

## **§ 57.11016**

### **§ 57.11016 Snow and ice on walkways and travelways.**

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

### **§ 57.11017 Inclined fixed ladders.**

Fixed ladders shall not incline backwards.

#### **TRAVELWAYS—SURFACE ONLY**

### **§ 57.11025 Railed landings, backguards, and other protection for fixed ladders.**

Fixed ladders, except on mobile equipment, shall be offset and have substantial railed landings at least every 30 feet unless backguards or equivalent protection such as safety belts and safety lines, are provided.

### **§ 57.11026 Protection for inclined fixed ladders.**

Fixed ladders 70 degrees to 90 degrees from the horizontal and 30 feet or more in length shall have backguards, cages or equivalent protection, starting at a point not more than seven feet from the bottom of the ladders.

### **§ 57.11027 Scaffolds and working platforms.**

Scaffolds and working platforms shall be of substantial construction and provided with handrails and maintained in good condition. Floorboards shall be laid properly and the scaffolds and working platform shall not be overloaded. Working platforms shall be provided with toeboards when necessary.

#### **TRAVELWAYS—UNDERGROUND ONLY**

### **§ 57.11036 Ladderway trap doors and guards.**

Trap doors or adequate guarding shall be provided in ladderways at each level. Doors shall be kept operable.

### **§ 57.11037 Ladderway openings.**

Ladderways constructed after November 15, 1979, shall have a minimum unobstructed cross-sectional opening of 24 inches by 24 inches measured from the face of the ladder.

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### **§ 57.11038 Entering a manway.**

Before entering a manway where persons may be working or traveling, a warning shall be given by the person entering the manway and acknowledged by any person present in the manway.

### **§ 57.11040 Inclined travelways.**

Travelways steeper than 35 degrees from the horizontal shall be provided with ladders or stairways.

### **§ 57.11041 Landings for inclined ladderways.**

Fixed ladders with an inclination of more than 70 degrees from the horizontal shall be offset with substantial landings at least every 30 feet or have landing gates at least every 30 feet.

#### **ESCAPEWAYS—UNDERGROUND ONLY**

### **§ 57.11050 Escapeways and refuges.**

(a) Every mine shall have two or more separate, properly maintained escapeways to the surface from the lowest levels which are so positioned that damage to one shall not lessen the effectiveness of the others. A method of refuge shall be provided while a second opening to the surface is being developed. A second escapeway is recommended, but not required, during the exploration or development of an ore body.

(b) In addition to separate escapeways, a method of refuge shall be provided for every employee who cannot reach the surface from his working place through at least two separate escapeways within a time limit of one hour when using the normal exit method. These refuges must be positioned so that the employee can reach one of them within 30 minutes from the time he leaves his workplace.

### **§ 57.11051 Escape routes.**

Escape routes shall be—

(a) Inspected at regular intervals and maintained in safe, travelable condition; and

(b) Marked with conspicuous and easily read direction signs that clearly indicate the ways of escape.

### **§ 57.11052 Refuge areas.**

Refuge areas shall be—

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(a) Of fire-resistant construction, preferably in untimbered areas of the mine;

(b) Large enough to accommodate readily the normal number of persons in the particular area of the mine;

(c) Constructed so they can be made gastight; and

(d) Provided with compressed air lines, waterlines, suitable handtools, and stopping materials.

**§57.11053 Escape and evacuation plans.**

A specific escape and evacuation plan and revisions thereof suitable to the conditions and mining system of the mine and showing assigned responsibilities of all key personnel in the event of an emergency shall be developed by the operator and set out in written form. Within 45 calendar days after promulgation of this standard a copy of the plan and revisions thereof shall be available to the Secretary or his authorized representative. Also, copies of the plan and revisions thereof shall be posted at locations convenient to all persons on the surface and underground. Such a plan shall be updated as necessary and shall be reviewed jointly by the operator and the Secretary or his authorized representative at least once every six months from the date of the last review. The plan shall include:

(a) Mine maps or diagrams showing directions of principal air flow, location of escape routes and locations of existing telephones, primary fans, primary fan controls, fire doors, ventilation doors, and refuge chambers. Appropriate portions of such maps or diagrams shall be posted at all shaft stations and in underground shops, lunchrooms, and elsewhere in working areas where persons congregate;

(b) Procedures to show how the miners will be notified of emergency;

(c) An escape plan for each working area in the mine to include instructions showing how each working area should be evacuated. Each such plan shall be posted at appropriate shaft stations and elsewhere in working areas where persons congregate;

(d) A fire fighting plan;

(e) Surface procedure to follow in an emergency, including the notification of proper authorities, preparing rescue

equipment, and other equipment which may be used in rescue and recovery operations; and

(f) A statement of the availability of emergency communication and transportation facilities, emergency power and ventilation and location of rescue personnel and equipment.

[50 FR 4082, Jan. 29, 1985, as amended at 60 FR 33722, June 29, 1995]

**§57.11054 Communication with refuge chambers.**

Telephone or other voice communication shall be provided between the surface and refuge chambers and such systems shall be independent of the mine power supply.

**§57.11055 Inclined escapeways.**

Any portion of a designated escapeway which is inclined more than 30 degrees from the horizontal and that is more than 300 feet in vertical extent shall be provided with an emergency hoisting facility.

**§57.11056 Emergency hoists.**

The procedure for inspection, testing and maintenance required by standard 57.19120 shall be utilized at least every 30 days for hoists designated as emergency hoists in any evacuation plan.

**§57.11058 Check-in, check-out system.**

Each operator of an underground mine shall establish a check-in and check-out system which shall provide an accurate record of persons in the mine. These records shall be kept on the surface in a place chosen to minimize the danger of destruction by fire or other hazards. Every person underground shall carry a positive means of being identified.

**§57.11059 Respirable atmosphere for hoist operators underground.**

For the protection of operators of hoists located underground which are part of the mine escape and evacuation plan required under standard 57.11053, the hoist operator shall be provided with a respirable atmosphere completely independent of the mine atmosphere. This independent ventilation system shall convert, without contamination, to an approved and properly maintained 2-hour self-contained