

of the borehole in a continuous column with no cartridge being deliberately crushed or deformed.

(e) An explosive shall not be loaded into a borehole if it is damaged, deteriorated or if the cartridge is incompletely filled.

(f) Explosives of different brands, types or cartridge diameters shall not be loaded in the same borehole.

(g) Only nonconductive, nonsparking tamping poles shall be used for loading and tamping boreholes. The use of nonsparking connecting devices for extendable tamping poles is permitted.

[53 FR 46786, Nov. 18, 1988; 54 FR 888, Jan. 10, 1989]

§ 75.1319 Weight of explosives permitted in boreholes in bituminous and lignite mines.

(a) The total weight of explosives loaded in any borehole in bituminous and lignite mines shall not exceed 3 pounds except when blasting solid rock in its natural deposit.

(b) The total weight of explosives loaded in a borehole less than 6 feet deep in bituminous and lignite mines shall be reduced by ½ pound for each foot of borehole less than 6 feet.

§ 75.1320 Multiple-shot blasting.

(a) No more than 20 boreholes shall be fired in a round unless permitted in writing by the District Manager under § 75.1321.

(b) Instantaneous detonators shall not be used in the same circuit with delay detonators in any underground coal mine.

(c) In bituminous and lignite mines, only detonators with delay periods of 1,000 milliseconds or less shall be used.

(d) When blasting in anthracite mines, each borehole in a round shall be initiated in sequence from the opener hole or holes.

(e) Arrangement of detonator delay periods for bituminous and lignite mines shall be as follows:

(1) When blasting cut coal—

(i) The first shot or shots fired in a round shall be initiated in the row nearest the kerf or the row or rows nearest the shear; and

(ii) After the first shot or shots, the interval between the designated delay periods of successive shots shall be at

least 50 milliseconds but not more than 100 milliseconds.

(2) When blasting coal off the solid—

(i) Each shot in the round shall be initiated in sequence from the opener hole or holes; and

(ii) After the first shot or shots, the interval between the designated delay periods of successive shots shall be at least 50 milliseconds but not more than 100 milliseconds.

§ 75.1321 Permits for firing more than 20 boreholes and for use of nonpermissible blasting units.

(a) Applications for permits for firing more than 20 boreholes in a round and for the use of nonpermissible blasting units shall be submitted in writing to the District Manager for the district in which the mine is located and shall contain the following information:

(1) The name and address of the mine;

(2) The active workings in the mine affected by the permit and the approximate number of boreholes to be fired;

(3) The period of time during which the permit will apply;

(4) The nature of the development or construction for which they will be used, e.g., overcasts, undercasts, track grading, roof brushing or boom holes;

(5) A plan, proposed by the operator designed to protect miners in the mine from the hazards of methane and other explosive gases during each multiple shot, e.g., changes in the mine ventilation system, provisions for auxiliary ventilation and any other safeguards necessary to minimize such hazards;

(6) A statement of the specific hazards anticipated by the operator in blasting for overcasts, undercasts, track grading, brushing of roof, boom holes or other unusual blasting situations such as coalbeds of abnormal thickness; and

(7) The method to be employed to avoid the dangers anticipated during development or construction which will ensure the protection of life and the prevention of injuries to the miners exposed to such underground blasting.

(b) The District Manager may permit the firing of more than 20 boreholes of permissible explosives in a round where he has determined that it is necessary to reduce the overall hazard to which miners are exposed during underground