

# **federal register**

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Tuesday  
June 30, 1987

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## **Part III**

### **Department of Labor**

**Mine Safety and Health Administration**

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**30 CFR Parts 48 and 75  
Underground Coal Mining; Self-Contained  
Self-Rescue Devices; Emergency  
Temporary Standard and Proposed Rule**

## DEPARTMENT OF LABOR

## Mine Safety and Health Administration

## 30 CFR Part 75

Self-Contained Self-Rescue Devices;  
Emergency Temporary Standard

**AGENCY:** Mine Safety and Health Administration, Labor.

**ACTION:** Emergency temporary standard.

**SUMMARY:** The Mine Safety and Health Administration (MSHA) is issuing an emergency temporary standard (ETS) which requires persons using self-contained self-rescue (SCSR) devices to receive training in the opening and activation of the device; insertion or simulated insertion of the mouthpiece; and the wearing of the nose clip. This training, commonly referred to as "hands-on" training, will be required after September 28, 1987 for all persons entering underground coal mines.

The basis for this ETS is MSHA's determination that "hands-on" training in SCSR units is necessary in the particular circumstances presented by this situation to avoid grave danger to underground miners from suffocation or poisoning from toxic products of combustion in the event of a mine fire or explosion. The Agency has further determined that immediate implementation of a "hands-on" training requirement is necessary to protect persons in underground coal mines from this grave danger. In accordance with section 101(b)(3) of the Mine Act this ETS will also serve as the basis for the Agency's final rule on the same subject. Elsewhere in this issue of the Federal Register, MSHA is proposing to implement on a permanent basis the requirement for "hands-on" training in the use of SCSR units.

**DATES:** Emergency Temporary Standard: The ETS is effective on June 30, 1987.

**FOR FURTHER INFORMATION CONTACT:** Patricia W. Silvey, Acting Associate Assistant Secretary for MSHA, 4015 Wilson Boulevard, Room 627, Arlington, Virginia 22203; phone (703) 235-1910.

**SUPPLEMENTARY INFORMATION:****I. Background**

This ETS is issued in accordance with section 101(b) of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. 811. The ETS is effective immediately and revises the existing safety standard for self-contained self-rescue (SCSR) devices, 30 CFR 75.1714. Existing safety standards in 30 CFR 75.1714 require that all persons going into underground coal mines have SCSR

devices available to them and that they be instructed and trained in the use of such devices. These devices are closed-circuit breathing apparatuses that provide a source of oxygen and greatly increase a person's chance of surviving a mine emergency involving an irrespirable atmosphere. In the event of such a mine emergency, the SCSR device provides miners with the last protection allowing escape. For successful escape, miners must be able to rapidly and properly use the devices. In order to protect persons who go into underground coal mines from the grave danger of being unable to protect themselves with SCSR devices in the event of a mine emergency, the ETS specifies "hands-on" training in the use of SCSR's.

The decision to require "hands-on" training reflects the Agency's evaluation of SCSR training programs at underground coal mines and the results of an investigation of a mining accident where victims did not know how to properly use their SCSR devices. MSHA has also reviewed, and is guided by, recommendations from studies conducted by the U.S. Department of the Interior, Bureau of Mines, in conjunction with the University of Kentucky.

MSHA estimates that there are 93,000 workers affected by this ETS. An informal Agency evaluation of existing training programs indicated that a significant number of these miners, as many as half of them, have not had "hands-on" training in the use of SCSR's. Because the effective use of SCSR devices is essential to successful evacuation in an immediately life-threatening situation, the Agency believes that the lack of "hands-on" training demands immediate regulatory action.

The ETS applies to miners and visitors who go underground and requires that they receive "hands-on" training in the use of the SCSR units provided at the mine. Under the ETS, this training must include each person properly opening the device, activating it, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clips. After September 28, 1987, persons who have not received this training will not be permitted to enter an underground coal mine. Persons who have received "hands-on" training specified by the ETS within the preceding nine months or who have had this "hands-on" training in accordance with training programs approved under 30 CFR Part 48 do not have to be retrained to comply with the ETS.

In accordance with the Mine Act, the provisions of the ETS also serve as the

basis for a proposed rule. Elsewhere in this issue of the Federal Register, MSHA proposes to revise the existing requirements in 30 CFR Part 48 and 30 CFR 75.160-1 to include "hands-on" training with SCSR devices as part of miners' and supervisors' regular training. Under the Mine Act, MSHA must promulgate final standards no later than nine months after publication of this ETS.

