the opening within four (4) feet of the supports being removed. Additional supports shall be installed where necessary to assure safe removal.

(d) (1) Prior to the removal of roof bolts, temporary support shall be installed as close as practicable to each bolt being removed. After the removal of roof bolts, persons removing the temporary supports shall perform this work from a location under permanent supports which have not been disturbed.

(2) Roof bolts shall not be removed where full pillar extraction is conducted.

(e) Each entrance to an area where supports shave been removed shall be posted with a readily visible warning or a physical barrier shall be installed to impede travel into the area.

(f) Except when supports are removed by persons who are in a remote location under supported roof, no permanent support shall be removed where:

(1) Roof bolt torque or tension measurements or the condition of conventional support indicate excessive loading;

(2) Roof fractures are present; or

(3) There is any other indication that the roof is structurally weak.

(g) Except for paragraph (b) of this section, the provisions of this section do not apply to removal of conventional supports for starting crosscuts and pillar splits or lifts.

38-10-14 Supplemental support materials, equipment, and tools.

(a) A supply of supplementary roof support materials and the tools and equipment necessary to install the materials shall be available at a readily accessible location on each working section or within four (4) crosscuts of each working section.

(b) The quantity of support materials and tools and equipment maintained available in accordance with this section shall be sufficient to support the roof if adverse roof conditions are encountered, or in the event of an accident involving a fall.

38-10-15 Longwall mining systems. For each longwall mining section, the roof control plan shall specify:

(a) The methods that will be used to maintain a safe travelway out of the section through the tailgate side of the longwall; and

(b) The procedures that will be followed if a ground failure prevents travel out of the section through the tailgate side of the longwall.

38-10-16 Roof control plan.

(a) (1) Each mine operator shall develop and follow a roof control plan, approved by the Director of the Division of Health, Safety and Training, that is suitable to the prevailing geological conditions, and the mining system to be used at the mine. Additional measures shall be taken to protect persons if unusual hazards are encountered.

(2) The proposed roof control plan and any revisions to the plan shall be submitted, in writing, to the Director of the Division of Health, Safety and Training. When revisions to a roof control plan are proposed, only the revised pages need to be submitted unless otherwise specified by the Director of the Division of Health, Safety and Training.

(b) (1) The mine operator will be notified in writing of the approval or denial of approval of a proposed roof control plan or proposed revision.

(2) When approval of a proposed plan or revision is denied, the deficiencies of the plan or revision and recommended changes will be specified and the mine operator will be afforded an opportunity to discuss the deficiencies and changes with the roof control inspectors or Director of the Division of Health, Safety and Training.

(3) Before new support materials, devices or systems other than roof bolts and accessories, are used as the only means of roof support, the Director of the Division of Health, Safety and Training may require that their effectiveness be demonstrated by experimental installations.

(c) No proposed roof control plan or revision to a roof control plan shall be implemented before it is approved.

(d) Before implementing an approved revision to a roof control plan, all persons who are affected by the revision shall be instructed in its provisions.

(e) The approved roof control plan and any revisions shall be available to the miners and representative of miners at the mine.

(f) Existing roof control plans that conflict with this series shall be revised to meet the requirements of this series by September 28, 1988. This paragraph (f) shall expire March 28, 1989.

38-10-17 Roof control plan information.

(a) The following information shall be included in each roof control plan:

(1) The name and address of the company.

(2) The name, address, mine identification number, and location of the mine.

(3) The name and title of the company official responsible for the plan.

(4) A typical columnar section of the mine strata which shall:

(A) Show the name and the thickness of the coalbed to be mined and any persistent partings;

(B) Identify the type and show the thickness of each stratum up to and including the main roof above the coalbed and for distance of at least ten (10) feet below the coalbed; and

(C) Indicate the maximum cover over the area to be mined.

(5) A description and drawings of the sequence of installation and spacing of supports for each method of mining used.

(6) When an ATRS system is used, the maximum distance that an ATRS system is to be set beyond the last row of permanent support.

(7) When tunnel liners or arches are to be used for roof support, specifications and installation procedures for the liners or arches.

(8) Drawings indicating the planned width of openings, size of pillars, method of pillar recovery, and the sequence of mining pillars.

(9) A list of all support materials required to be used in the roof, face, and rib control system, including, if roof bolts are to be installed:

(A) The length, diameter, grade and type of anchorage unit to be used;

(B) The drill hole size to be used; and

(C) The installed torque or tension range for tensioned roof bolts.

(10) When mechanically anchored tensioned roof bolts are used, the intervals at which test holes will be drilled.

(11) A description of the method of protecting persons:

(A) From falling material at drift openings; and

(B) When mining approaches within one hundred fifty (150) feet of an outcrop.

(b) Each drawing submitted with a roof control plan shall contain a legend explaining all symbols used and shall specify the scale of the drawing which shall not be less than five (5) feet to the inch or more than twenty (20) feet to the inch.

(c) All roof control plan information, including drawings, shall be submitted on 8 1/2 by 11 inch paper, or paper folded to this size.

38-10-18 Roof control plan-approval criteria.

(a) This section sets forth the criteria that shall be considered on a mine-by-mine basis in the formulation and approval of roof control plans and revisions. Additional measures may be required in plans by the Director of the Division of Health, Safety and Training or authorized representative. Roof control plans that do not conform to the applicable criteria in this section may be approved by the Director of the Division

of Health, Safety and Training or authorized representative, provided that effective control of the roof, face, and ribs can be maintained.

(b) Roof Bolting.

(1) Roof bolts should be installed on centers not exceeding five (5) feet lengthwise and crosswise, except as specified in Section 6.

(2) When tensioned roof bolts are used as a means of roof support, the torque or tension range should be capable of supporting roof bolt loads of at least fifty (50) percent of either the yield point of the bolt or anchorage capacity of the strata, whichever is less.

(3) Any opening that is more than twenty (20) feet wide should be supported by a combination of roof bolts and conventional supports.

(4) In any opening more than twenty (20) feet wide:

(A) Posts should be installed to limit each roadway to sixteen (16) feet wide where straight and eighteen (18) feet wide where curved; and

(B) A row of posts should be set for each five (5) feet of space between the roadway posts and the ribs.

(5) Openings should not be more than thirty (30) feet wide.

(c) Installation of roof support using mining machines with integral roof bolters.

(1) Before an intersection or pillar split is started, roof bolts should be installed on at least five (5)- foot centers where the work is performed.

