§ 57.6604 Extraordinary Electricity—Surface and Underground

§ 57.6600 Loading practices.

If extraordinary 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 extraordinary electricity are found, the source shall be determined and no loading shall take place until the condition is corrected.

§ 57.6601 Grounding.

Electric blasting circuits, including powerline sources when used, shall not be grounded.

§ 57.6602 Static electricity dissipation during loading.

When explosive material is loaded pneumatically into a blasthole in a manner that generates a static electricity hazard—

(a) An evaluation of the potential static electricity hazard shall be made and any hazard shall be eliminated before loading begins;

(b) The loading hose shall be of a semiconductive type, have a total of not more than 2 megohms of resistance over its entire length and not less than 1000 ohms of resistance per foot;

(c) Wire-countered hoses shall not be used;

(d) Conductive parts of the loading equipment shall be bonded and grounded and grounds shall not be made to other potential sources of extraordinary electricity; and

(e) Plastic tubes shall not be used as hole liners if the hole contains an electric detonator.

§ 57.6603 Air gap.

At least a 15-foot air gap shall be provided between the blasting circuit and the electric power source.

§ 57.6604 Precautions during storms.

During the approach and progress of an electrical storm—

(a) Surface blasting operations shall be suspended and persons withdrawn
§ 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.

§ 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.

§ 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.

§ 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.

(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.