As an alternative to this ETS, MSHA considered implementing the "hands-on" training provisions of the ETS through the Agency's existing training regulations in 30 CFR Part 48. Under the Part 48 regulations, mine operators are required to develop and administer training programs for miners (with the exception of supervisory personnel subject to MSHA-approved State certification requirements) and for visitors. These programs are required to provide for a wide range of mine safety and health training, including instruction in the use, care and maintenance of SCSR devices.

The training programs required by Part 48 are subject to approval by MSHA District Managers. As part of this approval function, District Managers are authorized to require revisions to operators' training programs in accordance with certain notice and consultation provisions (30 CFR 48.3(j)(1)). Using this process, MSHA considered administratively requiring existing training programs to be amended to include "hands-on" training with SCSR devices.

However, this approach was not adopted for two primary reasons. The Part 48 training regulations do not require training for supervisory personnel subject to MSHA-approved State certification requirements (30 CFR 48.2(a)(1)(ii)). In the underground coal mining industry, a substantial majority of supervisory personnel are trained and "certified" in safety-related matters such as roof control, mine ventilation, gas measurements and first-aid. In addition to the State certification programs, MSHA standards address the training and retraining of these persons (30 CFR 75.160-1). Training in the use of SCSR devices is not, however, among the required courses of instruction and, consequently, "hands-on" training with SCSR devices could not be required for most supervisory personnel without some regulatory action.

Another deficiency with this approach is that it would not assure that all persons who go into underground coal mines would receive "hands-on" training with SCSR devices on a schedule commensurate with the danger

posed. In accordance with the Part 48 training regulations and existing MSHA-approved training programs, miners are trained before they begin working and before undertaking new tasks. Thereafter, on an annual basis, they must receive "refresher training," which includes instruction in the use, care and maintenance of SCSR devices. With this existing structure for training miners, mandatory "hands-on" training with SCSR devices would be delayed by the process of amending and approving existing training programs. In addition, depending on when a training program amendment specifying "hands-on" SCSR training became effective relative to the annual cycle of refresher training at a mine, as much as an additional 12 months could pass before a miner received the "hands-on" SCSR training specified by the ETS.

The Agency also considered addressing the subject of additional SCSR training through the regular rulemaking process (Section 101(a) of the Mine Act). These procedures ordinarily involve several months for the submission of comments and public hearings, followed by the time necessary for development and publication of final rules. Postponing mandatory "hands-on" training for this amount of time would not be responsive to the degree of danger.

## II. Basis for the Emergency Temporary Standard

### A. Regulatory Authority

Section 101(b) of the Mine Act provides that:

(1) The Secretary shall provide, without regard to the requirements of Chapter 5, Title 5, United States Code, for an emergency temporary mandatory health or safety standard to take immediate effect upon publication in the Federal Register if he determines (A) that miners are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful, or to other hazards, and (B) that such emergency standard is necessary to protect miners from such danger.

(2) A temporary mandatory health or safety standard shall be effective until superseded by a mandatory standard promulgated in accordance with the procedures prescribed in paragraph (3) of this subsection.

(3) Upon publication of such standard in the Federal Register, the Secretary shall commence a proceeding in accordance with section 101(a), and the standards as published shall also serve as a proposed rule for the proceeding. The Secretary shall promulgate a

mandatory health or safety standard under this paragraph no later than nine months after publication of the emergency temporary standard as provided in paragraph (2).

Issuance of a temporary mandatory standard is an extraordinary measure provided for by the Mine Act to enable MSHA to "react quickly to grave dangers which threaten miners before those dangers manifest themselves in serious or fatal injuries or illnesses." S.Rept. 181, 95th Cong., 1st sess. 23 (1977). The language authorizing the issuance of a temporary mandatory standard for these purposes indicates that it is appropriate to address miner exposure to "other hazards", as well as toxic substances or harmful agents. This broad scope is further indicated in the legislative history, which states that "[t]o exclude any kind of grave danger would contradict the basic purpose of emergency temporary standards—protecting miners from grave dangers." *Id.* The suggestion that a temporary mandatory standard is limited to new dangers in the mining industry is also dispelled in the legislative history which explains: "That a danger has gone unremedied should not be a bar to issuing an emergency standard. Indeed, if such is the case, the need for prompt action is that much more pressing." *Id.* In addition, the legislative history emphasizes that a record of fatalities or serious injuries is not necessary before an emergency temporary standard can be issued because "[d]isasters, fatalities, and disabilities are the very thing this provision is designed to prevent." "Waiting until those dangers manifest themselves as fatalities or disabling injuries or illnesses, frustrates the purpose of this [ETS] provision." *Id.* at 23-24.

