

WEST VIRGINIA
SECRETARY OF STATE
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ADMINISTRATIVE LAW DIVISION

Form #1

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OFFICE OF THE SECRETARY OF STATE

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

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

RULE TYPE: Administrative; CITE AUTHORITY 22-6-4

AMENDMENT TO AN EXISTING RULE: YES NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 43

TITLE OF RULE BEING PROPOSED: Rules and Regulations Governing
Remote Controlled Extended Or Deep-Cut Mining Operations

DATE OF PUBLIC HEARING: September 6, 1990 TIME: 10:00 AM

LOCATION OF PUBLIC HEARING: Air Pollution Control Building
1558 Washington Street, East
Charleston, WV 25311

COMMENTS LIMITED TO: ORAL , WRITTEN , BOTH

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS: Department of Energy

Attn: Tina Lilly

1615 Washington Street

Charleston, WV 25311

The Department requests that persons wishing to make comments at the hearing make an effort to submit written comments in order to facilitate the review of these comments.

The issues to be heard shall be limited to the proposed rule.

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

Stephen C. Edens

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
BOARD OF COAL MINE HEALTH AND SAFETY

TITLE 36 SERIES 43

TITLE: RULES AND REGULATIONS GOVERNING REMOTE CONTROLLED
EXTENDED OR DEEP-CUT MINING OPERATIONS

TITLE 36
LEGISLATIVE RULES
BOARD OF COAL MINE HEALTH AND SAFETY

SERIES 10
RULES AND REGULATIONS GOVERNING THE USE
OF AUTOMATED SYSTEMS

Title: Rules and Regulations Governing Remote Controlled Extended Or
Deep-Cut Mining Operations.

36.10.1 General:

1.1 Scope: These rules and regulations apply to all working sections of underground coal mines utilizing remote controlled continuous mining machines, mining extended cuts or deep-cuts to a depth of face penetration which exceeds a normal cut. These rules and regulations do not apply to working sections wherein the continuous mining machine is remotely operated and taking normal cuts nor are they applicable at underground mining operations utilizing full face or partial face extraction methods wherein the mine roof is permanently supported as the mining machine advances beyond a normal cut.

1.2 Authority: WV Code 22-6-4c

1.3 Filing Date: These rules and regulations were filed with the Secretary of State this _____ day of _____ 1990.

1.4 Effective Date:

2. Definition:

2.1 For purposes of these rules and regulations a normal cut is hereby defined as the projected depth of face penetration or coal extraction by a continuous mining machine, measured from the furthestmost point of the machine cutting drum to the machine operating controls.

3. Requirements for Remote Controlled Extended or Deep-Cut Mining Operations; Special Consideration of Roof Control and Mine Ventilation Plans; Roof Bolting Procedures; Additional Precautions for Increased worker safety.

3.1 Roof Control and Methane and Dust Control Plans and the compatibility of each system shall be established on a mine-by-mine basis.

3.2 During mining and place changing with remote control miners, all persons shall be positioned in an area that will afford protection to themselves and others from unsupported roof and moving equipment. The remote control unit shall not be placed on top of the mining machine and operated from this position.

3.3 All persons shall remain under permanently supported top at all times during the mining operations. While the remote controlled continuous miner is in operation extracting coal. In excess of a normal cut, no person shall proceed inby the next to last row of permanent supports, provided however, that the inby edge of the canopy of manned face haulage equipment may be advanced to the last row of permanent supports.

3.4 No person shall be inby the continuous miner operator's work position while coal is being mined unless he notifies the operator and can be located in a safe position. Exception: Equipment operator's transporting the material being cut/loaded.

3.5 In the event of a continuous miner breakdown that requires persons to go inby existing permanent roof support to make repairs, the unsupported area where practical, will be permanently supported and the remaining unsupported roof supported with temporary supports set on 5-foot centers lengthwise and crosswise where miners are present or working. However, to reset the continuous miner breaker, a minimum of two rows of temporary supports on five foot centers to the breaker will be required, unless the side of the machine where the breaker is located is five feet or less from the rib, one row of temporary supports located not more than five feet from the rib will be acceptable. The installation of temporary supports required by this section shall be performed under the direct supervision of a certified foreman.

3.6 A conspicuous reference mark or some other visual means shall be provided for the workers to determine when the maximum depth of cut is attained. (Chalk marks are not acceptable)

3.7 An approved ATRS System will be maintained and used during bolting operations.

3.8 When a sidecut is planned to be turned from any mine entry, permanent roof supports shall be installed inby the projected inby rib of the proposed sidecut for a distance of ten feet or totally supported in the distance is less.

3.9 Roof supports shall be installed in sequence and spacing specified in the approved roof control plan.

3.10 All openings of unsupported crosscuts shall be supported with at least two rows of temporary supports on 4-foot center (crosswise) across the openings prior to work or travel in the intersection. This does not prevent preshift and on shift examination.

3.11 When crosscuts, in excess of a normal cut are developed on a working section, no more than two open, unsupported adjacent crosscuts in direct line with one another shall be permitted.

