

**Mine Safety and Health Admin., Labor**

**§ 77.600**

**§ 77.506-1 Electric equipment and circuits; overload and short circuit protection; minimum requirements.**

Devices providing either short circuit protection or protection against overload shall conform to the minimum requirements for protection of electric circuits and equipment of the National Electric Code, 1968.

**§ 77.507 Electric equipment; switches.**

All electric equipment shall be provided with switches or other controls that are safely designed, constructed, and installed.

**§ 77.508 Lightning arresters, ungrounded and exposed power conductors and telephone wires.**

All ungrounded, exposed power conductors and telephone wires shall be equipped with suitable lightning arresters which are adequately installed and connected to a low resistance grounding medium.

**§ 77.508-1 Lightning arresters; wires entering buildings.**

Lightning arresters protecting exposed telephone wires entering buildings shall be provided at the point where each such telephone wire enters the building.

**§ 77.509 Transformers; installation and guarding.**

(a) Transformers shall be of the totally enclosed type, or shall be placed at least 8 feet above the ground, or installed in a transformer house, or surrounded by a substantial fence at least 6 feet high and at least 3 feet from any energized parts, casings, or wiring.

(b) Transformer stations shall be enclosed to prevent persons from unintentionally or inadvertently contacting energized parts.

(c) Transformer enclosures shall be kept locked against unauthorized entry.

**§ 77.510 Resistors; location and guarding.**

Resistors, heaters, and rheostats shall be located so as to minimize fire hazards and, where necessary, provided with guards to prevent personal contact.

**§ 77.511 Danger signs at electrical installations.**

Suitable danger signs shall be posted at all major electrical installations.

**§ 77.512 Inspection and cover plates.**

Inspection and cover plates on electrical equipment shall be kept in place at all times except during testing or repairs.

**§ 77.513 Insulating mats at power switches.**

Dry wooden platforms, insulating mats, or other electrically nonconductive material shall be kept in place at all switchboards and power-control switches where shock hazards exist. However, metal plates on which a person normally would stand and which are kept at the same potential as the grounded, metal, non-current-carrying parts of the power switches to be operated may be used.

**§ 77.514 Switchboards; passageways and clearance.**

Switchboards shall be installed to provide passageways or lanes of travel which permit access to the back of the switchboard from both ends for inspection, adjustment or repair. Openings permitting access to the rear of any switchboard shall be guarded, except where they are located in buildings which are kept locked.

**§ 77.515 Bare signal or control wires; voltage.**

The voltage on bare signal or control wires accessible to personal contact shall not exceed 40 volts.

**§ 77.516 Electric wiring and equipment; installation and maintenance.**

In addition to the requirements of §§ 77.503 and 77.506, all wiring and electrical equipment installed after June 30, 1971, shall meet the requirements of the National Electric Code in effect at the time of installation.

**Subpart G—Trailing Cables**

**§ 77.600 Trailing cables; short-circuit protection; disconnecting devices.**

Short-circuit protection for trailing cables shall be provided by an automatic circuit breaker or other no less