

**Statutory Notes and Related Subsidiaries****EFFECTIVE DATE**

Section operative 90 days after Dec. 30, 1969, except to the extent an earlier date is specifically provided for in Pub. L. 91-173, see section 509 of Pub. L. 91-173, set out as a note under section 801 of this title.

**§ 877. General safety provisions****(a) Location of oil and gas wells; establishment and maintenance of barriers; minimum requisites; exceptions**

Each operator of a coal mine shall take reasonable measures to locate oil and gas wells penetrating coalbeds or any underground area of a coal mine. When located, such operator shall establish and maintain barriers around such oil and gas wells in accordance with State laws and regulations, except that such barriers shall not be less than three hundred feet in diameter, unless the Secretary or his authorized representative permits a lesser barrier consistent with the applicable State laws and regulations where such lesser barrier will be adequate to protect against hazards from such wells to the miners in such mine, or unless the Secretary or his authorized representative requires a greater barrier where the depth of the mine, other geologic conditions, or other factors warrant such a greater barrier.

**(b) Boreholes in advance of work face; distance in advance of work face; distance between boreholes**

Whenever any working place approaches within fifty feet of abandoned areas in the mine as shown by surveys made and certified by a registered engineer or surveyor, or within two hundred feet of any other abandoned areas of the mine which cannot be inspected and which may contain dangerous accumulations of water or gas, or within two hundred feet of any workings of an adjacent mine, a borehole or boreholes shall be drilled to a distance of at least twenty feet in advance of the working face of such working place and shall be continually maintained to a distance of at least ten feet in advance of the advancing working face. When there is more than one borehole, they shall be drilled sufficiently close to each other to insure that the advancing working face will not accidentally hole through into abandoned areas or adjacent mines. Boreholes shall also be drilled not more than eight feet apart in the rib of such working place to a distance of at least twenty feet and at an angle of forty-five degrees. Such rib holes shall be drilled in one or both ribs of such working place as may be necessary for adequate protection of miners in such place.

**(c) Prohibition against smoking; implementation programs**

No person shall smoke, carry smoking materials, matches, or lighters underground, or smoke in or around oil houses, explosives magazines, or other surface areas where such practice may cause a fire or explosion. The operator shall institute a program, approved by the Secretary, to insure that any person entering the underground area of the mine does not carry smoking materials, matches, or lighters.

**(d) Portable electric lamps; exceptions**

Persons underground shall use only permissible electric lamps approved by the Secretary for portable illumination. No open flame shall be permitted in the underground area of any coal mine, except as permitted under section 871(d) of this title.

**(e) Promulgation of lighting standards**

Within nine months after the operative date of this subchapter, the Secretary shall propose the standards under which all working places in a mine shall be illuminated by permissible lighting, within eighteen months after the promulgation of such standards, while persons are working in such places.

**(f) Escapeways; ventilation; maintenance; tests of passageways; protection of entrance; connection between mine openings**

(1) Except as provided in paragraphs (2) and (3) of this subsection, at least two separate and distinct travelable passageways which are maintained to insure passage at all times of any person, including disabled persons, and which are to be designated as escapeways, at least one of which is ventilated with intake air, shall be provided from each working section continuous to the surface escape drift opening, or continuous to the escape shaft or slope facilities to the surface, as appropriate, and shall be maintained in safe condition and properly marked. Mine openings shall be adequately protected to prevent the entrance into the underground area of the mine of surface fires, fumes, smoke, and flood water. Escape facilities approved by the Secretary or his authorized representative, properly maintained and frequently tested, shall be present at or in each escape shaft or slope to allow all persons, including disabled persons, to escape quickly to the surface in the event of an emergency.

(2) When new coal mines are opened, not more than twenty miners shall be allowed at any one time in any mine until a connection has been made between the two mine openings, and such connections shall be made as soon as possible.

(3) When only one mine opening is available, owing to final mining of pillars, not more than twenty miners shall be allowed in such mine at any one time, and the distance between the mine opening and working face shall not exceed five hundred feet.

(4) In the case of all coal mines opened on or after the operative date of this subchapter, and in the case of all new working sections opened on or after such date in mines opened prior to such date, the escapeway required by this section to be ventilated with intake air shall be separated from the belt and trolley haulage entries of the mine for the entire length of such entries to the beginning of each working section, except that the Secretary or his authorized representative may permit such separation to be extended for a greater or lesser distance so long as such extension does not pose a hazard to the miners.