3.12 Where adverse roof conditions are encountered, the depth of the cuts shall be reduced to a depth sufficient to effectively control the mine roof.

3.13 During the mining of a final push-out only those persons necessary shall be allowed in the area of the immediate intersection.

3.14 All remote control continuous miners shall be equipped with a strobe light or equivalent device to give warning when methane gas concentrations reach one percent or more. In addition, a device to remotely activate the fire suppression system and the water supply shall be provided on the remote control panel (unit) or at another remote location under supported roof.

3.15 Methane examinations shall be made according to the requirements of WV Code 22A-2-43.

3.16 Face ventilation shall be established according to the approved ventilation plan and WV Code 22A-2-24. Air quality measurements to determine compliance with this requirement may be taken at the end of the line brattice or tubing.

3.17 When the roof bolting cycle is started, the line brattice may be removed a sufficient distance to provide a safe work area and will be advanced as permanent supports are installed.

3.18 When flooded-bed scrubbers are used in conjunction with deep cut, remote mining, the scrubber screens shall be examined at least once each shift and cleaned if necessary. In addition, the entire scrubber will be examined after twenty four (24) production hours and cleaned if necessary.

REPORT AND RECOMMENDATIONS ON EXTENDED FACE "DEEP CUT" REMOTE MINING SUBMITTED TO THE BOARD OF COAL MINE HEALTH & SAFETY ON JULY 19, 1990, BY THE MINE SAFETY & TECHNICAL REVIEW COMMITTEE UNDER THE AUTHORITY OF WEST VIRGINIA CODE 22A-6-4(C)

Under the direction of the WV Mine Safety & Technical Review Committee, a Task Force on Remote Control, Extended Face Mining, commonly referred to as "deep cut" mining was commissioned in January of 1990 to review this mining method along with related hazards and any increased risk exposure associated with this form of mining. The Task Force was also charged with reviewing all existing laws, regulations and a representative number of mining plans establishing presently in place controls and affording safety protection to workers on deep cut mining sections and to make recommendations in those areas requiring special attention. Task Force members and their affiliations included: Jim Adkins, Cannelton; Dave Ashby, Peabody; Dave Camp, Consol; John O'Green, AEP; Gary Asher, UMW International (District 31); Rick Glover, UMW International (District 17); Eugene White, UMW International (District 17); and, Terry Osborne, UMW International (District 31).

The Task Force met on six separate occasions on the following dates: January 10, February 20, March 14, March 28 and May 2, 1990.

From 1985, when the state's first deep cut, continuous mining plan was approved there has been a steady growth in extended face, remote mining within the state. According to documents compiled by the Mine Safety & Health Administration, as of December 1989, three (3) mines in West Virginia/MSHA District 3 (Morgantown) and forty two (42) mines in West Virginia/MSHA District 4 (Mt. Hope) for a total of 45 West Virginia mines have approval to operate deep cut mining operations. Today, this mining method is still gaining in popularity due to its impressive safety performance record and overall efficiency, and even greater expansion of deep cut mining over the next years is reasonably likely.

And while it is well established that this particular mining method has numerous advantages over traditional methods from both a safety and productivity standpoint, however, as with any new form of mining, unique health and safety concerns are presented. In this regard and towards the fulfillment of its change, the Task Force examined the various tasks and miner positions involved with deep cut mining, environmental dangers from extended face penetration and its effect on roof stability, various cut sequences in the deep cut mining cycle, roof control and ventilation practices, procedures surrounding equipment malfunctioning and added safeguards to ensure miner safety.

Upon completion of its review and consideration of these factors, the Task Force has recommended and the MS&TRC hereby proposes for consideration, the attached draft rules and regulations governing deep cut remote control mining operations. These draft rules represent mandatory standards and contain a minimum level of operating standards providing for a maximum level of safety protection without needlessly restricting this method of mining.

The proposed regulations contains a scope provision establishing the purpose, applicability and limitations of the requirements. Also provided herewith is a section by section analysis giving further insight and explanation of the intent and purpose of each regulatory component. This document should accompany the draft rules throughout the rule-making process and remain part of the record to lend guidance to the enforcement and compliance efforts to follow.

Respectfully submitted on this 19th day of July, 1990.

SUB SECTION 2.1 Provides a definition of a normal cut.

SUB SECTION 3.1 is a general provision requiring that roof control plans and methane and dust control plans be compatible with each mine and mining system. WV Code 22A-2-25/26 establishes detailed requirements for roof control plans to be developed and approved. Regulatory provision 3.1, in part, reinforces the aforementioned statutory sections and further requires that roof control plans developed hereinafter take into account the unique roof or rib conditions as a result of extended face mining on a mine-by-mine basis. It should also be noted that this section does not require methane or dust control plans to be developed, but rather requires pertinent ventilation standards and gas and dust control measures under WV Code 22A-2-4/5 to be applied on a site specific basis contingent upon local conditions, ventilation controls utilized and extended face mining.