### B. Grave Danger

Diligent compliance with safety standards and safety-conscious work practices provide a substantial measure of protection against fires and explosions in underground coal mines. However, in this high-hazard work environment, the danger of a fire or explosion is ever present. Electricity or other sources of power can ignite coal dust or methane gas resulting in an explosion. Equipment can also be the source of a fire, which may involve fuel, lubricants and the surrounding coal. In caved, mined-out areas, which contain coal and accumulated gas, explosions can be caused by rock falls and in some instances fires are started by spontaneous combustion. When active mine areas are connected into previously mined-out areas, there is also

the risk of exposure to an oxygen-deficient atmosphere.

MSHA standards are designed to prevent these hazards, but if an emergency occurs because other measures have failed, the SCSR is the last protection that allows escape. Rapid and proper donning of an SCSR under such extreme adverse circumstances is essential to survival.

The Secretary has therefore determined that miners are exposed to a grave danger when they enter underground coal mines without being prepared to properly use the SCSR devices provided for their protection in the event of a fire or explosion.

### C. The Need for "Hands-On" Training in the Use of SCSR Devices

Existing MSHA standards in 30 CFR 75.1714 require that underground coal mine operators make SCSR devices available to the miners employed at their mines who go underground, and to the visitors which operators authorize to go underground. The existing standards also specify that mine operators instruct and train miners and visitors in the use and location of the self-rescue devices made available to them. Miner training is required to include use, care and maintenance of the units, and is required to be conducted in accordance with MSHA training regulations in 30 CFR Part 48.

The Part 48 regulations set forth requirements for operator-administered programs that address a wide-range of mine safety and health instruction and training. They include SCSR use instruction for visitors, new underground miners and annual refresher training for underground miners. The Part 48 training regulations do not cover supervisors who are subject to MSHA-approved State certification requirements. The supervisory personnel issue is discussed in section IV of this preamble.

The death of 27 miners in a mine fire on December 19, 1984, raised serious questions about the sufficiency of miner training in the use of SCSR devices. MSHA's investigation into the accident was protracted by problems of extinguishing the fire, and later by the hazardous conditions created by the fire damage. However, evidence gathered during the investigation (*Preliminary Report of Investigation, Underground Coal Mine Fire, Wilberg Mine*, issued April 27, 1987) indicated that some of the 27 victims did not have basic knowledge about how to start and use the SCSR devices available to them, and they were unaware of the critical need to protect their lungs from the smoke

and carbon monoxide contaminated atmosphere created by the fire.

MSHS is aware that miners have in several instances successfully used SCSR devices to escape from mines following a mine fire or explosion. However, in November 1986, MSHA completed a nationwide evaluation of the effectiveness of SCSR training covering 1,174 underground coal mines. At each mine, a representative number of miners and supervisors were asked to respond to a series of questions concerning SCSR use and storage at the mine. The same miners and supervisors were then asked to don an SCSR unit provided by MSHS. When the evaluation was completed, a total of 8,904 persons had been interviewed and tested. Of this group nearly 20 percent, or 1,780, persons were graded as failing. At 243 mines where the evaluation indicated ineffective SCSR training, additional retraining was required for all underground personnel.

In addition to this evaluation, researchers from the University of Kentucky and the Bureau of Mines have recently reported their findings based on a series of SCSR donning studies. (Cole and Vaught, "Training in the use of self-contained self-rescuers," and Vaught and Cole, "Problems in donning the self-contained self-rescuer" (USBM project H003480040)). In cooperation with two coal companies, studies were made of miners' skill in the correct use of SCSR devices. Problem areas pointed out by the studies included heavy reliance by the industry on teaching methods that do not provide individual performance simulation. MSHA experience confirms that training in the use of SCSR devices typically consists of a film, slide or tape presentation, or demonstration by an instructor to either a class or an individual. "Hands-on" training, which would familiarize miners with the skills necessary to successfully use the units in an emergency, has not been industry-wide practice.