(2) Where the roof is supported by only two (2) roof bolts crosswise, openings should not be more than sixteen (16) feet wide.

(d) Pillar Recovery.

(1) During development, any dimension of a pillar should be at least twenty (20) feet.

(2) Pillar splits and lifts should not be more than twenty (20) feet wide.

(3) Breaker posts should be installed on not more than four (4)- foot centers.

(4) Roadside-radius (turn) posts, or equivalent support, should be installed on not more than four (4)- foot centers leading into each pillar split or lift.

(5) Before full pillar recovery is started in areas where roof bolts are used as the only means of roof support and openings are more than sixteen (16) feet wide, at least one (1) row of posts should be installed to limit the roadway width to sixteen (16) feet. These posts should be:

(A) Extended from the entrance to the split through the intersection outby the pillar in which the split or lift is being made; and

(B) Spaced on not more than five (5)- foot centers.

(e) Unsupported openings at intersections. Openings that create an intersection should be permanently supported or at least one (1) row of temporary supports should be installed on not more than five (5)-foot centers across the opening before any other work or travel in the intersection.

(f) Longwall mining systems.

(1) Systematic supplemental support should be installed throughout:

(A) The tailgate entry of the first longwall panel prior to any mining; and

(B) In the proposed tailgate entry of each subsequent panel in advance of the frontal abutment stresses of the panel being mined.

(2) When a ground failure prevents travel out of the section through the tailgate side of the longwall section, the roof control plan should address:

(A) Notification of miners that the travelway is blocked;

(B) Re-instruction of miners regarding escapeways and escape procedures in the event of an emergency;

(C) Re-instruction of miners on the availability and use of self-contained self-rescue devices or self rescuers;

(D) Monitoring and evaluation of the air entering the longwall section;

(E) Location and effectiveness of the two-way communication systems; and

(F) A means of transportation from the section to the main line.

(3) The plan provisions addressed by paragraph ~~(g)(2)~~ (f) (2) of this section should remain in effect until a travelway is reestablished on the tailgate side of a longwall section.

(4) Section ~~6 through 13~~ 18 set out the criteria by which the Director of the Division of Health, Safety and Training will be guided in approving roof control plans on a mine-by-mine basis. Additional measures may be required. Except where otherwise mandated by Court ruling, roof control plans which do not conform to these criteria may be approved providing the operator can satisfy the Director of the Division of Health, Safety and Training that the resultant roof conditions will provide no less than the same measure of protection to the miners.

38-10-19. Evaluation and revision of roof control plan.

(a) Revisions of the roof control plan shall be proposed by the operator:

(1) When conditions indicate that the plan is not suitable for controlling the roof, face, ribs, or coal or rock bursts; or

(2) When accident and injury experience at the mine indicate the plan is inadequate. The accident and injury experience at each mine shall be reviewed at least every six (6) months.

(b) Each unplanned roof fall and rib fall and coal or rock burst that occurs in the active workings shall be plotted on a mine map if it:

(1) Is above the anchorage zone where roof bolts are used;

(2) Impairs ventilation;

(3) Impedes passage of persons;

(4) Causes miners to be withdrawn from the area affected; or

(5) Disrupts regular mining activities for more than one (1) hour.

(c) The mine map of which roof falls are plotted shall be available at the mine site for inspection by authorized representatives of the Director of the Division of Health, Safety and Training and representatives of miners at the mine.

(d) The roof control plan for each mine shall be reviewed every six (6) months by an authorized representative of the Director of the Division of Health, Safety and Training. This review shall take into consideration any falls of the roof, face, and ribs and the adequacy of the support systems used at the time.

RESPONSE TO COMMENTS

PUBLIC HEARING
RULES AND REGULATIONS GOVERNING ROOF CONTROL
Title 38 Series 10

July 1, 1988

The West Virginia Department of Energy (DOE) held public hearings on proposed legislative rules governing roof control at the Department of Energy's Kanawha City regional office, 322 70th Street, on July 1, 1988. The hearing record was opened at 10:00 a.m. by Roger T. Hall, Administrator for DOE, with Mr. Bart Lay, Director of the Division of Health, Safety, and Training of DOE also in attendance.

Commentary #1.

Mr. William "Bolts" Willis representing the United Mine Workers of America (UMWA) presented comment as follows:

Comment:

While the UMWA generally supported the concept of DOE modifying its regulations to conform to federal Mine Safety and Health Administration (MSHA) regulations to ensure uniform administration of the two enforcement agencies, Mr. Willis pointed out that the UMWA was opposed to some of the provisions of the federal regulations and in fact had brought legal action against MSHA in that regard. In view of their position on the federal regulations, the UMWA was similarly opposed to the State's regulations.

Response:

The DOE is cognizant of the action taken by the UMWA regarding the federal regulations; however at this time there appears to be no legal restraint upon the DOE to promulgate regulations. Therefore, the UMWA's objections are duly noted; however, the State will proceed with seeking legislative approval of the regulations as proposed.

Commentary #2.

Mr. Chris R. Hamilton, representing the West Virginia Coal Association (WVCA), presented comments as follows:

Comment:

In view of the fact that the West Virginia Legislature, during its 1988 regular session, authorized promulgation of proposed roof control regulations incorporating full roof bolting provisions required under a 1987 court order, it was the WVCA's position that promulgation of these new rules on

Response:

The DOE can understand why the WVCA might question the short-lived nature of the legislatively-authorized regulation; however, the development of the federal rule changes were coincidental with the development of State regulations under the court order. This unfortunate circumstance in timing was beyond the control of the State. A more important consideration for the DOE is that both State and federal rules be consistent to avoid costly and burdensome compliance by the industry at large with two different sets of regulations. The proposed legislative rules are therefore justified and will not be withdrawn.

Comment:

The WVCA correctly points out that the proposed rules are replete with duplicative and conflicting provisions.

Response:

This observation was also made by the DOE staff as the drafts were proofed and the conflicting and duplicative provisions have been removed.

Comment:

The WVCA points out that some of the provisions of the proposed regulations impose new requirements to which they may find objectionable.

Response:

The drafters of the proposed rule made every effort to adopt federal language without change of context and to comply with the court order on full roof bolting. To the extent that federal provisions vary from previous State regulations, these changes would by necessity be reflected in the proposed regulations. Again, consistency between the two regulatory agencies is of overriding importance.

Comment:

The WVCA advances the position that the Commissioner of the DOE is not authorized to promulgate regulations governing coal mine health and safety. It is their opinion that the Board of Coal Mine Health and Safety is the only agency authorized by statute to develop such regulations.

