Mine Safety and Health Admin., Labor

§ 57.6602 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>
<thead>
<tr>
<th>Number of holes in a round</th>
<th>Minimum burning time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 min.¹</td>
</tr>
<tr>
<td>2-5</td>
<td>2 min. 40 sec.</td>
</tr>
<tr>
<td>6-10</td>
<td>3 min. 20 sec.</td>
</tr>
<tr>
<td>11 to 15</td>
<td>5 min.</td>
</tr>
</tbody>
</table>

¹For 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.

§ 57.6604 Precautions during storms.

(a) Surface blasting operations shall be suspended and persons withdrawn during the approach and progress of an electrical storm.
from the blast area or to a safe location; or
(b) Underground electrical blasting operations that are capable of being initiated by lightning shall be suspended and all persons withdrawn from the blast area or to a safe location.

§ 57.6605 Isolation of blasting circuits.
Lead wires and blasting lines shall be isolated and insulated from power conductors, pipelines, and railroad tracks, and shall be protected from sources of stray or static electricity. Blasting circuits shall be protected from any contact between firing lines and overhead powerlines which could result from the force of a blast.

EQUIPMENT/TOOLS—SURFACE AND UNDERGROUND

§ 57.6700 Nonsparking tools.
Only nonsparking tools shall be used to open containers of explosive material or to punch holes in explosive cartridges.

§ 57.6701 Tamping and loading pole requirements.
Tamping and loading poles shall be of wood or other nonconductive, nonsparking material. Couplings for poles shall be nonsparking.

MAINTENANCE—SURFACE AND UNDERGROUND

§ 57.6800 Storage facilities.
When repair work which could produce a spark or flame is to be performed on a storage facility—
(a) The explosive material shall be moved to another facility, or moved at least 50 feet from the repair activity and monitored; and
(b) The facility shall be cleaned to prevent accidental detonation.

§ 57.6801 Vehicle repair.
Vehicles containing explosive material and oxidizers shall not be taken into a repair garage or shop.

§ 57.6802 Bulk delivery vehicles.
No welding or cutting shall be performed on a bulk delivery vehicle until the vehicle has been washed down and all explosive material has been removed. Before welding or cutting on a hollow shaft, the shaft shall be thoroughly cleaned inside and out and vented with a minimum ½-inch diameter opening to allow for sufficient ventilation.

§ 57.6803 Blasting lines.
Permanent blasting lines shall be properly supported. All blasting lines shall be insulated and kept in good repair.

GENERAL REQUIREMENTS—SURFACE AND UNDERGROUND

§ 57.6900 Damaged or deteriorated explosive material.
Damaged or deteriorated explosive material shall be disposed of in a safe manner in accordance with the instructions of the manufacturer.

§ 57.6901 Black powder.
(a) Black powder shall be used for blasting only when a desired result cannot be obtained with another type of explosive, such as in quarrying certain types of dimension stone.
(b) Containers of black powder shall be—
(1) Nonsparking;
(2) Kept in a totally enclosed cargo space while being transported by a vehicle;
(3) Securely closed at all times when—
(i) Within 50 feet of any magazine or open flame;
(ii) Within any building in which a fuel-fired or exposed-element electric heater is operating; or
(iii) In an area where electrical or incandescent-particle sparks could result in powder ignition; and
(4) Opened only when the powder is being transferred to a blasthole or another container and only in locations not listed in paragraph (b)(3) of this section.
(c) Black powder shall be transferred from containers only by pouring.
(d) Spills shall be cleaned up promptly with nonsparking equipment. Contaminated powder shall be put into a container of water and shall be disposed of promptly after the granules have disintegrated, or the spill area shall be flushed promptly with water.