

a flammable vapor-air mixture at atmospheric pressure.

(s) *Low voltage* means up to and including 660 volts, *medium voltage* means voltages from 661 to 1,000 volts, and *high voltage* means more than 1,000 volts.

(t) *Misfire* means the complete or partial failure of a blasting charge to explode as planned.

(u) *Primer* or *Booster* means a package or cartridge of explosive which is designed specifically to transmit detonation to other explosives and which does not contain a detonator.

(v) *Qualified person* means, as the context requires,

(1) An individual deemed qualified by the Secretary and designated by the operator to make tests and examinations required by this Part 77; and,

(2) An individual deemed, in accordance with the minimum requirements to be established by the Secretary, qualified by training, education, and experience, to perform electrical work, to maintain electrical equipment, and to conduct examinations and make tests of all electrical equipment.

(w) *Roll protection* means a framework, safety canopy, or similar protection for the operator when equipment overturns.

(x) *Safety can* means an approved container, of not over 5 gallons capacity, having a spring-closing lid and spout cover.

(y) *Safety fuse* means a train of powder enclosed in cotton, jute yarn, and waterproofing compounds, which burns at a uniform rate; used for firing a cap containing the detonating compound which in turn sets off the explosive charge.

(z) *Safety switch* means a sectionalizing switch that also provides shunt protection in blasting circuits between the blasting switch and the shot area.

(aa) *Secretary* means the Secretary of Labor or his delegate.

[36 FR 9364, May 22, 1971, as amended at 43 FR 12320, Mar. 24, 1978]

### Subpart B—Qualified and Certified Persons

#### § 77.100 Certified person.

(a)(1) The provisions of this Part 77 require that certain examinations and

tests be made by a certified person. A certified person within the meaning of these provisions is a person who has been certified in accordance with the provisions of paragraph (b) of this § 77.100 to perform the duties, and make the examinations and tests which are required by this Part 77 to be performed by a certified person.

(2) A person who has been so certified shall also be considered to be a qualified person within the meaning of those provisions of this Part 77 which require that certain examinations, tests and duties be performed by a qualified person, except those provisions in Subparts F, G, H, I, and J of this part relating to performance of electrical work.

(b) Pending issuance of Federal standards, a person will be considered, to the extent of the certification, a certified person to make examinations, tests and perform duties which are required by this Part 77 to be performed by a certified person:

(1) If he has been certified for such purpose by the State in which the coal mine is located; or

(2) If this person has been certified for such purpose by the Secretary. A person's initial certification is valid for as long as the person continues to satisfy the requirements necessary to obtain the certification and is employed at the same coal mine or by the same independent contractor. The mine operator or independent contractor shall make an application which satisfactorily shows that each such person has had at least 2 years experience at a coal mine or equivalent experience, and that each such person demonstrates to the satisfaction of an authorized representative of the Secretary that such person is able and competent to test for oxygen deficiency with a permissible flame safety lamp, or any other device approved by the Secretary and to test for methane with a portable methane detector approved by the Bureau of Mines, MESA, or MSHA, under Part 22 of this Chapter (Bureau of Mines Schedule 8C), and to perform such other duties for which application for certification is made. Applications for certification by the Secretary should be submitted in writing

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to the Mine Safety and Health Administration, Certification and Qualification Center, P.O. Box 25367, Denver Federal Center, Denver, Colorado 80225.

[36 FR 9364, May 22, 1971, as amended at 43 FR 12320, Mar. 24, 1978; 54 FR 30515, July 20, 1989]

### § 77.101 Tests for methane and for oxygen deficiency; qualified person.

(a) The provisions of Subparts C, P, R, and T of this Part 77 require that tests for methane and for oxygen deficiency be made by a qualified person. A person is a qualified person for these purposes if he is a certified person for such purposes under § 77.100.

(b) Pending issuance of Federal standards, a person will be considered a qualified person for testing for methane and oxygen deficiency:

(1) If he has been qualified for this purpose by the State in which the coal mine is located; or

(2) If he has been qualified by the Secretary for these purposes upon a satisfactory showing by the operator of the coal mine that each such person has been trained and designated by the operator to test for methane and oxygen deficiency. Applications for Secretarial qualification should be submitted in writing to the Mine Safety and Health Administration, Certification and Qualification Center, P.O. Box 25367, Denver Federal Center, Denver, Colo. 80225

[36 FR 9364, May 22, 1971, as amended at 43 FR 12320, Mar. 24, 1978]

### § 77.102 Tests for methane; oxygen deficiency; qualified person, additional requirement.

Notwithstanding the provisions of § 77.101, on and after December 30, 1971, no person shall be a qualified person for testing for methane and oxygen deficiency unless he has demonstrated to the satisfaction of an authorized representative of the Secretary that he is able and competent to make such tests and the Mine Safety and Health Administration has issued him a current card which qualifies him to make such tests.

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### § 77.103 Electrical work; qualified person.

(a) Except as provided in paragraph (f) of this section, an individual is a qualified person within the meaning of Subparts F, G, H, I, and J of this Part 77 to perform electrical work (other than work on energized surface high-voltage lines) if:

(1) He has been qualified as a coal mine electrician by a State that has a coal mine electrical qualification program approved by the Secretary; or,

(2) He has at least 1 year of experience in performing electrical work underground in a coal mine, in the surface work areas of an underground coal mine, in a surface coal mine, in a noncoal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and has satisfactorily completed a coal mine electrical training program approved by the Secretary; or,

(3) He has at least 1 year of experience, prior to the date of the application required by paragraph (c) of this section, in performing electrical work underground in a coal mine, in the surface work areas of an underground coal mine, in a surface coal mine, in a noncoal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and he attains a satisfactory grade on each of the series of five written tests approved by the Secretary as prescribed in paragraph (b) of this section.

(b) The series of five written tests approved by the Secretary shall include the following categories:

(1) Direct current theory and application;

(2) Alternating current theory and application;

(3) Electric equipment and circuits;

(4) Permissibility of electric equipment; and,

(5) Requirements of Subparts F through J and S of this Part 77.

(c) In order to take the series of five written tests approved by the Secretary, an individual shall apply to the District Manager and shall certify that he meets the requirements of paragraph (a)(3) of this section. The tests will be administered in the Coal Mine