Response:

The DOE does not concur with the WVCA position. The statute at West Virginia Code 22-1-15 and 22A-1A-2 clearly authorizes the Commissioner to promulgate regulations specific to the respective articles. Other provisions of the Code restrict the Commissioner's authority to promulgate regulations, i.e., Chapter 22B. If the legislature intended to limit the Commissioner's rulemaking authority under Article 1A of Chapter 22A, such limitations would have been specifically stated.

Comment:
The WVCA objects to the inclusion of regulations governing longwall mining operations and suggests that they be deleted.

Response:
The DOE views the longwall provisions as being an integral part of the federal requirements and are therefore justifiably reflected in the proposed State regulations.

No additional commenters coming forth to present testimony, the public hearing record was closed at 10:40 a.m.

COMMENTS ON BEHALF OF THE WEST VIRGINIA COAL ASSOCIATION, TO THE WEST VIRGINIA DEPARTMENT OF ENERGY'S PROPOSED TITLE 38, SERIES 10 REGULATIONS ADDRESSING ROOF CONTROL PRACTICES--JULY 1, 1988

The West Virginia Coal Association is a trade association comprised of coal-producing companies who collectively account for about 85 percent of the state's underground coal production. Its membership also includes manufacturers, suppliers, service companies and land companies.

We understand that the intent of the proposed rules and regulations designated as Title 38, Series 10 addressing mine roof control is to conform the state requirements to those found in 30 CFR, Part 75.200. Specifically, the new roof control rules and regulations and new procedures for the development and approval of roof control plans adopted by MSHA in March of this year. It is further our understanding that the reason supporting this regulatory action is to accomodate the joint review and approval of roof control plans between the State Department of Energy and the Mine Safety & Health Administration.

While our Association wholeheartedly supports increased cooperation between state and federal regulatory agencies particularly with respect to mine plan approval, and is generally supportive of conforming the State Mine Health & Safety Laws with the Code of Federal Regulations, provided that the level of safety or protection that is afforded under corresponding state laws is not compromised. We do, however, question the overall necessity or appropriativeness of the proposed regulation in view of the following:

First, the subject Title 38, Series 10 Rules and Regulations were originally promulgated on December 16, 1986 by the DOE in response to the State Supreme Court decision rendered on July 10, 1986 requiring full roof bolting in conjunction with auger-mining operations.

Prior to this time the State Department of Energy and its predecesor agency, Department of Mines, relied upon the broad discretionary authority contained in WV Code 22A-2-25 and 22A-2-26 to effectively review and approve roof control plans in conjunction with MSHA. The promulgation of Series 10, Administrative Regulations, had no impact or bearing on that joint agency process.

Secondly and subsequent to that action, the Board of Coal Mine Health & Safety, at the recommendation of the Mine Safety and Technical Review Committee, promulgated roof control standards which incorporated all provisions pertinent to auger mining operations which were contained in Series 10 regulations,including the criteria for the design, development and approval of mine roof control plans for auger mining. Those regulations designated as Title 36, Series 25 are currently in effect, making the regulations originally filed on December 16, 1986 and the emergency rules filed on May 6, 1988 unnecessary. (A copy of Title 36, Series 25 are enclosed.)

Accordingly and as an overall comment--we recommend that the development of this regulation cease and the DOE original filing be rescinded.

That is our main recommendation. However, should you decide to proceed with the promulgation of the emergency rule we offer the following comments:

Previous MSHA regulations contained extensive criteria for evaluating and approving roof control plans which resulted in unduly complex plans. Through MSHA's final rule--which the State seeks to duplicate--the number of roof control practices required to be addressed in plans has been reduced drastically. Criteria no longer necessary were deleted and criteria generally applicable to all mines were changed to mandatory standards. With these principle changes, roof control plans are less complex under federal law.

However, the state's emergency rule as filed contains both--the new provisions recently enacted by MSHA as well as the former provisions contained in 30 CFR, Part 75.200 (7-12).

This produces considerable confusion and complication for the mining industry; duplication within the regulations and a number of conflicting provisions. We recommend that these sections be reviewed and all duplication eliminated. (Enclosed for your reference is an analysis of the criteria provisions, Sections 38-10-20-24, within the proposed regulations showing where these provisions can be found within MSHA's former and revised regulations. This document also highlights the major changes in the regulations.)

We point out two areas of concerns with respect to the sections of the proposed rule which are intended to parellel MSHA's final rule. First--The manner in which the state regulation is organized and the sequence of the various provisions. If the intent is to conform the state requirement to identical federal provisions then the same format should be used. This would minimize additional confusion.

Secondly, and more concerning are the new requirements imposed on the industry through the regulation. Namely, the requirements for roof support systems and evacuation procedures for longwall mining, procedures for controlling coal bursts or bumps, examinattions of roof bolt torque or tension and requirements for warning signs at the last row of roof supports.

With respect to these new requirements, we question and raise the legal issue of the Commissioner's authority to unilaterally promulgate rules and regulations which establish mine health and safety standards.

Two sections of state law, WV Code 22-1-15 and 22A-1A-2, are cited within the proposed regulations authorizing the promulgation of these rules. Code 22-1-15 provides narrow and limited authority for the Commissioner to promulgate rules and regulations of an administrative or procedural nature addressing certain activities or functions of the Department and Code section.

22A-1A-2 provides authority for the Commissioner to develop rules where the Code expressly requires the Commissioner to do so.

In essence, we do not believe neither section applies nor that the Commissioner has authority to unilaterally promulgate mine health and safety rules. We would suggest that any new requirements contained in these rules be omitted.

We also note for the record that the DOE emergency rules do not contain the new federal standards for ATRS systems. We assume that this is due to the fact that ATRS systems are addressed in separate existing administrative regulations. Likewise, administrative regulations designated as Title 36 Series 6 Comprehensive also exist which detail requirements for longwall mining operations. Accordingly, we would recommend that all applicable sections relating to longwall mining similarly be deleted(sections (38-10-15(A)(B); 38-10-18(f)). This would eliminate added conflict and duplicity. (A copy of Title 36, Series 6 regulations are enclosed herewith.)

Again we ask that the DOE review carefully the need or desirability of these rules and regulations in light of the points raised herein. We are of the opinion that no need or legal basis exist.

