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- (b) When manually installing temporary supports, the first temporary support shall be set no more than 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 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 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.

§ 75.211 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.

§ 75.212 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 5-foot centers, or equally effective support.

§75.213 Roof support removal.

- (a)(1) All persons who perform the work of removing permanent roof supports shall be supervised by a management person experienced in removing roof supports.
- (2) Only persons with at least one year of underground mining experience shall perform permanent roof support removal work.
- (b) Prior to the removal of permanent roof supports, the person supervising roof support removal in accordance with paragraph (a)(1) of this section shall examine the roof conditions in the area where the supports are to be removed and designate each support to be removed.
- (c)(1) Except as provided in paragraph (g) of this section, prior to the removal

of permanent supports, a row of temporary supports on no more than 5-foot centers or equivalent support shall be installed across the opening within 4 feet of the supports being removed. Additional supports shall be installed where necessary to assure safe removal.

- (2) Prior to the removal of roof bolts, temporary support shall be installed as close as practicable to each roof bolt being removed.
- (d) Temporary supports installed in accordance with this section shall not be removed unless—
- (1) Removal is done by persons who are in a remote location under supported roof; and
- (2) At least two rows of temporary supports, set across the opening on no more than 5-foot centers, are maintained between the miners and the unsupported area.
- (e) Each entrance to an area where supports have 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 as provided in paragraph (g) of this section, permanent support shall not be removed where—
- (1) Roof bolt torque or tension measurements or the condition of conventional support indicate excessive loading:
 - (2) Roof fractures are present;
- (3) There is any other indication that the roof is structurally weak; or
- (4) Pillar recovery has been conducted.
- (g) Permanent supports may be removed provided that:
- (1) Removal is done by persons who are in a remote location under supported roof; and
- (2) At least two rows of temporary supports, set across the opening on no more than 5-foot centers, are maintained between the miners and the unsupported area.
- (h) The provisions of this section do not apply to removal of conventional supports for starting crosscuts and pillar splits or lifts except that prior to the removal of these supports an examination of the roof conditions shall be made.

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§75.214 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 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.

§75.215 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.

§ 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