

good repair to prevent accidents and injuries to employees.

**§ 77.201 Methane content in surface installations.**

The methane content in the air of any structure, enclosure or other facility shall be less than 1.0 volume per centum.

**§ 77.201-1 Tests for methane; qualified person; use of approved device.**

Tests for methane in structures, enclosures, or other facilities, in which coal is handled or stored shall be conducted by a qualified person with a device approved by the Secretary at least once during each operating shift, and immediately prior to any repair work in which welding or an open flame is used, or a spark may be produced.

**§ 77.201-2 Methane accumulations; change in ventilation.**

If, at any time, the air in any structure, enclosure or other facility contains 1.0 volume per centum or more of methane changes or adjustments in the ventilation of such installation shall be made at once so that the air shall contain less than 1.0 volume per centum of methane.

**§ 77.202 Dust accumulations in surface installations.**

Coal dust in the air of, or in, or on the surfaces of, structures, enclosures, or other facilities shall not be allowed to exist or accumulate in dangerous amounts.

**§ 77.203 Use of material or equipment overhead; safeguards.**

Where overhead repairs are being made at surface installations and equipment or material is taken into such overhead work areas, adequate protection shall be provided for all persons working or passing below the overhead work areas in which such equipment or material is being used.

**§ 77.204 Openings in surface installations; safeguards.**

Openings in surface installations through which men or material may fall shall be protected by railings, barriers, covers or other protective devices.

**§ 77.205 Travelways at surface installations.**

(a) Safe means of access shall be provided and maintained to all working places.

(b) Travelways and platforms or other means of access to areas where persons are required to travel or work, shall be kept clear of all extraneous material and other stumbling or slipping hazards.

(c) Inclined travelways shall be constructed of nonskid material or equipped with cleats.

(d) Regularly used travelways shall be sanded, salted, or cleared of snow and ice as soon as practicable.

(e) Crossovers, elevated walkways, elevated ramps, and stairways shall be of substantial construction, provided with handrails, and maintained in good condition. Where necessary toeboards shall be provided.

(f) Crossovers shall be provided where it is necessary to cross conveyors.

(g) Moving conveyors shall be crossed only at designated crossover points.

**§ 77.206 Ladders; construction; installation and maintenance.**

(a) Ladders shall be of substantial construction and maintained in good condition.

(b) Wooden members of ladders shall not be painted.

(c) Steep or vertical ladders which are used regularly at fixed locations shall be anchored securely and provided with backguards extending from a point not more than 7 feet from the bottom of the ladder to the top of the ladder.

(d) Fixed ladders shall not incline backwards at any point unless provided with backguards.

(e) Fixed ladders shall be anchored securely and installed to provide at least 3 inches of toe clearance.

(f) Fixed ladders shall project at least 3 feet above landings, or substantial handholds shall be provided above the landings.

**§ 77.207 Illumination.**

Illumination sufficient to provide safe working conditions shall be provided in and on all surface structures, paths, walkways, stairways, switch