SUB SECTION 3.2 is a general equipment safety standard which provides increased protection from machine movements and unsupported mine roof. In addition, this provision prohibits machine operators from operating the machine in the remote mode with the control unit on top of the machine.

SUB SECTION 3.3 provides a greater degree of safety protection from roof falls in face regions during extended face cuts by prohibiting all persons from going inby the next to last row of permanent supports while the machine is operating. An exception is provided for haulage equipment operators who may advance in the place to a point where the inby edge of the machine's canopy is directly under the last row of supports in the place. These provisions are only applicable during remote mining beyond a normal cut and the requirement governing the advancement of haulage equipment additionally is only applicable if the haulage equipment utilized is manned.

SUB SECTION 3.4 is intended to facilitate better coordination of job functions between workers with particular emphasis on the location of workers, in conjunction with movements of the continuous mining machine. This provision specifically requires communications between miners and the miner operator if they intend to go inby the operator's location. Under this provision assurance must be provided from the person inby the operator that he is in the clear. Haulage equipment operators are exempt from this section while tramming equipment to be loaded or while tramming under load.

SUB SECTION 3.5 distinguishes and addresses two types of situations where mechanical malfunction exists with continuous mining machines while the machine is inby the last row of permanent supports. The first situation described is where the machine is broke down, needing repaired, in which case permanent supports are required where practicable. In addition temporary supports are to be installed on specified centers. The second situation addressed by this provision only entails resetting electrical breakers, which may be reset after the specified number of temporary supports are installed. In either case, a certified foreman is required by these rules to oversee the installation of all temporary supports pursuant to this requirement. It should also be noted that this section contemplates that circuit breakers located on power transformers and mining machines will be preset at the proper settings to minimize overload and breaker failure.

SUB SECTION 3.6 requires a means to verify when the appropriate depth of face penetration is obtained. While these rules and regulations do not expressly provide for a maximum distance of face penetration, it is typically determined on a site specific basis by roof conditions, mining equipment, ventilation systems and other factors, and should be identifiable by section personnel. In most mines the inby edge of the canopy of haulage equipment will satisfy this requirement.

SUB SECTION 3.7 requires the use of an ATRS system in conjunction with roof bolting operations in extended face areas without exception.

SUB SECTION 3.8 is intended to provide added protection to mining personnel from unsupported-extended face cuts while driving crosscuts from the same entry. This provision requires a specified zone of 10 ft. to be permanently supported before the crosscut is started.

SUB SECTION 3.9 reinforces the statutory requirements of complying with roof control plans as well as the importance of installing roof supports in proper sequence and specified centers for maximum roof control.

SUB SECTION 3.10 requires a set of "breaker" post across the opening of unsupported crosscuts before any person travels inby the crosscut. This section does not preclude examinations to be made of the inby entry or faces if the breaker posts are not installed in a timely manner nor are the "breaker" post required to be installed totally under unsupported top in the crosscut.

SUB SECTION 3.11 is intended to prevent roof failure of an excessive lineal distance or "rides" from occurring on active deep cut mining sections due to an excessive amount of unsupported mine roof. This provision disallows more than two (2) extended, unsupported crosscuts, directly in line with one another to exist. In order for this provision to apply, crosscuts must be open wherein the crosscut is completed, connecting two entries, be unsupported in their entirety and directly in line with one another.

SUB SECTION 3.12 addresses situations where adverse roof conditions are encountered by requiring the depth of face penetration to be adjusted to whatever depth becomes necessary in order to control the adverse roof conditions.

SUB SECTION 3.13 deals with pillar work and is intended to limit the number of people in the immediate face area while final push-outs or "stumps" are mined.

SUB SECTION 3.14 requires continuous mining machines to be equipped with a strobe light or other device to give a warning if methane gas levels reach 1%. If a means or device other than a strobe light is used, the methane warning must be clearly visible to the machine operator and must be distinguishable from all other light sources when activated. In addition the warning device (strobe or other) must contain a continuous visual signal, indicating that the warning device is operative.

SUB SECTION 3.15 requires gas examinations to meet compliance with WV Code 22A-2-43, and the mine ventilation plan approved by MSHA. It should also be noted that the task force, when fashioning this requirement, did not want to disrupt or precondition existing enforcement activities.

SUB SECTION 3.16 addresses face ventilation in a similar fashion by allowing face ventilation to be established according to the plan approved for the mine by MSHA and the relevant provisions of WV Code 22A-2-4. In addition, this provision clarifies that air measurements to determine compliance with Code Section 22A-2-4 may be taken at the end of the line brattice or ventilation tubing.

SUB SECTION 3.17 allows for the line brattice to be removed from the last row of permanent supports and for a sufficient distance to provide additional room for roof bolting machines to maneuver into the precise location for installing supports according to the approved support systems. This provision also requires that the line brattice be advanced systematically as the supports are installed.

SUB SECTION 3.18 establishes a maintenance and cleaning schedule for flooded-bed scrubbers when they are used in conjunction with deep-cut, remote mining operations.