More recently, as the industry become aware of shortcomings in miners' training, some operators have taken the initiative to introduce "hands-on" training in the use of SCSR devices through their annual miner training programs or by other means. However, as stated above, approximately one-half of all coal miners currently working underground, or 46,000 persons, may not have had "hands-on" SCSR training.

"Hands-on" training is widely recognized in the training field as important to the development of task-oriented skills. Practice that closely duplicates the procedures that must be performed for survival during actual emergency situations is an essential part

of task-oriented training. It also provides feedback to the instructor and the trainee about which procedural steps have been correctly performed as well as identifying those areas in which additional training is needed. (Hagman and Rose, "Retention of Military Tasks: A Review," Human Factors (1983)).

#### *D. The Need for an Emergency Temporary Standard*

SCSR devices provide the last means of protection to miners in an emergency escape situation. Miners are exposed to grave danger when they enter underground coal mines without being prepared to rapidly and properly use the SCSR device provided for their protection in the event of a mine emergency. "Hands-on" training will provide miners with the skills necessary to successfully use the units in an emergency. This is an effective, yet simple, method of assuring that miners will have the skills necessary to avoid the dangers posed by an emergency escape situation. As discussed previously, regularly rulemaking would not be immediately responsive to the degree of danger posed to underground miners. Given this particular circumstance presented in this situation, the Secretary has determined that an emergency temporary standard requiring "hands-on" training is necessary to immediately protect miners.

#### **III. Discussion of the Emergency Temporary Standard**

The ETS requires that each mine operator administer a basic level of "hands-on" training with the SCSR devices provided at the mine, and that this training be completed within 90 days after publication of this ETS. In accordance with existing 30 CFR 75.1714 this training is required for all miners employed by the operator who go underground and for all visitors authorized by the operator to go underground. The ETS does not require retraining of persons who received this "hands-on" training within the nine-month period preceding the effective date of this ETS, or who have received such training in accordance with a program approved by MSHA under 30 CFR Part 48.

The ETS specifies four task-oriented elements that must be included in SCSR training: (1) Opening the device; (2) activating the device; (3) inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece; and (4) putting on the nose clip. These steps are critical to isolating the lungs from a contaminated atmosphere and they are required to be

performed by each person being trained. This "hands-on" training is to be made a part of the overall instruction and training provided miners and visitors in the location, use, care and maintenance of SCSR devices.

The effective date of this ETS is June 30, 1987 and it requires that operators administer the required training to their work force and visitors who go underground by no later than September 28, 1987. After September 28, 1987 miners and visitors will not be permitted to go underground without having received the required SCSR training.

MSHA recognizes that some mines may experience difficulty in meeting the requirements of this ETS within the time permitted. Influencing factors include the size of the mine's work force, the nature of prior SCSR training administered, and the availability of SCSR devices that can be used for training exercises. Accordingly, all underground coal mine operators are urged to make arrangements for and begin administering the required SCSR training without delay.

#### **IV. Drafting Information**

The principal persons responsible for preparing this document are: Douglas C. Altizer, Jr., Coal Mine Safety and Health, MSHA; Frank Schwamberger, Education Policy and Development, MSHA; Ernest C. Teaster, Jr., Office of Standards, Regulations and Variances, MSHA; and Edward C. Hugler, Office of the Solicitor, Department of Labor.

#### **V. Executive Order 12291 and the Regulatory Flexibility Act**

In accordance with Executive Order 12291, MSHA has prepared an initial analysis to identify potential costs and benefits associated with the emergency temporary standard. The Agency has incorporated this analysis into the Initial Regulatory Flexibility Analysis required by the Regulatory Flexibility Act. In this analysis, MSHA has determined that the emergency temporary standard would not result in major cost increases nor have an effect of \$100 million or more on the economy. Therefore, the rule is not within the criteria for a major rule and a Regulatory Impact Analysis is not required.

The Regulatory Flexibility Act requires that agencies evaluate and include, whenever possible, compliance alternatives that minimize any adverse impact on small businesses when developing regulations. MSHA has determined that compliance alternatives are not available for small mines for the "hands-on" training requirement of this emergency temporary standard.

In the following summary of the Initial Regulatory Flexibility Analysis MSHA addressed the cost impact on industry by factoring in, where applicable, all direct and indirect costs for equipment and labor. MSHA estimates are based primarily upon the expertise of senior MSHA personnel who provided estimates for the time required to perform specific tasks and the compliance level of the industry.

