

**Training Questions for
Emergency Mine Evacuation
Emergency Temporary Standard Compliance Guide**

Q. Does MSHA have templates for the new § 48.3 and § 75.1502(a) that I can use for my mine? Where do I get it?

A. Yes, we have posted [[Get Document](#)] on our internet site templates for training plan modifications and mine emergency evacuation and firefighting program of instruction. A mine operator may download these templates and submit them to MSHA for their plan and program revisions.

Q. How can miners be expected to practice transferring from one SCSR to another when the mine hasn't received its additional SCSRs from the manufacturer?

A. We expect that training will be provided on all types of self-rescue devices in use at the mine. Operators are not required to provide training (donning and transferring) in types of SCSRs that are new to the mine, until they are received. This training must be provided before the new SCSRs are placed into service. However, training on future storage locations of outby SCSRs can begin as soon as these locations have been approved by MSHA.

Q. Have the requirements changed for evacuation drills to be conducted every 90 days?

A. No, the frequency of the drills has not changed. For both §§ 75.383 and 75.1502, each miner must still participate in evacuation drills at least once every 90 days.

Q. Do miners need to practice donning and transferring SCSRs during the emergency evacuation drills?

A. Yes, as part of each drill, each miner must practice donning and transferring each type of self-rescue device used at the mine. We recommend that this training be conducted in the mine or a controlled environment which simulates mine emergency conditions. Realistic training environments make for a better training experience, which enhances skill retention.

Q. Would a section foreman be considered to have the requisite ability, knowledge, training or experience to conduct an evacuation drill, and train and evaluate miners about donning and transferring an SCSR?

A. Any person who has these requisite qualities can be designated by the operator. The standard highlights the importance of designating a person who has the ability to evaluate a miner's ability to effectively don and transfer.

Q. How often do I have to instruct miners on all types of mine emergency scenarios and options for mine evacuation?

A. The operator must develop scenarios designed to instruct all miners on when to immediately don SCSRs and properly evacuate the mine should a fire, explosion, or gas or water inundation occur. At a minimum, each miner should be trained in the four types of scenarios at least once every 12 months. An effective way to do this is to incorporate this training with the mine evacuation drills. Frequency of training will be evaluated by the District Managers in the process of reviewing programs of instruction for approval.

Q. Do I have to record on an MSHA Form 5000-23 each time a miner takes the instruction and drill following § 75.1502?

A. No, the operator must keep a record listing the names of the miners, date of the drill, and the type of mine emergency(s) addressed. The operator must certify by signature and date.

Q. Under the ETS, when types of SCSRs that are new to the mine arrive, do all miners need to be trained in using these new devices prior to being placed into service?

A. Yes, before implementing any new program of instruction revisions, all miners must be trained in the changes, which includes donning and transferring. Where SCSRs are on back order, training must be completed as the back order is filled and the units are placed into service.

Q. After complying with the ETS, when types of SCSRs that are new to the mine arrive, do all miners need to be trained in using these new devices prior to being placed into service?

A. Yes, if new types of SCSRs are purchased, the program of instruction must be revised to reflect the new types. Before implementing any newly approved program of instruction revisions, all miners must be trained in the changes, which includes donning and transferring.

Q. What is required in the § 75.1502(a) program of instruction for scenarios? How detailed must the scenarios be?

A. We expect these scenarios to be representative of mine emergencies which are possible within the mine. To help mine operators comply with this requirement, MSHA has provided a template that operators may use [Insert HTML link].

Q. Can I use the maps (in 75.383 & 75.1714-5) and descriptive instructions (75.1714-4(c)) for the evacuation and SCSR plans (75.1502(a)) as part of my program of instruction?

A. Yes, the instructor may use these documents as instructional aides. The instructions given using these documents, however, cannot replace the physical and hands-on requirements for the evacuation drills in § 75.1502(c).

Immediate Notification

Q. Have I complied with the immediate accident notification provision as long as I contact MSHA just before the 15 minutes is up?

A. The “within 15 minutes” timeframe is a maximum allowable response that can only be taken if necessary. It does not stand alone. You must respond in the first instance “at once without delay.” For example, if you knew that an accident occurred and then sat by the phone up to the 15 minutes before getting around to contacting MSHA, you would not be acting “at once without delay” and would be in violation.

Q. Does the rule take into account that it may take me time to determine whether an accident has occurred in the first place?

A. Yes. The provision is based on “[i]f an accident occurs.” “Accident” for notification purposes is defined in 30 CFR 50.2(h). The rule thus gives you time to determine whether an “accident” as defined has occurred. Finding out whether an accident occurred, however, must be done without delay in good faith for effective notification. You are then responsible for notifying MSHA about those accidents that you know or should know about.