We reinterate that the preceeding comments addressing specific sections of the proposed regulations are offered in the alternative that you decide not to rescend the DOE roof control regulations which we contend are unnecessary, without foundation and questionably unlawful.

WEST VIRGINIA DEPARTMENT
OF ENERGY'S EMERGENCY RULES
AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)

COMPARISON TO MSHA'S
REGULATIONS (OLD AND NEW) AND TO
OTHER WV-DOE "EMERGENCY" PROVISIONS

	MSHA		WV-DOE
	NEW	OLD	EMERGENCY REGS.
38-10-20 Criteria-Full Roof Bolting Plan. A full roof bolting plan is one in which roof bolts constitute the sole means of roof support at a face as part of the normal mining cycle.		38-10-20 is almost identical to the old MSHA Regulations previously found in 30 CFR 75.200-7	
(a) Roof bolt assemblies should meet the following specificatons:			
(1) All components of the roof bolt assembly should comply with the American National Standards Institute, "Specifications for Roof Bolting Materials in Coal Mines". -------	Similar to 30 CFR § 75.204(a)		Similar to 38-10-5(a)
(2) Roof bolts that provide support by creating a beam of laminated strata should be of a length that assures adequate anchorage, but in no case should the length of the bolt be less than thirty (30) inches. -------	Almost identical to part of 30 CFR § 75.204(f)(1)		Almost identical to part of 38-10-4(h)(1)
(3) Roof bolts that provide support by suspending the immediate roof from a stronger overlying strata should be of a length that permits anchoring at least twelve (12) inches in the stronger strata. -------	Almost identical to part of 30 CFR § 204(f)(1)		Almost identical to part of 38-10-4(h)(1)
(4) Bearing plates used directly against the mine roof should be not less than six (6) inches square or of equivalent area. In exceptional cases where the mine roof is firm and not susceptible to sloughing, bearing plates five (5) inches square or of equivalent area may be used. -------	Almost identical to 30 C.R.F. § 204(c)		Almost identical to 38-10-5(c)(2)
(5) When wooden material such as planks, header blocks, and crossbars are used between the bearing plate and the roof for additional bearing, the use should be limited to short life openings (not to exceed three (3) years) unless treated. Bearing plates used in conjunction with wooden materials should be not less than four (4) inches square or of equivalent area. -------	Almost identical to 30 CFR § 75.204(c)(3) and (4)		Almost identical to 30-10-5(c)(3) and (4)
(6) When washers are used, the shape of such washers should conform to the shape of the roof bolt head and the shape of the bearing plate and such washers should be of sufficient strength to withstand loads up to the yield point of the roof bolt. -------	Similar to 30 CFR § 75.204(d)		Similar to 38-10-5(d)
(b) Installation practices:			
(1) Finishing bits should be easily identifiable by sight or feel and the diameter should be within a tolerance of plus 0.030-inch minus zero of the manufacturers recommended hole diameter for the anchor used. -------	Similar to 30 CFR[1] § 75.204(e)		Similar to and conflicts in part with 38-10-4(f) and (g)[2]

[1] "Easily identifiable by sight or feel" eliminated and changed to "shall be distinguishable". Also adds a minus margin to the existing tolerance permitted for bits.

[2] See previous footnote. 38-10-4(f) and (g) is almost identical to 30 CFR §75.204(e).

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
(2) Torque ranges specified in the roof control plan should be capable of providing roof bolt loads to within plus or minus 1,000 pounds of fifty (50) percent of either the yield point of the roof bolt being used or the anchorage capacity of the strata, whichever is less. In no case, however, should installed torques provide loads that exceed the yield point of the roof bolt being used or the anchorage capacity. Relationship for determining roof bolt load for torque applied are as follows:	-------	According to Federal Register, similar to provisions of 30 CFR § 75.204(f)(3); § 75.221(a)(9); and § 75.222(b)(2) considered collectively	See previous remarks	30 CFR § 75.204(f)(3) is identical to 38-10-4(h)(3) 30 CFR § 75.221(a)(9) is identical to 38-10-17(a)(9) 30 CFR § 75.222(b)(2) is almost identical to 38-10-18(b)(2)
Cone Neck of Self-Centering Roof Bolt				
5/8-inch expansion type roof bolt-- 30 lbs. of load per ft.-lb of torque.				
3/4-inch expansion type roof bolt-- 30 lbs. of load per ft.-lb. of torque.				
Standard Roof Bolt Without Hard Washer or Lubricant				
5/8-inch expansion type roof bolt-- 50 lbs. of load per ft.-lb of torque.				
3/4-inch expansion type roof bolt-- 40 lbs. of load per ft.-lb. of torque.				
Standard Roof Bolt With Hard Washer or Lubricant				
5/8-inch expansion type roof bolt-- 60 lbs. of load per ft.-lb of torque.				
3/4-inch expansion type roof bolt-- 60 lbs. of load per ft.-lb. of torque.				
(3) Each operator should outline and describe roof bolt testing procedures to be followed in the roof control plan. The procedures to be followed should include:				
(A) Providing and maintaining an approved, calibrated torque wrench on each roof bolting machine. An approved wrench should be one that will indicate the actual torque on the roof bolt.	-------	*Removed from Regs.*[1]		No similar provision

[1]Eliminates this requirement and allows for a more performance-oriented standard and allows for the introduction of new technology in this area.

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
(B) Designating a qualified person to spot-check torques on at least twenty-five (25) *percent of the roof* bolts immediately after the working place has been fully bolted. If the *majority* of the installed torques fall outside the recommended range, the remaining roof bolts in the working place should be tested. If the majority of the torques still fall outside the recommended range, necessary adjustments in the *equipment used* for tightening the roof bolts should be made immediately. If, *after adjustments* are made and required torques are not achieved, supplementary support such as additional roof bolts, longer roof bolts with adequate anchorage, posts, cribs, or crossbars should be installed.	-------	According to Federal Register similar to 30 CFR § 75.204(f)(4)[1]	See previous remarks	30 CFR § 75.204(f)(4) is identical to 38-10-4(h)(4)
(C) On a daily basis, spot-check torques on at least ten (10) percent of the roof bolts from the outby corner of the last open crosscut to the face and record the results. This record should show the number of roof bolts *tested, number of roof* bolts below the recommended range, and the number of roof bolts above *the recommended range*. If results show that a majority of the roof bolts are not maintaining at least seventy (70) percent of the minimum torque required (fifty (50) percent if plates bear against wood), or have exceeded the maximum *required torque by fifty* (50) percent, supplementary support such as additional roof bolts, longer *roof bolts with adequate* anchorage, posts, cribs, or crossbars should be installed until a review of the adequacy of the roof control plan is made by an authorized representative of the Director of the Division of Health, Safety and Training.	-------	Similar to 30 CFR §75.204(f)(5) and (6)[2]		Similar to and in conflict with part of 38-10-4(h)(5) and (6)[3]
(4) Devices should be used to compensate for the angle when roof bolts are installed at angles greater than 5 from the perpendicular to the roof line.	-------	Almost identical to 30 CFR § 75.204(f)(8)		Almost identical to 38-10-5(d)(2)
(c) Roof bolting pattern:				
(1) Roof bolt spacing either lengthwise or crosswise should not exceed five (5) feet.	-------	Almost identical to 30 CFR § 75.222(b)(1)		Almost identical to 38-10-18(b)(1)
(2) Roof bolts should be installed as close as possible to, but not more than five (5) feet from, the face before starting conventional cutting or a continuous miner run.	-------	Similar to 30 CFR § 75.206(a)(3)		Similar to 38-10-7(a)(3)