MSHA estimates that the total compliance cost for the ETS is \$834,355. The cost for SCSR training devices (\$529,500) comprises about 63 percent of this cost. The remaining cost (\$304,855) is attributed to labor for the miners taking the training, for the instructors giving the training and for persons revising the training plans. A copy of the full analysis is available upon request.

**VI. Paperwork Reduction Act**

The emergency temporary standard does not contain recordkeeping or reporting requirements.

**List of Subjects in 30 CFR Part 75**

Administrative practice and procedure, Education, Mine safety and health, Self-contained self-rescue devices.

Dated: June 25, 1987.  
 Alan C. McMillan,  
 Deputy Assistant Secretary for Mine Safety and Health.

**PART 75—MANDATORY SAFETY STANDARDS—UNDERGROUND COAL MINES**

30 CFR Part 75 is amended as follows:

1. The authority citation for 30 CFR Part 75 is revised to read as follows:

Authority: 30 U.S.C. 811, 957, and 961.  
 2. The authority citations following any Subpart heading or section are removed.

3. New paragraph (c) is added to § 75.1714 Part 75, Subchapter O, Chapter I, Title 30 of the Code of Federal Regulations to read as follows:

**§ 75.1714 Availability of approved self-rescue devices; instruction in use and location.**

(c)(1) After September 28, 1987 no miner employed by the operator or visitor authorized by the operator to enter the mine shall go underground without having received the training required by paragraph (2) of this section within the preceding nine months or in accordance with the training program required by 30 CFR Part 48.

(2) Training in the use of self-contained self-rescue devices shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip.

[FR Doc. 87-14764 Filed 6-25-87; 3:54 pm]

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## DEPARTMENT OF LABOR

## Mine Safety and Health Administration

## 30 CFR Parts 48 and 75

## Self-Contained Self-Rescue Devices

**AGENCY:** Mine Safety and Health Administration, Labor.

**ACTION:** Proposed rule.

**SUMMARY:** The Mine Safety and Health Administration (MSHA) is proposing to require persons using self-contained self-rescue (SCSR) devices to receive training in the opening and activation of the device; insertion or simulated insertion of the mouthpiece; and the wearing of the nose clip. This training, commonly referred to as "hands-on" training, would be required for all persons entering underground coal mines. "Hands-on" training in the use of SCSR units is necessary to avoid danger to underground miners from suffocation or poisoning from toxic products of combustion in the event of a mine fire or explosion. Elsewhere in this issue of the Federal Register, MSHA is publishing an Emergency Temporary Standard requiring "hands-on" training in the use of SCSR units for all persons entering an underground coal mine after September 28, 1987.

**DATES:** Comments on this proposed rule and requests for public hearings must be received by August 14, 1987.

**ADDRESS:** Send written comments and requests for public hearings to the Mine Safety and Health Administration, Office of Standards, Regulations and Variances, Room 631, Ballston Tower No. 3, 4015 Wilson Boulevard, Arlington, Virginia 22203.

**FOR FURTHER INFORMATION CONTACT:** Patricia W. Silvey, Acting Associate Assistant Secretary for MSHA, 4015 Wilson Boulevard, Room 627, Arlington, Virginia 22203; phone (703) 235-1910.

**SUPPLEMENTARY INFORMATION:****I. Background**

Diligent compliance with safety standards and safety-conscious work practices provide a substantial measure of protection against fires and explosions in underground coal mines. However, in this high-hazard work environment, the danger of a fire or explosion is ever present. Electricity or other sources of power can ignite coal dust or methane gas resulting in an explosion. Equipment can also be the source of a fire, which may involve fuel, lubricants and the surrounding coal. In caved, mined-out areas, which contain coal and accumulated gas, explosions can be caused by rock falls and in some

instances fires are started by spontaneous combustion. When active mine areas are connected into previously mined-out areas, there is also the risk of exposure to an oxygen-deficient atmosphere.

MSHA standards are designed to prevent these hazards, but if an emergency occurs because other measures have failed, the SCSR is the last protection that allows escape. Rapid and proper donning of an SCSR under such extreme adverse circumstances is essential to survival. MSHA has issued an emergency temporary standard (ETS) effective today that requires all persons who enter an underground coal mine after September 28, 1987, to have had "hands-on" training in the use of self-contained self-rescue devices (SCSRs). This training includes properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip. The ETS was issued in accordance with section 101(b) of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. 811. The ETS revised the existing safety standard for SCSR, 30 CFR 75.1714. The ETS will be superseded by this rule when promulgated in final form.