Q. Who do I contact if an accident occurs when the MSHA District Office is closed?

A. The rule directs you first to try to contact the district at all times. You should prepare for this by asking the District Manager to provide you with telephone numbers for contacting appropriate district personnel during non-business hours. Using the direct district number during non-business hours will prompt a pre-recorded message that will give you the numbers for the MSHA district personnel. The rule goes on to say that if you cannot contact the district, you must use the 24/7 MSHA headquarters toll-free number, (800) 746-1553.

Lifelines

Q. What is an acceptable lifeline? What is a durable material?

A. The ETS requirements for lifelines are intentionally performance-oriented. MSHA recognizes that there may be several equally effective ways of meeting the standard. The mine operator may procure prefabricated lifeline cords or construct his own. As explained in the preamble, "Lifelines must be constructed of durable (strong) materials and must survive normal mining conditions (e.g., atmospheric conditions such as humidity). They must be available in an emergency when miners need them to evacuate the mine. In addition, lifelines must also be sturdy enough to withstand intense physical use during an evacuation." The prefabricated yellow polypropylene or nylon ropes with directional cones that are currently commercially available would meet the intent of the standard.

Q. Does the lifeline have to be fire-proof?

A. No. The standard does not require that lifelines be either "fire proof" or "flame resistant." This is a very stringent requirement which would significantly increase the cost of compliance and is not considered to be necessary. The rationale for requiring lifelines in both designated escapeways is so that, in the event of a mine fire, if one route of escape is impassable due to the fire, the other escapeway could be used.

Q. What are acceptable directional marking devices?

A. Any device that will reliably guide evacuees in the correct direction in a limited visibility environment that is attached to the lifeline at least every 100 feet would be acceptable. Directional plastic cones are used on commercially available lifelines and are acceptable directional marking devices.

Q. What are acceptable reflective markings?

A. Reflective tape that is approximately 2 inches wide that is affixed to the lifeline every 25 feet is an acceptable reflective marking. Any equivalent reflective marking would also be acceptable.

Q. Could we use material such as bungee cords, surgical tubing or other such material which could give some flexibility to the life lines or will this material need to be fire proof?

A. The ETS does not specify the precise location of the lifeline within the escapeway, the method of attachment or the type of hanger materials. The standard does require that lifelines be "located in such a manner for miners to use effectively to escape." This language provides flexibility to install lifelines in the most practical manner based on the mine design, seam height, mining conditions, etc. The important consideration is they are available for miners to quickly locate and use in an emergency situation.

Q. Can the lifelines be attached directly to the SCSR storage locations?

A. Yes, as long as this attachment is sufficient to resist the expected forces during an emergency evacuation.

Q. What about tag lines from the life line to the SCSR storage locations? Can we just use a rope without reflective material or cones or will we need to mark these life the lifelines and will they also need to be fire proof?

A. Tag lines that attach the lifeline to the SCSR storage locations should meet the same requirements as the lifeline cords. If the distance from the lifeline to the storage location exceeds 25 feet, the same reflective material that is required for the lifeline would also apply to the cord between the lifeline and the SCSR storage location. It is unlikely, based on the required spacing of 100 feet for directional indicators, such as cones, that they would be needed on the cords attached to the SCSR storage locations. The standard does require that the lifelines be "attached to and marked to show the location of any SCSR storage locations in the escapeways." Although the standard does not specify this marking, it should be clearly distinguishable from the directional indicators on the lifeline itself so that it is apparent to the miners that the attached cord leads to the SCSR storage location.

Additional Self-contained Self-Rescuers (SCSRs)

Q. What are the basic requirements of § 75.1714-4?

A. New § 75.1714-4 requires additional self-contained, self-rescue devices (SCSR) for every underground coal miner to improve the likelihood of successfully evacuating the mine following fires or explosions that may result in an irrespirable atmosphere. In addition to the SCSR required for every miner under existing § 75.1714-2, an additional SCSR shall be stored near the work locations of the miners where they may be readily accessible during a mine evacuation. If the time required to evacuate the mine exceeds the capacity of a single SCSR, additional SCSRs shall be stored along the primary and alternate escapeways at reasonable intervals to replace SCSR units depleted during a mine evacuation.