[1]Eliminates mandatory requirement for "*supplemental support*" and allows for other corrective action, including replacement of bolts, changes in equipment, using different lengths of bolts or using other roof support systems.

[2]Requires only bolts be tested if coal is mined from that working place during a 24-hour period.

[3]See previous footnote. 38-10-4(h)(5) and (6) is almost identical to 30 CFR §75.204(f)(5) and (6).

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
(d) Openings should not exceed twenty (20) feet in width where roof bolting is the sole means of roof support.	-------	30 CFR § 75.222(b)(3) would cover this area	See previous remarks	Similar to 38-10-18(b)(3), which is identical to 30 CFR 75.222(b)(3)
38-10-21. Criteria -- Conventional Roof Control Plan. A conventional roof control plan is one in which installation of materials other than roof bolts such as metal or wood posts, jacks, or cribs in conjunction with wooden cap blocks (half headers), footers (sills), planks and beams are installed as the sole means of roof support at a face as part of the normal mining cycle.			38-10-21 is almost identical to the old MSHA regulations previously found in 30 CFR § 200-8	
(a) Support materials should meet the following specifications:				
(1) Posts should be of solid, straight grain wood with the ends sawed square and free from defects which would affect their strength.	-------	Removed		No similar provision
(2) The diameter of round posts should not be less than one (1) inch for each fifteen (15) inches of length, but in no case should the diameter be less than four (4) inches; split posts should have a cross-sectional area equal to that required for round posts to equivalent length.	-------	Replaced by 30 CFR § 75.206(b)(1)[1]		Conflicts with 38-10-7(b)[2] which is identical to 30 CFR § 75.206(b)(1)
(3) Wooden cap blocks and footers should have flat paralleled sides and be not less than two (2) inches thick, four (4) inches wide, and twelve (12) inches long.	-------	Similar to 30 CFR § 75.206(b)(2)(i)		Similar to 38-10-7(b)(2)(A) which is identical to 30 CFR § 75-206(b)(2)(i)
(4) Wooden crossbars and planks should be straight and of solid wood. Crossbars should have a minimum cross-sectional area of twenty-four (24) square inches and the minimum thickness should be three (3) inches. Planks should have a minimum cross-sectional area of eight (8) square inches and a minimum thickness of one (1) inch.	-------	Similar to 30 CFR § 75.206(b)(2)(ii) & (iii)		Similar to 38-10-7(b)(2)(B) & (C) which is identical to 30 CFR § 75.206(b)(2)(ii) & (iii)
(5) Cribbing material should be of wood having parallel flat sides. In no case should the crib be less than thirty (30) inches square.	-------	Similar to 30 CFR § 75.206(b)(3)[3]		Conflicts, in part, with 38-10-7(b)(3)[4], which is identical to 30 CFR § 75-206(b)(3)

[1]For post longer than 60 inches, requires diameter to be 1 inch for each 24 inches instead of 1 inch for each 15 inches.

[2]See previous footnote.

[3]Eliminates 30 inch requirement for cribbing, requires only two sides to be parallel, and allows crib blocks to be made of other material which provide support capacity equal to wood (i.e. concrete blocks).

[4]38-10-7(b)(3) eliminates the 30 inch requirement and does not require the crib blocks to be wood. See previous footnote.

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
(b) Installation practices:			See previous remarks	
(1) No more than two (2) wooden wedges should be used to install a post.	--------	Removed[1]		No identical provision
(2) Posts should not be installed under roof susceptible to sloughing or under disturbed roof without a wooden cap block, plank, or crossbar between the post and the roof.	--------	Almost identical to 30 CFR § 75.206(f)		Amost identical to 38-10-7(f)
(3) Posts should be installed tight and on solid footing.	--------	Almost identical to 30 CFR § 75.206(e)		Almost identical to 38-10-7(e)
(4) Blocks used for lagging between the roof and wooden crossbars, planks, or metal bars should be spaced so that the load on the supports will be equally distributed.	--------	Amost identical to 30 CFR § 75.206(g)		Almost identical to 38-10-7(g)
(5) Cap blocks should be used between jacks and the roof.	--------	According to the Federal Register - similar to 30 CFR § 75.206(h)		30 CFR § 76.206(h) is identical to 38-10-7(h)
(c) Conventional support pattern:				
(1) Spacing of roadway roof supports should not exceed five (5) feet.	--------	Almost identical to 30 CFR § 75.206(a)(2)		Almost identical to 38-10-7(a)(2)
(2) Width of roadways should not exceed fourteen (14) feet on the straight and sixteen (16) on the curves.	--------	Similar to 30 CFR[2] § 75.206(a)(4) & (5)		Similar to and conflicts with part of 38-10-7(a)(4) & (5)[3]
(3) Roof supports should be installed to within five (5) feet of the uncut face; however, the supports nearest the face may be removed to facilitate the operation of face equipment if equivalent temporary support is installed prior to removal.	--------	Almost identical to 30 CFR § 75.206(a)(6)		Almost identical to 38-10-7(a)(3)
(4) When an opening is no longer needed for storing supplies or for travel of equipment, the roof at the entrance of all such openings along travelways should be supported by extending the post line across the opening.	--------	Almost identical to 30 CFR § 75.206(a)(1)		Almost identical to 38-10-7(a)(6)
(d) Openings should not exceed twenty (20) feet in width where the roof is supported solely by conventional means.	--------	Almost identical to 30 CFR § 75.206(a)(6)		Almost identical to 38-10-7(a)(1)

[1]Eliminates maximum number of wedges, but requires post to be stable.