Prior to the ETS, 30 CFR 75.1714 required that underground coal mine operators make SCSR devices available to the miners employed at their mines who go underground, and to the visitors which operators authorize to go underground. The standard also specified that mine operators instruct and train miners and visitors in the use and location of the self-rescue devices made available to them. It required miner training to include use, care and maintenance of the units, which had to be conducted in accordance with MSHA training regulations in 30 CFR Part 48. However, the standard did not require "hands-on training."

The death of 27 miners in a mine fire on December 19, 1984, raised serious questions about the sufficiency of miner training in the use of SCSR devices. MSHA's investigation into the accident was protracted by problems of extinguishing the fire, and later by the hazardous conditions created by the fire damage. However, evidence gathered during the investigation (*Preliminary Report of Investigation, Underground Coal Mine Fire, Wilberg Mine*, issued April 27, 1987) indicated that some of the 27 victims did not have basic knowledge about how to start and use the SCSR devices available to them, and they were unaware of the critical need to protect their lungs from the smoke

and carbon-monoxide contaminated atmosphere created by the fire.

MSHA is aware that miners have in several instances successfully used SCSR devices to escape from mines following a mine fire or explosion. However, in November 1987, MSHA completed a nationwide evaluation of the effectiveness of SCSR training covering 1,174 underground coal mines. At each mine, a representative number of miners and supervisors were asked to respond to a series of questions concerning SCSR use and storage at the mine. The same miners and supervisors were then asked to don an SCSR unit provided by MSHA. When the evaluation was completed, a total of 8,904 persons had been interviewed and tested. Of this group nearly 20 percent, or 1,780, persons were graded as failing. At 243 mines where the evaluation indicated ineffective SCSR training, additional retraining was required for all underground personnel.

In addition to this evaluation, researchers from the University of Kentucky and the Bureau of Mines have recently reported their findings based on a series of SCSR donning studies. (Cole and Vaught, "Training in the use of self-contained self-rescuers," and Vaught and Cole, "Problems in donning the self-contained self-rescuer" (USBM project H003408040)). In cooperation with two coal companies, studies were made of miners' skill in the correct use of SCSR devices. Problem areas pointed out by the studies included heavy reliance by the industry on teaching methods that do not provide individual performance simulation. MSHA experience confirms that training in the use of SCSR devices typically consists of a film, slide or tape presentation, or demonstration by an instructor to either a class or an individual. "Hands-on" training, which would familiarize miners with the skills necessary to successfully use the units in an emergency, has not been industry-wide practice.

More recently, as the industry has become aware of short-comings in miners' training, some operators have taken the initiative to introduce "hands-on" training in the use of SCSR devices through their annual miner training programs or by other means. MSHA estimates that there are 93,000 workers affected by the ETS. An informal Agency evaluation of existing training programs indicated that a significant number of these miners, as many as half of them, have not had "hands-on" training in the use of SCSR's.

"Hands-on" training is widely recognized in the training field as important to the development of task-

oriented skills. Practice that closely duplicates the procedures that must be performed for survival during actual emergency situations is an essential part of task-oriented training. It also provides feedback to the instructor and the trainee about which procedural steps have been correctly performed as well as identifying those areas in which additional training is needed. (Hagman and Rose, "Retention of Military Tasks: A Review," Human Factors (1983)).

SCSRs are closed-circuit breathing apparatuses that provide a source of oxygen and greatly increase a person's chance of surviving a mine emergency involving an irrespirable atmosphere. In the event of such a mine emergency, the SCSR device provides miners with the last protection allowing escape. For successful escape, miners must be able to rapidly and properly use the devices. Because the effective use of SCSR devices is essential to successful evacuation in an immediately life-threatening situation, the Agency addressed the lack of "hands-on" training demands through the immediate regulatory action of the ETS.

In accordance with the Mine Act, the provisions of the ETS must be replaced by a final rule within nine months of its publication. This proposed rule initiates section 101(a) rulemaking to accomplish that requirement. Under the proposal, the existing requirements in 30 CFR Part 48 and 30 CFR 75.160-1 would be revised to include "hands-on" training with SCSR devices as part of miners' and supervisors' regular training.