Q. At what locations are the additional SCSR devices required by § 75.1714-4(a) to be stored?

A. The SCSRs required by § 75.1714-4(a) must be stored in locations that are readily accessible by each person in the mine [§ 75.1714-4(d)]. This is a performance-oriented requirement that gives the mine operators flexibility in determining the location, quantity, and type of additional SCSRs stored near where persons work. On traditional working sections, the additional SCSRs may be stored on the mantrips (if the mantrips stay on the section), at the dinner hole, near the section loading point or any other location that is readily accessible during an evacuation. This location should be protected from normal mine hazards such as loose roof, rib rolls, vehicular traffic, etc., and must not be blocked or obscured by supplies or debris. This location must be conspicuously

marked [§ 75.1714-4(d)] with a reflective sign [§ 75.1714-4(e)] that says “SELF-RESCUERS”.

Q. How many SCSRs are required by § 75.1714-4(a) to be stored in the mine?

A. One additional SCSR shall be stored near where each person in the mine works.

Q. Are additional SCSRs required for management and visitors?

A. Yes, one additional SCSR shall be readily accessible to each person in the mine. These additional SCSRs may be carried and stored on the mantrips used to transport visitors in the mine.

Q. Do additional SCSRs required by § 75.1714-4 have to be provided for state and federal inspectors?

A. No, “visitors” do not include state and federal coal mine inspectors who have a “right-of-entry” to the mine [MSHA Program Policy Manual, Vol V, pg. 143].

Q. Why are additional SCSRs required on mantrips and mobile equipment?

A. A mine emergency that requires immediate evacuation could occur during travel into or out of the mine on a mantrip or on mobile equipment.

Q. Are additional SCSRs required on pick-up trucks, scoops, diesel ramcars, etc.?

A. All mobile equipment that travels into and out of the mine must have an additional SCSR for each person who may operate and/or ride on that unit. Scoops, ramcars, etc. that normally stay at or near the working section are not required to contain an additional SCSR, but an additional SCSR must be available to the operator with the SCSRs stored on the section.

Q. Does a battery scoop that is primarily located on the section but occasionally travels outside to pick up supplies required to have an additional SCSR stored on the unit?

A. Yes, it must have an additional SCSR while traveling in and out of the mine if it is primarily operated on the section, there must be an additional SCSR for the equipment operator either stored on the section or on the mantrip.

Q. How many SCSRs are required to be stored on mantrips, pick-ups, etc?

A. One SCSR for each person operating or riding the mantrip or mobile unit. MSHA suggests that the number of SCSRs stored on the vehicle equal the maximum passenger capacity of the vehicle.

Q. Can the additional SCSRs required by § 75.1714-4(a) be kept on the mantrip?

A. Yes, if the mantrip remains on the working section. If the mantrip leaves the section during the shift, any stored SCSRs must be offloaded and stored on the section. If the SCSRs are offloaded, a separate SCSR for the operator must be stored on the unit, if the unit is driven from the section.

Q. Can additional SCSRs be stored on the mantrips and on the working sections to eliminate additional handling?

A. Yes, these are minimum requirements, the mine operator may store more than the required number of units.

Q. Our mine currently has an approved plan for use of filter self rescuers (FSR). Under this approved § 75.1714-2(e) plan, SCSRs are stored on the mantrips. Do these SCSRs stored on the mantrips meet the requirements of § 75.1714-4(b)?

A. No, the SCSRS stored under the § 75.1714-2(e) plan are required by § 75.1714(a) and by § 75.1714-2(e)(3). An additional SCSR is required to be stored on mantrips and mobile equipment to provide additional oxygen that may be needed during an evacuation.

Q. Will the SCSRs that are currently stored on the working section under a § 75.1714-2(e) approved plan meet the requirements of § 75.1714-4(a)?

A. No, the SCSRS stored under the § 75.1714-2(a) plan are required by § 75.1714(a). An additional SCSR is required to be stored in a readily accessible location near where people work to provide additional oxygen that may be needed during an evacuation.

Q. Why is only one additional SCSR required to be stored near where people work? Wouldn't additional SCSRs help miners who choose to barricade?

A. MSHA encourages the immediate evacuation of mines that have had an explosion or are on fire. The risk of fires and subsequent explosions has been a common factor in many historic mine disasters. While additional oxygen would benefit barricaded miners, this is a broader issue that involves emergency shelters and long-term supplies of oxygen. MSHA is studying these issues and has published a request for information (RFI) in the Federal Register [January 25, 2006 (Volume 71, Number 16), pages 4223-4226]. Comments on the RFI are due back to MSHA on or before March 27, 2006.

Q. Why are additional SCSRs required by § 75.1714-4(a), many mines can be evacuated in less than one hour (the nominal capacity of a SCSRs)?