[2]Allows roadways to be sixteen (16) feet where full overhead supports are used.

[3]See previous footnote. 38-10-7(a)(4) and (5) is almost identical to 30 CFR §75.206(a)(4) and (5).

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
38-10-22 Criteria--Combination Roof Control Plan. For a plan where both roof bolts and convenational supports are used for roof control at the face, the criteria for a Full Roof Bolting Plan and a Conventional Roof Control Plan should apply with the following modifications:	-------		38-10-22 is almost identical to the old MSHA regulations previously found in 30 CFR § 75.200-9	
(a) Any place being driven over twenty (20) feet in width should be supported by a Combination Roof Control Plan.	-------	Almost identical to 30 CFR § 75.222(b)(3)		Almost identical to 38-10-18(b)(3)
(b) The roadway should be limited to sixteen (16) feet in width on both the straight and the curves to within ten (10) feet of the uncut face.	-------	Similar to 30 CFR § 75.222(b)(4)(i)		Similar to 38-10-18(b)(4)(A)
(c) A row of posts should be set for each five (5) feet of space between the roadway posts and the ribs.	-------	Almost identical to 30 CFR § 75.222(b)(4)(ii)		Almost identical to 38-10-18(b)(4)(B)
(d) Openings should not exceed thirty (30) feet in width.	-------	Almost identical to 30 CFR § 75.222(b)(5)		Almost identical to 38-10-18(b)(5)
38-10-23 Criteria--Spot Roof Bolting Plan. Spot roof bolting may be used only as a supplement to the approved roof control plan at random locations where adverse roof conditions are encountered. Where spot roof bolting is used, the criteria in Section 20, parts (1), (2), and (3) of the Full Roof Bolting Plan should apply. In addition, roof bolts should be installed in accordance with roof conditions, but in no case should spacing exceed four (4) feet lengthwise and crosswise. Roof bolting should begin under safe roof and continue to the length of the adverse roof condition until safe roof is again encountered.		Removed[1]	Almost identical to old MSHA regulations previously found in 30 CFR § 75.200-10	No similar provision
38-10-24 Criteria--Pillar Recovery Plan. Any reduction in pillar size during second mining shall be considered pillar recovery. Second mining is construed to be intentional retreat mining. The following criteria are applicable to pillary recovery roof control plans:			Almost identical to old MSHA regulations previously found in 30 CFR § 75.200-11	
(a) Sections 21 and 22 should apply depending on whether the pillar recovery plan calls for conventional support or a combination of conventional support and roof bolting.	-------	Removed		No similar provision
(b) During development, the size and shape of the pillars should be dictated by the depth of cover, height of coal and other conditions associated with the coalbed. The smallest dimension of the pillar should be no less than twenty (20) feet.	-------	Similar to 30 CFR § 75.222(d)(1)		Similar to 38-10-18(d)(1)
(c) Pillar splits and lifts should not exceed twenty (20) feet in width.	-------	Similar to 30 CFR § 75-222(d)(2)		Similar to 38-10-18(d)(2)

[1]Roofbolting applications contained in 30 CFR §75.204 would govern spot bolting.

WEST VIRGINIA DEPARTMENT OF ENERGY'S EMERGENCY RULES AND REGULATIONS GOVERNING ROOF CONTROL (38-10-20 through 38-10-24)		COMPARISON TO MSHA'S REGULATIONS (OLD AND NEW) AND TO OTHER WV-DOE "EMERGENCY" PROVISIONS		
		MSHA		WV-DOE
		NEW	OLD	EMERGENCY REGS.
(d) A minimum of two (2) rows of breaker posts or the equivalent should be installed on not more than four (4)-foot centers across each opening leading into pillared areas and such posts should be installed before production is started. Such posts should be installed near the breakline between the lift being started and the gob.	-------	Similar to 30 CFR § 75.207(b)(1) and § 75.222(d)(3)	See previous remarks	Similar to 38-10-8(b)(1) and 38-10-18(d)(3)
(e) A row or roadside-radium (turn) posts or the equivalent should be installed on not more than four (4)-foot centers leading into pillar splits, including secondary splits in slabs, wings or fenders.	-------	Similar to 30 CFR § 75.207(b)(2) and § 75.222(d)(4)		Similar to 38-10-8(b)(2) 38-10-18(d)(4)
(f) The width of the roadway leading from the solid pillars to a final stump (pushout) should not exceed fourteen (14) feet. At least two (2) rows of posts or their equivalent should be set on each side of the roadway on not more than four (4)-foot centers. Only one open roadway leading to a final stump (pushout) should be permitted.	-------	Similar to 30 CFR § 75.207(c)[1]		Similar to and conflicts in part with 38-10-8(c)[2]
(g) Before full pillar recovery is begun in areas where roof bolts were used as the sole means of roof support and openings are more than sixteen (16) feet wide, supplementary support should be installed. Supplementary supports should consist of at least one (1) row of posts installed on either side on not more than four (4)-foot centers lengthwise and limit the width of all roadways to sixteen (16) feet. These supports should be extended from the entrance to the split for at least one (1) full pillar outby the pillar in which the split is being made.	-------	Similar to 30 CFR § 75.222(d)(5)		Similar to 38-10-18(d)(5)
(h) The following criteria should apply to open end pillaring:				
(1) At least two (2) rows of breaker posts or their equivalent should be installed between the lift being started and the gob on not more than four (4)-foot centers before the initial cut is made and should be extended to within seven (7) feet of the face. The width of the roadway should not exceed fourteen (14) feet.	-------	Similar to 30 CFR § 75.207(d)		Similar to 38-10-8(d)
(2) If the roof in open end pillaring has a tendency to hang, falls should be made, or cribs installed in addition to the breakline posts between the active lift and the hanging area. The cribs should be set not more than eight (8) feet apart. Heavy duty hydraulic jacks set at centers close enough to give equivalent support may be substituted for cribs, if such jacks are removed remotely.	-------	Removed		No similar provision

[1]Allows for sixteen (16) foot roadways under certain circumstances.