## II. Discussion of the Proposed Rule

The ETS revises 30 CFR 75.1714 which applies to all miners and visitors authorized by the operator to go underground. It requires that "hands-on" training be provided to such persons prior to September 28, 1987. To integrate the safety protection afforded by this training into the framework of existing Agency standards, MSHA is proposing that the "hands-on" training required by the ETS be codified in the training regulations for 30 CFR Part 48, and also be codified in the training requirements for "certified persons" in 30 CFR 75.160-1.

With this approach, the majority of MSHA training requirements would be maintained within 30 CFR Part 48 which is consistent with MSHA's goal to provide a comprehensive miner training program. However, in accordance with § 48.2(a)(1)(ii), supervisory personnel subject to MSHA-approved State certification requirements are not covered by Part 48. The regular training of these individuals is addressed by 30 CFR 75.160-1. Therefore, MSHA is also

proposing to revise § 75.160-1 to include the added training requirements to assure that all miners, including supervisors, receive "hands-on" training as an integral component of their training in the use, care and maintenance of SCSR's. These proposed changes, which are separately discussed below, would replace the amendments made by the ETS to § 75.1714.

### A. Part 48—Training and Retraining of Miners

Subpart A of 30 CFR Part 48, prescribes requirements for submitting and obtaining MSHA approval of operator-administered programs for training and retraining underground miners. Each mine must have an approved training program for training new miners and newly-employed experienced miners, as well as training miners for new tasks, providing annual refresher training and giving certain persons, including visitors, hazard training.

Under this proposal, the existing training requirements for new miners (§ 48.5), newly-employed experienced miners (§ 48.6), annual refresher training (§ 48.8), and hazard training (§ 48.11) would be revised to specify "hands-on" training in the use of SCSR devices. As with the ETS, "hands-on" training would include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and wearing the nose clip.

The Agency specifically requests comment on the prescribed "hands-on" training. MSHA's goal is to develop an SCSR training program which will best assure that persons can properly use the device in the event of an emergency. The Agency is also interested in comment on revising the existing training requirements in 30 CFR Part 48 and § 75.160-1 to reflect "hands-on" training. Because the Part 48 training requirements do not cover training and retraining of supervisors who are certified in accordance with state requirements, MSHA is also proposing to revise § 75.160-1 (training and retraining of qualified and certified persons) to also include "hands-on" training.

### B. Section 75.160-1—Plans for Training and Retraining of Qualified and Certified Persons

Section 75.160 requires each operator to provide a program, approved by the Secretary, for training and retraining qualified and certified persons. This standard, published in 1970, addresses the training of persons who perform

certain functions prescribed by the Mine Act and MSHA standards. The Part 48 training regulations published in 1978, included the training and retraining of qualified persons, but not certified persons. Thus, the requirements of §§ 75.160 and 75.160-1 were retained. The vast majority of supervisors at underground coal mines are certified persons.

Section 75.160-1 sets forth the courses that must be included in the training program required by § 75.160. It does not, however, require that the program include a course in the use, care and maintenance of SCSR devices. MSHA believes that all miners, including certified persons, need proper training and retraining in the use of SCSR devices. Therefore, the Agency is proposing to revise this standard to require that training programs for certified persons address use of SCSR devices, including "hands-on" training.

The proposed rule would redesignate § 75.160-1 as § 75.161 to facilitate codification in the Code of Federal Regulations.

## III. Drafting Information

The principal persons responsible for preparing this document are: Douglas C. Altizer, Jr., Coal Mine Safety and Health, MSHA; Frank Schwamberger, Education Policy and Development, MSHA; Ernest C. Teaster, Jr., Office of Standards, Regulations and Variances, MSHA; and Edward C. Hugler, Office of the Solicitor, Department of Labor.

## IV. Executive Order 12291 and the Regulatory Flexibility Act

In accordance with Executive Order 12291, MSHA has prepared an initial analysis to identify potential costs and benefits associated with the proposed rule. The Agency has incorporated this analysis into the Initial Regulatory Flexibility Analysis required by the Regulatory Flexibility Act. In this analysis, MSHA has determined that the proposed rule would not result in major cost increases nor have an effect of \$100 million or more on the economy. Therefore, the rule is not within the criteria for a major rule and a Regulatory Impact Analysis is not required.

The Regulatory Flexibility Act requires that agencies evaluate and include, whenever possible, compliance alternatives that minimize any adverse impact on small businesses when developing regulations. MSHA has determined that compliance alternatives are not available for small mines for the "hands-on" training requirement of this proposed rule.

