

**§ 56.4501 Fuel lines.**

Fuel lines shall be equipped with valves capable of stopping the flow of fuel at the source and shall be located and maintained to minimize fire hazards. This standard does not apply to fuel lines on self-propelled equipment.

**§ 56.4502 Battery-charging stations.**

(a) Battery-charging stations shall be ventilated with a sufficient volume of air to prevent the accumulation of hydrogen gas.

(b) Smoking, use of open flames, or other activities that could create an ignition source shall be prohibited at the battery charging station during battery charging.

(c) Readily visible signs prohibiting smoking or open flames shall be posted at battery-charging stations during battery charging.

**§ 56.4503 Conveyor belt slippage.**

Belt conveyors within confined areas where evacuation would be restricted in the event of a fire resulting from belt-slippage shall be equipped with a detection system capable of automatically stopping the drive pulley. A person shall attend the belt at the drive pulley when it is necessary to operate the conveyor while temporarily bypassing the automatic function.

**§ 56.4530 Exits.**

Buildings or structures in which persons work shall have a sufficient number of exits to permit prompt escape in case of fire.

**§ 56.4531 Flammable or combustible liquid storage buildings or rooms.**

(a) Storage buildings or storage rooms in which flammable or combustible liquids, including grease, are stored and that are within 100 feet of any person's work station shall be ventilated with a sufficient volume of air to prevent the accumulation of flammable vapors.

(b) In addition, the buildings or rooms shall be—

(1) Constructed to meet a fire resistance rating of at least one hour; or

(2) Equipped with an automatic fire suppression system; or

(3) Equipped with an early warning fire detection device that will alert any person who could be endangered by a fire, provided that no person's work station is in the building.

(c) Flammable or combustible liquids in use for day-to-day maintenance and operational activities are not considered in storage under this standard.

WELDING/CUTTING/COMPRESSED GASES

**§ 56.4600 Extinguishing equipment.**

(a) When welding, cutting, soldering, thawing, or bending—

(1) With an electric arc or with an open flame where an electrically conductive extinguishing agent could create an electrical hazard, a multipurpose dry-chemical fire extinguisher or other extinguisher with at least a 2-A:10-B:C rating shall be at the worksite.

(2) With an open flame in an area where no electrical hazard exists, a multipurpose dry-chemical fire extinguisher or equivalent fire extinguishing equipment for the class of fire hazard present shall be at the worksite.

(b) Use of halogenated fire extinguishing agents to meet the requirements of this standard shall be limited to Halon 1211 (CBrClF<sub>2</sub>) and Halon 1301 (CBrF<sub>3</sub>). When these agents are used in confined or unventilated areas, precautions based on the manufacturer's use instructions shall be taken so that the gases produced by thermal decomposition of the agents are not inhaled.

**§ 56.4601 Oxygen cylinder storage.**

Oxygen cylinders shall not be stored in rooms or areas used or designated for storage of flammable or combustible liquids, including grease.

**§ 56.4602 Gauges and regulators.**

Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.

**§ 56.4603 Closure of valves.**

To prevent accidental release of gases from hoses and torches attached to oxygen and acetylene cylinders or to manifold systems, cylinder or manifold system valves shall be closed when—

(a) The cylinders are moved;

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(b) The torch and hoses are left unattended; or

(c) The task or series of tasks is completed.

**§ 56.4604 Preparation of pipelines or containers.**

Before welding, cutting, or applying heat with an open flame to pipelines or containers that have contained flammable or combustible liquids, flammable gases, or explosive solids, the pipelines or containers shall be—

(a) Drained, ventilated, and thoroughly cleaned of any residue;

(b) Vented to prevent pressure build-up during the application of heat; and

(c)(1) Filled with an inert gas or water, where compatible; or

(2) Determined to be free of flammable gases by a flammable gas detection device prior to and at frequent intervals during the application of heat.

**APPENDIX I TO SUBPART C OF PART 56—  
NATIONAL CONSENSUS STANDARDS**

Mine operators seeking further information in the area of fire prevention and control may consult the following national consensus standards.

MSHA standard	National consensus standard
§§ 56.4200, 56.4201.	NFPA No. 10—Portable Fire Extinguisher.
	NFPA No. 11—Low Expansion Foam and Combined Agent Systems.
	NFPA No. 11A—High Expansion Foam Systems.
	NFPA No. 12—Carbon Dioxide Extinguishing Systems.
	NFPA No. 12A—Halon 1301 Extinguishing Systems.
	NFPA No. 13—Water Sprinkler Systems.
	NFPA No. 14—Standpipe and Hose Systems.
	NFPA No. 15—Water Spray Fixed Systems.
	NFPA No. 16—Foam Water Spray Systems.
	NFPA No. 17—Dry-Chemical Extinguishing Systems.
	NFPA No. 121—Mobile Surface Mining Equipment.
	NFPA No. 291—Testing and Marketing Hydrants.
	NFPA No. 1962—Care, Use, and Maintenance of Fire Hose, Connections, and Nozzles.
§ 56.4202 ..	NFPA No. 14—Standpipe and Hose Systems.
	NFPA No. 291—Testing and Marketing Hydrants.
§ 56.4203 ..	NFPA No. 10—Portable Fire Extinguishers.
§ 56.4230 ..	NFPA No. 10—Portable Fire Extinguishers.
	NFPA No. 121—Mobile Surface Mining Equipment.

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**Subpart D—Air Quality and Physical Agents**

**AIR QUALITY**

**§ 56.5001 Exposure limits for airborne contaminants.**

Except as permitted by § 56.5005—

(a) Except as provided in paragraph (b) of this section, the exposure to airborne contaminants shall not exceed, on the basis of a time weighted average, the threshold limit values adopted by the American Conference of Governmental Industrial Hygienists, as set forth and explained in the 1973 edition of the Conference’s publication, entitled “TLV’s Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1973,” pages 1 through 54, which are hereby incorporated by reference and made a part hereof. This publication may be obtained from the American Conference of Governmental industrial Hygienists by writing to 1330 Kemper Meadow Drive, Attn: Customer Service, Cincinnati, OH 45240; <http://www.acgih.org>”, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration. Excursions above the listed thresholds shall not be of a greater magnitude than is characterized as permissible by the Conference.

(b) The 8-hour time weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 2 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400–450 magnification (4 millimeter objective) phase contrast illumination. No employees shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers longer than 5 micrometers, per milliliter of air, as determined by the membrane filter method over a minimum sampling time of 15 minutes. “Asbestos” is a generic term for a number of hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils. Although there are many asbestos minerals, the term “asbestos” as used herein is limited to the following minerals: chrysotile,