A. This additional SCSR is primarily a spare. MSHA wants every miner to know that sufficient oxygen is available in the SCSRs to permit the safe evacuation of any coal mine. In most cases, the additional SCSR will double the amount of oxygen available during an emergency evacuation in an irrespirable atmosphere. A significant concern is that miners do not seem to have the confidence to evacuate through thick smoke. Additional oxygen supplied by the SCSRs will

provide added confidence to miners to allow them to safely traverse this toxic and limited visibility hazard. While there have been significant improvements in SCSR reliability, the additional SCSRs will also help ensure that everyone will have access to a functional SCSR during a mine emergency.

Q. Are additional SCSRs required to be stored in the escapeways?

A. Yes, if the mine cannot be safely evacuated within the oxygen capacity of a single SCSR the ETS requires that additional SCSRs must be stored in both the primary and alternate escapeways to provide replacements for depleted SCSRs.

Q. Can I store the additional SCSRs in a crosscut rather than the escapeway entry?

A. Yes, as long as the SCSRs are readily accessible.

Q. How will I know if my mine needs additional stored SCSRs in the primary and alternate escapeways?

A. If it takes more than 45 minutes to walk (or crawl if in low coal) to exit the mine from any working section, then you probably need additional stored SCSRs in the escapeways.

Q. What are the requirements for SCSR storage in escapeways?

A. If additional SCSRs are required to be stored in the escapeways, an outby storage plan that includes the number, type and locations for the SCSR units must be developed by the mine operator and approved by the District Manager [75.1714-4(c)].

Q. Can I store the SCSRs in a room or entry that is adjacent to the escapeway that may be reached by going through a mandoor?

A. No, under the limited visibility and chaotic conditions that may occur during a mine emergency, the extra burden of locating this mandoor and going through this opening to reach the critical stored SCSRs defeats the readily accessible requirement of § 75.1714-4(d).

Q. I have a mine where the primary and alternate escapeways are adjacent to each other. Can I build a room between these two escapeways with block stoppings and two mandoor that is accessible from either escapeway to store one set of the extra SCSRs required by § 75.1714-4(c) rather than one set in each of the escapeways?

A. No, see the preceding question and answer regarding the doors. In addition, the regulation requires SCSRs to be stored in the primary and the alternate escapeways. This “room” is not “in” either escapeway. The single set of SCSRs does not comply with the “and” requirement of the regulation. The intent of this requirement is to provide readily accessible additional SCSRs to persons who have to escape the mine under potentially extreme conditions. Any additional

barriers between these evacuees and these critical SCSRs may reduce the likelihood of a successful evacuation.

Q. What happens when the Authorized Representative of the Secretary thinks that the SCSR outby storage plan does not provide adequate SCSR availability to the evacuees?

A. The District Manager may require a functional test (as explained in the next Q&A) of the SCSR storage proposal.

Q. What will this functional test consist of?

A. This test can consist of a simulated evacuation using the protocol developed in the publication titled “The Oxygen Cost of a Mine Escape”, Kovac, Kravitz and Rehak, MSHA-NIOSH, 1997. [[Get Document](#)] This procedure is also specified in the preamble to this ETS.

Q. Where should the stored SCSRs be located in the escapeway?

A. The location should be determined for each mine based on the travel conditions of the escapeway such as seam height, grade, and any other factor that may impact the time it takes to evacuate along the escapeway. Mine facilities such as overcasts that must be crawled over, doors that must be traversed, etc., can also influence the rate of travel. In addition, the physical condition of the evacuees may impact the locations of the stored SCSRs because heavier, more out-of-shape people consume more oxygen per mile traveled than lighter and fitter individuals. A good rule of thumb for spacing the SCSR storage locations is to observe the distance traveled along the escapeway by some of the more physically challenged miners during a 45 minute interval. This 45 minute time interval accounts for the increased exertion required when using a SCSR (about 15% greater air consumption than bare-faced) and provides about 5 minutes for exchanging SCSRs. A more rigorous method of locating the SCSR storage locations is explained in the publication titled “The Oxygen Cost of a Mine Escape”, Kovac, Kravitz and Rehak, MSHA-NIOSH, 1997. This procedure is also specified in the preamble to this ETS.

Q. State regulations require SCSRs to be stored in the escapeways at specific distances. In almost all instances, these distances are less than would be required by the federal ETS. Do we have to store SCSRs at both the state locations and at the locations required by the ETS?

A. No, § 75.1714-4(c) is a minimum requirement; SCSR storage locations that are spaced closer than this requirement are acceptable.

