

mud, or fire atmosphere could be encountered, persons shall be removed to safe places before blasting.

**§ 57.20032 Two-way communication equipment for underground operations.**

Telephones or other two-way communication equipment with instructions for their use shall be provided for communication from underground operations to the surface.

**Subpart T—Safety Standards for Methane in Metal and Nonmetal Mines**

AUTHORITY: 30 U.S.C. 811.

SOURCE: 52 FR 24941, July 1, 1987, unless otherwise noted.

GENERAL

**§ 57.22001 Scope.**

This subpart T sets forth procedures and safety standards for each metal and nonmetal underground mine subject to the Federal Mine Safety and Health Act of 1977. All metal and nonmetal mines will be placed into one of the categories or subcategories defined in this subpart. Mines shall operate in accordance with the applicable standards in this subpart to protect persons against the hazards of methane gas and dust containing volatile matter. The standards in this subpart apply to underground mines as well as surface mills at Subcategory I-C mines. These mines are also required to be operated in accordance with the other applicable health and safety standards published in 30 CFR part 57.

**§ 57.22002 Definitions.**

The following definitions apply in this subpart:

*Competent person.* A person designated by the mine operator who has sufficient experience and training to perform the assigned task.

*Explosive material.* Explosives, blasting agents, and detonators. Explosives are substances classified as explosives by the Department of Transportation in §§ 173.53, 173.88, and 173.100 of Title 49 of the Code of Federal Regulations (1986 Edition). Blasting agents are sub-

stances classified as blasting agents by the Department of Transportation in § 173.114(a) of Title 49 of the Code of Federal Regulations (1986 Edition). Detonators are devices containing a detonating charge used to initiate explosives. Examples of detonators are blasting caps, electric or non-electric instantaneous or delay blasting caps and delay connectors. [A copy of Title 49 is available at any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration].

*Substantial construction.* Construction of such strength, material, and workmanship that the object will withstand air blasts, blasting shock, ground movement, pressure differentials, wear, and usage which may be expected to occur in the mining environment.

[52 FR 24941, July 1, 1987, as amended at 69 FR 38842, June 29, 2004]

MINE CATEGORIZATION

**§ 57.22003 Mine category or subcategory.**

(a) All underground mines, and the surface mills of Subcategory I-C mines (gilsonite), shall be placed into one of the following categories or subcategories to protect persons against the hazards of methane and dusts containing volatile matter. Categories and subcategories are defined as follows:

(1) *Category I* applies to mines that operate within a combustible ore body and either liberate methane or have the potential to liberate methane based on the history of the mine or the geological area in which the mine is located. Category I is divided into Subcategories I-A, I-B, and I-C as follows:

(i) *Subcategory I-A* applies to mines that operate within a combustible ore body and liberate methane and in which—

(A) A concentration of 0.25 percent or more methane has been detected in the mine atmosphere and confirmed by laboratory analysis; or

(B) An ignition of methane has occurred.

(ii) *Subcategory I-B* applies to mines that operate within a combustible ore body and have the potential to liberate methane based on the history of the

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mine or geological area in which the mine is located and in which—

(A) A concentration of 0.25 percent or more methane has not been detected in the mine atmosphere; and

(B) An ignition of methane has not occurred.

(iii) *Subcategory I-C* applies to mines in which the product extracted is combustible and the dust has a volatile matter content of 60 percent or more measured on a moisture free basis<sup>1</sup>.

(2) *Category II* applies to domal salt mines where the history of the mine or geological area indicates the occurrence of or the potential for an outburst. Category II is divided into Subcategories II-A and II-B as follows:

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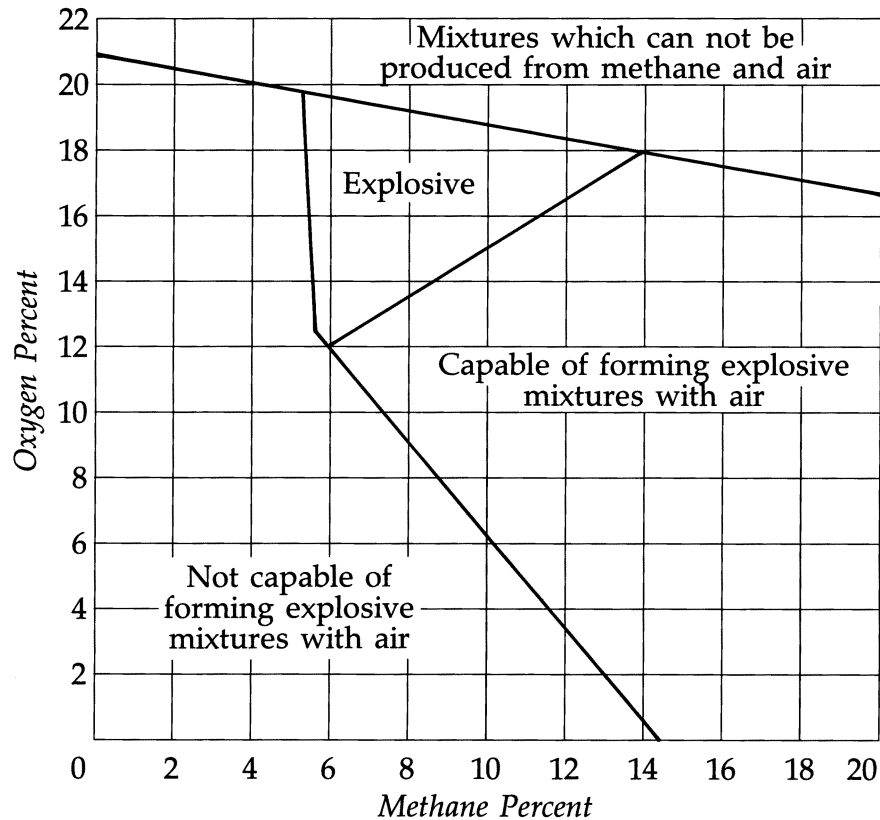
<sup>1</sup>Measured by the American Society for Testing and Materials, ASTM D 3175-82, Standard Test Method for Volatile Matter in the Analysis Sample of Coal and Coke. (This document is available at any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration).

