

connected. Safety fuse, igniter cord, detonating cord, shock or gas tubing, and similar material which is kinked, bent sharply, or damaged shall not be used.

**§ 57.6501 Nonelectric initiation systems.**

(a) When the nonelectric initiation system uses shock tube—

(1) Connections with other initiation devices shall be secured in a manner which provides for uninterrupted propagation;

(2) Factory-made units shall be used as assembled and shall not be cut except that a single splice is permitted on the lead-in trunkline during dry conditions; and

(3) Connections between blastholes shall not be made until immediately prior to clearing the blast site when surface delay detonators are used.

(b) When the nonelectric initiation system uses detonating cord—

(1) The line of detonating cord extending out of a blasthole shall be cut from the supply spool immediately after the attached explosive is correctly positioned in the hole;

(2) In multiple row blasts, the trunkline layout shall be designed so that the detonation can reach each blasthole from at least two directions;

(3) Connections shall be tight and kept at right angles to the trunkline;

(4) Detonators shall be attached securely to the side of the detonating cord and pointed in the direction in which detonation is to proceed;

(5) Connections between blastholes shall not be made until immediately prior to clearing the blast site when surface delay detonators are used; and

(6) Lead-in lines shall be manually unreeled if connected to the trunklines at the blast site.

(c) When nonelectric initiation systems use gas tube, continuity of the circuit shall be tested prior to blasting.

**§ 57.6502 Safety fuse.**

(a) The burning rate of each spool of safety fuse to be used shall be measured, posted in locations which will be conspicuous to safety fuse users, and brought to the attention of all persons involved with the blasting operation.

(b) When firing with safety fuse ignited individually using handheld lighters, the safety fuse shall be of lengths which provide at least the minimum burning time for a particular size round, as specified in the following table:

TABLE E-1—SAFETY FUSE—MINIMUM BURNING TIME

Number of holes in a round	Minimum burning time
1 .....	2 min. <sup>1</sup>
2-5 .....	2 min. 40 sec.
6-10 .....	3 min. 20 sec.
11 to 15 .....	5 min.

<sup>1</sup>For example, at least a 36-inch length of 40-second-per-foot safety fuse or at least a 48-inch length of 30-second-per-foot safety fuse would have to be used to allow sufficient time to evacuate the area.

(c) Where flyrock might damage exposed safety fuse, the blast shall be timed so that all safety fuses are burning within the blastholes before any blasthole detonates.

(d) Fuse shall be cut and capped in dry locations.

(e) Blasting caps shall be crimped to fuse only with implements designed for that purpose.

(f) Safety fuse shall be ignited only after the primer and the explosive material are securely in place.

(g) Safety fuse shall be ignited only with devices designed for that purpose. Carbide lights, liquefied petroleum gas torches, and cigarette lighters shall not be used to light safety fuse.

(h) At least two persons shall be present when lighting safety fuse, and no one shall light more than 15 individual fuses. If more than 15 holes per person are to be fired, electric initiation systems, igniter cord and connectors, or other nonelectric initiation systems shall be used.

**EXTRANEIOUS ELECTRICITY—  
SURFACE AND UNDERGROUND**

**§ 57.6600 Loading practices.**

If extraneous electricity is suspected in an area where electric detonators are used, loading shall be suspended until tests determine that stray current does not exceed 0.05 amperes through a 1-ohm resistor when measured at the location of the electric detonators. If greater levels of extraneous electricity are found, the source shall