Q. At our mine, we use diesel mantrips in the primary (intake) escapeway. Since the mantrip only takes about 35 minutes to exit the mine from the most inby working section, do we need any additional SCSRs that are stored in the primary escapeway?

A. Yes, the additional SCSRs required by § 75.1714-4(c) must be spaced so that persons evacuating the mine under their own power (walking, crawling, etc.) will

have sufficient oxygen to safely exit the mine under the worst potential conditions (thick smoke, limited visibility, etc.). While mantrips and mobile equipment may be used during an emergency evacuation in clear air, it is often impossible to navigate a vehicle in thick smoke. Under extreme conditions, electrical power may be unavailable for trolley mantrips and diesel engines do not operate in low oxygen environments.

Q. How many SCSRs must be stored in the escapeways for emergency evacuation?

A. A sufficient number of SCSRs must be stored in both the primary and alternate escapeways to replace the depleted SCSRs of all persons who might have to evacuate the mine. The number of these SCSRs must be specified in the plan required in section § 75.1714-4(c)

Q. What is an acceptable storage facility?

A. Any storage location should protect the SCSRs from the mine environment and common hazards and meet the storage requirements of the SCSR manufacturer. This location should be protected from normal mine hazards such as loose roof, rib rolls, vehicular traffic, etc., and must not be blocked or obscured by supplies or debris. The storage location must be conspicuous and easily accessible [§ 75.1714-4(d)]. This location must be conspicuously marked with a reflective sign [§ 75.1714-4(e)] that says "SELF-RESCUERS". Directional signs made of reflective material shall be posted leading to each storage location.

Q. Do the SCSR storage boxes have to be fire-proof?

A. No, but they must be sufficient to protect the stored SCSRs from the mine environment and meet the manufacturer's storage requirements.

Q. Can SCSRs be stored in plastic ice chests? In metal boxes? In wooden boxes?

A. Containers that are sufficient to protect the stored SCSRs from the mine environment, meet the manufacturer's storage requirements and are conspicuously marked may be used.

Q. Can the SCSR storage boxes be locked if the section bosses have the keys?

A. No, the stored SCSR units must be readily available to any person who is evacuating the mine.

Q. What is "conspicuously marked?"

A. "Conspicuously marked" means that the containers holding the SCSRs can be easily identified by the persons evacuating the mine. A distinctive color, reflective material, distinctive pattern or all of these methods may be used to make the SCSR storage locations conspicuous. Another key element in making the storage locations conspicuous is to keep the storage boxes free of debris, loose coal, supplies, discarded equipment, and rock dust that may obscure these

critical locations. All of the SCSR storage facilities in a mine should have similar markings to eliminate confusion.

Q. Can the requirements of § 75.1714-4(c) be met by storing additional SCSRs in the primary (intake) escapeway since that is the most likely escape route?

A. No, a sufficient number of SCSRs must be stored in both the primary and alternate escapeways to replace the depleted SCSRs of all persons who might have to evacuate the mine.

Q. Do the stored SCSRs have to be inspected and maintained?

A. The inspection, testing, maintenance, repair and recordkeeping for all SCSR devices is addressed in § 75.1714-3. Interactive training on the care and maintenance of selected SCSR units is available at <http://www.msha.gov/interactivetraining.htm> under:



Self-Contained Self-Rescuers (SCSR's) Interactive Training Course

Q. How often should the stored SCSRs be inspected or tested?

A. The stored units must be inspected and tested as specified by the equipment manufacturer.

Q. I have tried to purchase additional SCSRs and have been told by the local distributors that none will be available for several months. What can I do to comply with this new regulation?

A. The mine operators are expected to make a good-faith effort to purchase these additional units as soon as practicable. Recognizing that this ETS will result in a significant increase in the demand for SCSR devices that will probably exceed the available stock, MSHA will work with the SCSR manufacturers and the mine operators to facilitate the phase-in of this new requirement. Mine operators must issue a valid purchase order or contract for the purchase of the additional SCSRs within 30 days of the publication of this ETS. The SCSR manufacturers and/or distributors will issue a confirmation letter for this purchase commitment that will be accepted as temporary compliance with this requirement until these SCSR units are delivered to and placed into service at the mine.

Q. How long will my mine have to modify mantrips to carry the additional SCSRs?

A. The mantrips and mobile equipment must be modified to carry the additional SCSRs within 30 days of the publication of this ETS if the SCSR units are available. If the SCSR units are not available within this 30-day period, the mantrips and mobile equipment must be modified to carry these additional units as soon as these units are placed into service.