

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.

**§ 75.220 Roof control plan.**

(a)(1) Each mine operator shall develop and follow a roof control plan, approved by the District Manager, 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 District Manager. When revisions to a roof control plan are proposed, only the revised pages need to be submitted unless otherwise specified by the District Manager.

(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 District Manager.

(3) Before new support materials, devices or systems other than roof bolts and accessories, are used as the only means of roof support, the District Manager 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 subpart C shall be revised to meet the requirements of this subpart C by September 28, 1988. This

paragraph (f) shall expire March 28, 1989.

[53 FR 2375, Jan. 27, 1988; 53 FR 11395, Apr. 6, 1988 as amended at 60 FR 33723, June 29, 1995]

**§ 75.221 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—

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

(ii) 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 10 feet below the coalbed; and

(iii) 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—

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

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

(iii) 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—

(i) From falling material at drift openings; and

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(ii) When mining approaches within 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 5 feet to the inch or more than 20 feet to the inch.

(c) All roof control plan information, including drawings, shall be submitted on 8½ by 11 inch paper, or paper folded to this size.

[53 FR 2375, Jan. 27, 1988, as amended at 60 FR 33723, June 29, 1995]

### § 75.222 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 District Manager. Roof control plans that do not conform to the applicable criteria in this section may be approved by the District Manager, 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 5 feet lengthwise and crosswise, except as specified in § 75.205.

(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 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 20 feet wide should be supported by a combination of roof bolts and conventional supports.

(4) In any opening more than 20 feet wide—

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

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

(5) Openings should not be more than 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 in-

stalled on at least 5-foot centers where the work is performed.

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

(d) *Pillar recovery.* (1) During development, any dimension of a pillar should be at least 20 feet.

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

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

(4) Roadside-radius (turn) posts, or equivalent support, should be installed on not more than 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 16 feet wide, at least one row of posts should be installed to limit the roadway width to 16 feet. These posts should be—

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

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

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

(f) *ATRS systems in working sections where the mining height is below 30 inches.* In working sections where the mining height is below 30 inches, an ATRS system should be used to the extent practicable during the installation of roof bolts with roof bolting machines and continuous-mining machines with integral roof bolters.

(g) *Longwall mining systems.* (1) Systematic supplemental support should be installed throughout—

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

(ii) 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