



Enforcement Summary: Falls of Roof and Rib Fatalities in Coal Mines

From January 1, 2000, through December 31, 2008, 53 fatalities resulted from accidents in which individuals were struck by falling roof rock or rib in coal mines.¹ A description of frequently cited standards and the tragic consequences of noncompliance follows below.²

30 C.F.R. § 75.202(a) requires that the roof, face and ribs of areas where persons work or travel be supported or otherwise controlled to protect persons from hazards related to falls of the roof, face or ribs and coal or rock bursts.

Miners were fatally injured when:

- roof, face and rib areas were not adequately supported or controlled.

30 C.F.R. § 75.202(b) provides that no person shall work or travel under unsupported roof.

Miners were fatally injured when:

- they traveled under unsupported roof in violation of this standard.

30 C.F.R. § 75.220(a)(1) requires each mine operator to develop and follow a roof control plan that is approved by the District Manager and that is suitable to the prevailing geological conditions and the mining system to be used at the mine. The standard also requires that additional measures be taken to protect persons if unusual hazards are encountered.

Miners were fatally injured when:

- mine operators violated one or more provisions of the respective approved roof control plans;
- supplemental roof support was not installed, nor additional measures taken, when adverse roof conditions were encountered;
- they were positioned in areas prohibited by the respective approved roof control plan, including three fatalities that occurred when miners were located between the first and second rows of permanent roof support during deep-cut mining in violation of the roof control plan;
- retreat mining was not conducted in accordance with the respective approved roof control plans, including unsafe operation of mobile roof support (MRS) units;
- roof bolt spacing exceeded the spacing specified in the respective approved roof control plan(s);
- the cut depths exceeded the values specified in the respective approved roof control plans;
- warning devices were not installed on the next to last row of roof bolts in violation of the respective approved roof control plans.

¹ Fatalities associated with major roof fall disasters were not included in this analysis.

² In many cases noncompliance with more than one standard contributed to the fatal accidents. These frequently cited standards are not the only standards cited for this accident category.

Training is a key factor in preventing conditions that contribute to fatal accidents. While this standard is not one of the Rules to Live By priority standards, operators and miners are reminded that:

30 C.F.R. § 48.7(a) requires that miners assigned new work tasks as mobile equipment operators, haulage and conveyor systems operators, roof and ground control machine operators, and those in blasting operations for which they have not been trained and for which they have not demonstrated safe operating procedures for such new work tasks within 12 months preceding the assignment or for which they do not have previous experience and for which they have not demonstrated safe operating procedures for such new work tasks within 12 months preceding the assignment, be provided with the training outlined in that standard.

Miners were fatally injured when:

- they were assigned to operate MRS units without having been adequately trained in all the safe operating procedures related to their new tasks.