(i) *Subcategory II-A* applies to domal salt mines where an outburst reportable under § 57.22004(c)(1) has occurred.

(ii) *Subcategory II-B* applies to domal salt mines where an outburst reportable under § 57.22004(c)(1) has not occurred, but which have the potential for an outburst based on the history of the mine or geological area in which the mine is located.

(3) *Category III* applies to mines in which noncombustible ore is extracted and which liberate a concentration of methane that is explosive, or is capable of forming explosive mixtures with air, or have the potential to do so based on the history of the mine or the geological area in which the mine is located. The concentration of methane in such mines is explosive or is capable of forming explosive mixtures if mixed with air as illustrated by Table 1 below, entitled “Relation Between Quantitative Composition and Explosibility of Mixtures of Methane and Air”.

**Table 1**



**Relation Between Quantitative Composition and Explosibility of Mixtures of Methane and Air**

(4) *Category IV* applies to mines in which noncombustible ore is extracted and which liberate a concentration of methane that is not explosive nor capable of forming explosive mixtures with air based on the history of the mine or the geological area in which the mine is located. The concentration of methane in such mines is not explosive nor capable of forming explosive mixtures if mixed with air as illustrated by Table 1 above, entitled "Relation Between Quantitative Composition and Explosibility of Mixtures of Methane and Air".

(5) *Category V* applies to petroleum mines. Category V is divided into Subcategories V-A and V-B as follows:

(i) *Subcategory V-A* applies to petroleum mines that operate entirely or partially within an oil reservoir; and all other petroleum mines in which—

(A) A concentration of 0.25 percent or more methane has been detected in the mine atmosphere and confirmed by laboratory analysis; or

(B) An ignition of methane has occurred.

(ii) *Subcategory V-B* applies to petroleum mines that operate outside of and drill into an oil reservoir and in which—

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(A) A concentration of 0.25 percent or more methane has not been detected in the mine atmosphere; and

(B) An ignition of methane has not occurred.

(6) *Category VI* applies to mines in which the presence of methane has not been established and are not included in another category or subcategory.

(b) Category or subcategory placement or change in placement shall include consideration of the following:

(1) The history and geology of the mine or of the geological area in which the mine is located;

(2) The ore body and host rock;

(3) The character, amount, duration, origin, and nature of methane emission and the presence of explosive dust and inert gases; and

(4) Whether or not conditions encountered during primary or access development are transient or permanent.

(c)(1) Gas samples for the purpose of category or subcategory placement or change in placement, and for determining action levels, shall be taken in the mine atmosphere. Gas samples taken to determine the nature and extent of an occurrence under § 57.22004 (c) and (d) may be taken at any location, including the source, point of entry and the mine atmosphere.

(2) Tests for methane shall be made with hand-held methanometers, methane monitors, atmospheric monitoring systems, devices used to provide laboratory analysis of samples, or with other equally effective sampling devices. However, only methane samples that have been confirmed by laboratory analysis shall be used for category or subcategory placement or change in placement.

(d) Each mine and mill shall be required to operate in accordance with the safety standards applicable to its particular category or subcategory.

**§ 57.22004 Category placement or change in placement.**

The Administrator for Metal and Nonmetal Mine Safety and Health (Administrator) shall be responsible for category and subcategory placement, change in placement, and notification of placement of mines.

(a) The Administrator's proposed notice of placement or change in place-

ment shall be sent to the mine operator and the appropriate representative of miners and shall include—

(1) The category or subcategory;

(2) The reasons for placement or change in placement;

(3) The data considered;

(4) The applicable standards and a time schedule for the mine operator to achieve compliance;

(5) Whether or not conditions encountered during primary or access development are transient or permanent; and

(6) Notification of the right to appeal the Administrator's determination under § 57.22005.

(b) The operator or the representative of the miners shall have the right to request of the Administrator reassignment of the mine to a more appropriate category or subcategory if, based on operating experience, the conditions set forth in § 57.22003(b) indicate that the hazards of methane exist under circumstances more appropriately governed by a different category or subcategory. In response to such a request, the procedures set forth in paragraph (d) of this section shall apply. While the request for category or subcategory reassignment is pending, the mine shall continue to operate under the standards for the category or subcategory to which originally assigned.

(c) MSHA shall be notified as soon as possible if any of the following events occur:

(1) An outburst that results in 0.25 percent or more methane in the mine atmosphere;

(2) A blowout that results in 0.25 percent or more methane in the mine atmosphere;

(3) An ignition of methane; or

(4) Air sample results that indicate 0.25 percent or more methane in the mine atmosphere of a Subcategory I-B, I-C, II-B, V-B or Category VI mine.

(d) The Administrator shall promptly appoint an MSHA committee to investigate occurrences reported in accordance with paragraph (c) of this section or requests filed in accordance with paragraph (b) of this section. Upon completion of an investigation, the committee shall make a written report of the findings. These investigations