In the following summary of the Initial Regulatory Flexibility Analysis MSHA addressed the cost impact on industry by factoring in, where applicable, all direct and indirect costs for equipment and labor. MSHA estimates are based primarily upon the expertise of senior MSHA personnel who provided estimates for the time required to perform specific tasks and the compliance level of the industry.

MSHA estimates that the total compliance cost for the ETS is \$834,355. The cost for SCSR training devices (\$529,500) comprises about 63 percent of this cost. The remaining cost (\$304,855) is attributed to labor for the miners taking the training, for the instructors giving the training and for persons revising the training plans. A copy of the full analysis is available upon request.

#### V. Paperwork Reduction Act

Codification of the "hands-on" training provision in 30 CFR Part 48 and in the training requirements for certified persons specified in 30 CFR 75.160-1 would require operators of underground coal mines to submit revised training plans and programs to MSHA for approval. MSHA estimates that it would take 30 minutes for each of the 2016 underground coal mines to revise the training plan and program.

MSHA will submit the paperwork requirements contained in this document to the Office of Management and Budget (OMB) for review under section 3504(h) of the Paperwork Reduction Act of 1980. Comments on the paperwork provisions should be sent directly to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for MSHA, Room 3208, 726 Jackson Place, NW, Washington, DC 20746.

#### List of Subjects in 30 CFR Parts 48 and 75

Administrative practice and procedure; Education; Mine safety and health; Self-contained self-rescue devices.

Dated: June 26, 1987.

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Deputy Assistant Secretary for Mine Safety and Health.

Accordingly, it is proposed to amend Parts 48 and 75 of Chapter I, Title 30 of the Code of Federal Regulations as follows:

#### PART 48—TRAINING AND RETRAINING OF UNDERGROUND MINERS

1. The authority citation to 30 CFR Part 48 is revised to read as follows:

Authority: 30 U.S.C. 811 and 825.

2. Section 48.5 is amended by revising paragraph (b)(2) to read as follows:

##### § 48.5 Training of new miners; minimum courses of instruction; hours of instruction.

(b)(2) *Self-rescue and respiratory devices.* The course shall include instruction and demonstration in the use, care, and maintenance of self-rescue and respiratory devices used at the mine. Training in the use of self-contained self-rescue devices shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip. The course shall be given before the new miner goes underground.

3. Section 48.6 is amended by redesignating paragraph (b)(8) as (b)(9) and adding a new paragraph (b)(8) to read as follows:

##### § 48.6 Training of newly employed experienced miners; minimum courses of instruction.

(b)(8) *Self-rescue and respiratory devices.* Training in the use of self-contained self-rescue devices shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip.

4. Section 48.8 is amended by revising paragraph (b)(8) to read as follows:

##### § 48.8 Annual refresher training of miners; minimum courses of instruction; hours of instruction.

(b)(8) *Self-rescue and respiratory devices.* The course shall include instruction in the use, care, and maintenance of self-rescue and respiratory devices. Training in the use of self-contained self-rescue devices shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining

proper insertion of the mouthpiece, and putting on the nose clip.

5. Section 48.11 is amended by revising paragraph (a)(4) to read as follows:

##### § 48.11 Hazard training.

(a)(4) *Self-rescue and respiratory devices.* Training in the use of self-contained self-rescue devices shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip.

#### PART 75—MANDATORY SAFETY STANDARDS—UNDERGROUND COAL MINES

1. The authority citation to 30 CFR Part 75 continues to read as follows:

Authority: 30 U.S.C. 811, 957, and 961.

2. Section 75.160-1 is redesignated as § 75.161 and is revised to read as follows:

##### § 75.161 Plans for training programs.

Each mine operator shall submit to the District Manager a program or plan setting forth what, when, how, and where the operator will train and retrain persons whose work assignments require that they be certified or qualified. The program shall provide—

(a) For certified persons, annual training courses in methane measurement and oxygen deficiency testing, roof and rib control, ventilation, first aid, principles of mine rescue, and the provisions of this Part 75;

(b) For qualified persons, annual courses in performance of the tasks which they perform and qualified persons; and

(c) For qualified and certified persons, annual training in the use of self-contained self-rescue devices used at the mine. This training shall include each person properly opening the device, activating the device, inserting the mouthpiece or simulating this task while explaining proper insertion of the mouthpiece, and putting on the nose clip.

##### § 75.1714 [Amended]

3. Section 75.1714 is amended by removing paragraph (c).

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