[2]See previous footnote.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
DEPARTMENT OF MINES
CHAPTER 22-4
SERIES 17

Subject: Rules and Regulations Governing Longwall Mining Within the State of West Virginia

Section 1. General

1.01 Authority These rules and regulations are issued under authority of the West Virginia Code, Chapter 22, Article 2A, Section 4 of the West Virginia Code

1.02 Effective Date These rules and regulations were promulgated on the 24th day of June, 1980 and became effective on the 15th day of August, 1980.

1.03 Filing Date These rules and Regulations were filed in the Office of the Secretary of State on the 1st day of July, 1980.

1.04 Other Law Applicable All provisions of the Mining Law of this state, specifically Chapter 22, Article 2 of the Code are applicable to longwall mining, except to the extent that these regulations cover the specific requirement.

Section 2. Effective Law and Regulation

2.01 These regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22, Article 1 of the West Virginia Code relative to enforcement are applicable to the enforcement of these regulations.

Section 3. Definitions

3.01 Department The term "Department" shall mean the State Department of Mines provided for in Section Two, Article One, Chapter 22 of the West Virginia Code.

3.02 Approved The term "Approved" shall mean in strict compliance with mining law, or, in the absence of law, accepted by a recognized standardizing body or organization whose approval is generally recognized as authoritative on the subject,

3.03 Accessible Travel Route "Accessible Travel Route" means an unobstructed passageway not less than 24 inches wide with reflective material at twenty-five foot intervals.

3.04 Retreat Longwall Working Face The term "Retreat Longwall Working Face" shall mean a working place in a coal mine in which work of extracting coal from its natural deposit in the earth is performed during a mining cycle by a longwall mining system.

3.05 Retreat Longwall Working Section The term "Retreat Longwall Working Section" shall mean all areas from and including the section transformer to and including the longwall working face.

3.06 Caving Line The term "Caving Line" shall mean the line on the roof formed by the rear most projection of the roof support canopies once the longwall section has started retreating.

Section 4. Plans for Longwall Mining; Approval by Department of Mines

4.01 After the effective date of these rules and regulations, no longwall mining shall be started in any coal mine until required plans for longwall mining have been filed and approved by the Department of Mines which approval shall not be unreasonably withheld. All revisions to such approved plans shall be resubmitted for approval to the Department of Mines.

Longwall mining plans submitted for approval to the Department of Mines shall include the following:

(A) Company Name
(B) Mine Name
(C) Mine Location
(D) Mine Address
(E) Telephone Number (Mine)
(F) Name, title and telephone number of person submitting plan.
(G) Mine D Number
(H) Longwall Mining Roof Control Plan
(All approved roof control plans for longwall mining sections shall include a plan indicating the roof support to be used and the working procedures to be followed when a cavity is encountered over chocks.
(I) Ventilation Plan, which shall include the complete section and face ventilation controls and bleeder systems.
(J) Methane and Dust Control Plan.

4.02 After approval of submitted plans has been obtained from the Department of Mines, as required in Section 4.01 and 4.02 of these rules and regulations, additional approvals for new longwall sections will not be necessary; providing required plans initially approved and/or revised are complied with.

4.03. In coal mines where retreat longwall mining section operations are in progress prior to the effective date of these rules and regulations, no new longwall mining sections shall be started until required plans for longwall mining have been filed and approved by the Department of Mines, which approval shall not be unreasonably withheld.

Section 5. Chock and/or Shield Recovery Plan from Longwall Face; Approval by Department of Mines

5.01 The operator shall develop a plan for recovery of chocks and/or shields or other longwall roof support. Such recovery shall not be initiated until such recovery plan is approved

by the Department of Mines, which approval shall not be unreasonably withheld. All revisions to such approved plan shall be resubmitted for approval to the Department of Mines.

Section 6. Communications; Longwall Working Face; Longwall Working Section

6.01 Two-way communication facilities, approved by the Director of the Department of Mines, shall be provided at the headgate, tailgate and across each longwall section face. During the production of coal longwall section face communication facilities shall be a separate system from the mine communication facilities. Longwall section face communication facilities shall be located at a point not more than one hundred (100) feet apart across the longwall section face.

6.02 Two-way communication facilities shall be provided on each longwall working section. During production of coal the headgate operator, or other designated person, shall be continuously available with the longwall section communication and longwall face communication facilities.

Section 7. Electrical De-energizing Devices; Longwall Section Face Conveyor

7.01 After the effective date of these rules and regulations, all new installed longwall section face conveyors shall be provided with lock-out type de-energizing devices to de-energize the electrical power on the longwall section face conveyor. Such de-energizing devices shall be provided at intervals of not more than fifty (50) feet when the height of the coal seam is below forty eight (48) inches and at intervals of not more than one hundred (100) feet when the height of the coal seam is above forty eight (48) inches.

Twelve (12) months after the effective date of these rules and regulations all longwall mining sections that was in operation prior to the effective date of these rules and regulations shall be provided with lock-out type de-energizing device on face conveyors as required in the aforementioned paragraph.

7.02 The headgate operator on the longwall section face shall be provided with emergency deenergizing devices to deenergize immediately the longwall mining face equipment.

7.03 (1) At the beginning of each coal producing shift all emergency deenergizing devices shall be checked for proper functioning. If an emergency deenergizing device is found malfunctioning, mining operations shall not begin until all deenergizing devices are functioning properly.

(2) If during a coal producing shift a deenergizing device malfunctions, a designated person shall be stationed at the next de-energizing device until such time the malfunctioning denergizing device is repaired.

(3) At no time shall more than one deenergizing device be malfunctioning while mining operations are in progress.

7.04 Longwall section face conveyor electrical circuits shall be designed so the face conveyor will not start at any other location until the lockout device is disengaged at the point of initial interruption.

7.05 All shearer and plow motors used on a longwall section face shall be designed so that the cutting bits on the shearer or plow cannot begin operating when electrical power is initially applied.

7.06 No person shall perform work on the panline or on the face side of the panline unless such equipment is deenergized and locked out.

Section 8. Methane Examinations; Monitor; Face Area

8.01 The Director or his representative shall require an approved methane monitor to be installed at the headgate on a longwall working section. The censoring unit indicating the atmospheric conditions on the above methane monitor shall be installed at a location inby the rib line on the return side of the longwall face.

The methane monitor shall be kept operative and properly maintained and tested weekly.

Such methane monitor shall give warning automatically when the concentration of methane reaches a maximum percentage of not more than 1.0 volume per centum of methane.

The operator of any mine which longwall mining is performed shall establish and adopt a definite maintenance program designed to keep such methane monitors operative and a written description of such program shall be available for inspection. At least once each month the methane monitors shall be checked for operating accuracy with a known methane air mixture and shall be calibrated as necessary. A record of calibration tests shall be kept in a book on the surface.