**(g) Erection of fireproof structures; prior existing structures; fire doors; monthly tests; records; availability**

After the operative date of this subchapter, all structures erected on the surface within one

hundred feet of any mine opening shall be of fireproof construction. Unless structures existing on or prior to such date which are located within one hundred feet of any mine opening are of such construction, fire doors shall be erected at effective points in mine openings to prevent smoke or fire from outside sources endangering miners underground. These doors shall be tested at least monthly to insure effective operation. A record of such tests shall be kept in an area on the surface of the mine chosen by the operator to minimize the danger of destruction by fire or other hazard and shall be available for inspection by interested persons.

**(h) Prevention of accumulations of coal dust and methane gas; surface coal-handling facilities; air-intake openings**

Adequate measures shall be taken to prevent methane and coal dust from accumulating in excessive concentrations in or on surface coal-handling facilities, but in no event shall methane be permitted to accumulate in concentrations in or on surface coal-handling facilities in excess of limits established for methane by the Secretary within one year after the operative date of this subchapter. Where coal is dumped at or near air-intake openings, provisions shall be made to avoid dust from entering the mine.

**(i) Training programs**

Every operator of a coal mine shall provide a program, approved by the Secretary, of training and retraining of both qualified and certified persons needed to carry out functions prescribed in this chapter.

**(j) Electric face equipment; installation of canopies**

An authorized representative of the Secretary may require in any coal mine where the height of the coalbed permits that electric face equipment, including shuttle cars, be provided with substantially constructed canopies or cabs to protect the miners operating such equipment from roof falls and from rib and face rolls.

**(k) Mine entrances; sealing; prevention of entry by unauthorized personnel**

On and after the operative date of this subchapter, the opening of any coal mine that is declared inactive by its operator or is permanently closed or abandoned for more than ninety days, shall be sealed by the operator in a manner prescribed by the Secretary. Openings of all other mines shall be adequately protected in a manner prescribed by the Secretary to prevent entrance by unauthorized persons.

**(l) Facilities for changing and storing clothes; toilet and bathing facilities**

The Secretary may require any operator to provide adequate facilities for the miners to change from the clothes worn underground, to provide for the storing of such clothes from shift to shift, and to provide sanitary and bathing facilities. Sanitary toilet facilities shall be provided in the active workings of the mine when such surface facilities are not readily accessible to the active workings.

**(m) Emergency medical assistance preparations; locations for medical equipment; filing of implementation plans**

Each operator shall make arrangements in advance for obtaining emergency medical assistance and transportation for injured persons. Emergency communications shall be provided to the nearest point of assistance. Selected agents of the operator shall be trained in first aid and first aid training shall be made available to all miners. Each coal mine shall have an adequate supply of first aid equipment located on the surface, at the bottom of shafts and slopes, and at other strategic locations near the working faces. In fulfilling each of the requirements of this subsection, the operator shall meet at least minimum requirements prescribed by the Secretary of Health and Human Services. Within two months after the operative date of this subchapter, each operator shall file with the Secretary a plan setting forth in such detail as the Secretary may require the manner in which such operator has fulfilled the requirements in this subsection.

**(n) Self-rescue device; training of personnel**

A self-rescue device approved by the Secretary shall be made available to each miner by the operator which shall be adequate to protect such miner for one hour or longer. Each operator shall train each miner in the use of such device.

**(o) Methods of eliminating oxygen deficiencies**

The Secretary shall prescribe improved methods of assuring that miners are not exposed to atmospheres that are deficient in oxygen.

**(p) Identification check system; records**

Each operator of a coal mine shall establish a check-in and check-out system which will provide positive identification of every person underground, and will provide an accurate record of the persons in the mine kept on the surface in a place chosen to minimize the danger of destruction by fire or other hazard. Such record shall bear a number identical to an identification check that is securely fastened to the lamp belt worn by the person underground. The identification check shall be made of a rust resistant metal of not less than sixteen gauge.

**(q) Installation of devices to prevent and suppress ignition on electric cutting face equipment**

The Secretary shall require, when technologically feasible, that devices to prevent and suppress ignitions be installed on electric face cutting equipment.

**(r) Tunnelling under water; permits; contents; necessity; safety zones; restrictions**

Whenever an operator mines coal from a coal mine opened after the operative date of this subchapter, or from any new working section of a mine opened prior to such date, in a manner that requires the construction, operation, and maintenance of tunnels under any river, stream, lake, or other body of water, that is, in the judgment of the Secretary, sufficiently large to constitute a hazard to miners, such operator shall obtain a permit from the Secretary which shall include such terms and conditions as he deems

appropriate to protect the safety of miners working or passing through such tunnels from cave-ins and other hazards. Such permits shall require, in accordance with a plan to be approved by the Secretary, that a safety zone be established beneath and adjacent to such body of water. No plan shall be approved unless there is a minimum of cover to be determined by the Secretary, based on test holes drilled by the operator in a manner to be prescribed by the Secretary. No such permit shall be required in the case of any new working section of a mine which is located under any water resource reservoir being constructed by a Federal agency on December 30, 1969, the operator of which is required by such agency to operate in a manner that adequately protects the safety of miners working in such section from cave-ins and other hazards.

**(s) Drinking water**

An adequate supply of potable water shall be provided for drinking purposes in the active workings of the mine, and such water shall be carried, stored, and otherwise protected in sanitary containers.

**(t) Standards for prevention of explosions from nonmethane gases and for testing for accumulations**

Within one year after the operative date of this subchapter, the Secretary shall propose standards for preventing explosions from explosive gases other than methane and for testing for accumulations of such gases.

(Pub. L. 91-173, title III, §317, Dec. 30, 1969, 83 Stat. 787; Pub. L. 96-88, title V, §509(b), Oct. 17, 1979, 93 Stat. 695.)

**Editorial Notes**

REFERENCES IN TEXT

For the operative date of this subchapter, referred to in subsecs. (e), (f)(4), (g), (h), (k), (m), (r), and (t), see section 509 of Pub. L. 91-173, set out as an Effective Date note under section 801 of this title.

This chapter, referred to in subsec. (i), was in the original "this Act", meaning Pub. L. 91-173, Dec. 30, 1969, 83 Stat. 742, known as the Federal Mine Safety and Health Act of 1977, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 801 of this title and Tables.

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CHANGE OF NAME

"Secretary of Health and Human Services" substituted for "Secretary of Health, Education, and Welfare" in subsec. (m) pursuant to section 509(b) of Pub. L. 96-88 which is classified to section 3508(b) of Title 20, Education.

EFFECTIVE DATE

Section operative 90 days after Dec. 30, 1969, except to the extent an earlier date is specifically provided for in Pub. L. 91-173, see section 509 of Pub. L. 91-173, set out as a note under section 801 of this title.

**§ 878. Definitions**

For the purpose of this subchapter and subchapter II of this chapter, the term—

(a) "certified" or "registered" as applied to any person means a person certified or reg-

istered by the State in which the coal mine is located to perform duties prescribed by such subchapters, except that, in a State where no program of certification or registration is provided or where the program does not meet at least minimum Federal standards established by the Secretary, such certification or registration shall be by the Secretary;

(b) "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 chapter; and

(2) an individual deemed, in accordance with 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 tests of all electrical equipment;

(c) "permissible" as applied to—

(1) equipment used in the operation of a coal mine, means equipment, other than permissible electric face equipment, to which an approval plate, label, or other device is attached as authorized by the Secretary and which meets specifications which are prescribed by the Secretary for the construction and maintenance of such equipment and are designed to assure that such equipment will not cause a mine explosion or a mine fire,

(2) explosives, shot firing units, or blasting devices used in such mine, means explosives, shot firing units, or blasting devices which meet specifications which are prescribed by the Secretary, and

(3) the manner of use of equipment or explosives, shot firing units, and blasting devices, means the manner of use prescribed by the Secretary;

(d) "rock dust" means pulverized limestone, dolomite, gypsum, anhydrite, shale, adobe, or other inert material, preferably light colored, 100 per centum of which will pass through a sieve having twenty meshes per linear inch and 70 per centum or more of which will pass through a sieve having two hundred meshes per linear inch; the particles of which when wetted and dried will not cohere to form a cake which will not be dispersed into separate particles by a light blast of air; and which does not contain more than 5 per centum of combustible matter or more than a total of 4 per centum of free and combined silica ( $SiO_2$ ), or, where the Secretary finds that such silica concentrations are not available, which does not contain more than 5 per centum of free and combined silica;

(e) "anthracite" means coals with a volatile ratio equal to 0.12 or less;

(f) "volatile ratio" means volatile matter content divided by the volatile matter plus the fixed carbon;

(g)(1) "working face" means any place in a coal mine in which work of extracting coal from its natural deposit in the earth is performed during the mining cycle,

(2) "working place" means the area of a coal mine in by the last open crosscut,