If the methane monitor on a longwall mining section malfunctions the operator shall have such monitor repaired within twelve hours. However; during the period of time the methane monitor is inoperative, the electric equipment shall not be operated for a longer period than ten minutes without an examination for methane gas, the two hour examinations as required in Section 8.02 of these rules and regulations shall be conducted on one hour intervals and air reading on the intake side of the longwall face shall be collected on one hour intervals.

If for extraordinary reasons parts are unavailable to correct the malfunction on the methane monitor, within twelve hours, the operator shall notify the Department of Mines who will evaluate the circumstances.

If a malfunction to the methane monitor occurs on a longwall working section, the supervisor on such shift shall indicate in his on shift examination report, in the fire boss report book, the date and time such methane monitor malfunctioned.

8.02 It shall be the duty of the certified person designated by the mine foreman to supervise a longwall section, to examine the longwall face for hazards at least once every two hours during each coal producing shift or more often if necessary for safety. Such examination shall

include test for methane gas and oxygen deficiency. Such methane and oxygen deficiency examinations shall be made in at least one hundred foot intervals, between the headgate and tailgate. The initials, date, and time shall be recorded at the test locations.

Should one percent or more of methane gas be detected, the electrical equipment shall be immediately deenergized and the electrical power circuit then disconnected from the power supply until the place is pronounced safe by a certified person.

Section 9. Safety Provisions—Longwall Section Face Conveyor

9.01 No person shall cross the longwall section face conveyor while such is in operation, unless a crossover is provided for a person to cross the face conveyor safely.

9.02 Prior to starting a longwall section face conveyor, telephone pager communications or other effective warning signal shall be sounded to alert all persons across the longwall section working face.

9.03 No person shall ride the longwall section face conveyor; However, a plan may be submitted to the Director of the Department of Mines for approval for the removal of injured persons on the longwall section face conveyor, provided it is necessary to transport such injured person on a stretcher or backboard.

9.04 All new face roof support units shall be equipped with adjacent unit controls unless units have a wide single canopy over each unit that protects the workman from falling material when operating unit controls from within the support of shield unit being removed.

9.05 After the effective date of these rules and regulations all new installed face roof support units shall be equipped with an outlet to facilitate measurement of the interior prop pressure.

After the effective date of these rules and regulations all new installed face roof support units shall be equipped with an outlet to facilitate measurement of the yield pressure.

9.06 Yield valves of face roof support units shall be calibrated at least annually within 15 percent of the yield pressure specified in the approved roof control plan. A legible record of such calibrations of each valve shall be kept on the surface of the mine for at least 18 months and be available for inspection by interested persons.

Section 10. Cutting and Welding; Longwall Mining Section

10.01 Prior to cutting and welding being performed on a longwall section face methane gas examinations shall be made by a certified mine foreman-fire boss or assistant mine foreman-fire boss. Cutting and welding may only be performed when methane gas is less than one percent. A certified person as defined above shall be continuously present during all cutting and welding operations.

10.02 Prior to cutting or welding on a longwall section face panline, such open bottom type panlines shall be jacked up, blocked and/or properly secured off the bottom a distance of

at least 10 feet along the face on both sides where such cutting is to be performed. Methane examinations shall be made before cutting and welding is initiated on such panlines.

10.03. When cutting and welding operations have been completed a certified person as defined above shall search for fires and hot spots. If fires or hot spots are found, they shall be extinguished immediately.

Section 11. Longwall Mining—General Requirements

11.01 All hydraulic line repairs shall be performed in accordance with the requirements of the manufacturer's specifications.

11.02 All hydraulic roof support units and associated apparatus on a longwall working face shall be visually inspected at least once during each coal production shift by a qualified person. A written record of such examination shall be maintained on the surface.

Section 12. Longwall Mining; First-Aid Equipment

12.01 First aid equipment required on each working section as defined in Chapter 22, Article 2, Section 59 of the West Virginia Code shall be maintained in the headgate and tailgate entries at a point not to exceed 150 feet outby the longwall working face.

Section 13. Accessible Travel Route—Longwall Mining Section

13.01 An accessible travel route shall be maintained at all times off of the tailgate end of the retreat longwall working face.

However, the operator may develop a plan for approval, by the Department of mines to continue operation of the longwall working section in the event the tailgate route becomes impassable. Such plan shall include necessary provisions to be taken to provide additional protective devices for longwall section personnel.

When the tailgate travel routes become impassable the longwall operation shall cease immediately and all persons working on such longwall section shall be familiarized of the procedures to follow for escape from such section. Such approved plan by the Department of Mines shall be implimented immediately.

The operator shall immediately notify the Department of Mines when such travel route becomes impassable.

The Department of Mines representative shall immediately upon notification establish a scheduled meeting with the operator and representatives of the miners at such mine.

Section 14. Training—Longwall Mining Section

14.01 Training programs in the hazards of longwall mining shall be submitted for approval to the Director of the Department of Mines.

The training program shall consist of the following:

(A) Escapeway and Travel Routes
(B) Ventilation
(C) Roof Support
(D) Communications
(E) Stop Controls and Signals
(F) Location of First-Aid Equipment
(G) Safety Rules for Longwall Mining

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

DEPARTMENT OF MINES

CHAPTER 22-4

SERIES 18

SUBJECT: RULES AND REGULATIONS GOVERNING SHORTWALL MINING WITHIN THE STATE OF WEST VIRGINIA

PROMULGATED
REGULATION

PUBLIC NOTICE MAILING LIST

1. Clarksburg Publishing Company
   Clarksburg Exponent and Telegram
   324-326 Hewes Avenue
   Clarksburg, West Virginia 26301

2. Inter-Mountain
   Post Office Box 1339
   Elkins, West Virginia 26241

3. Herald Dispatch
   946 Fifth Avenue
   Huntington, West Virginia 25720

4. Beckley Newspapers, Inc.
   Raleigh Register and Beckley Post-Herald
   Post Office Drawer P or R
   Beckley, West Virginia 25801

5. The Dominion Post
   Greer Building
   Morgantown, West Virginia 26505

6. The Ogden Newspapers, Inc.
   Wheeling News Register and Intelligencer
   1500 Main Street
   Wheeling, West Virginia 26003

7. The Charleston Gazette
   Post Office Box 2993
   Charleston, West Virginia 25330