

## **Fire Training Scenario**

- 1) Any person discovering a fire and others in the immediate vicinity shall make a prompt effort to extinguish the fire. Those efforts would include activation of applicable fire suppression systems and/or direct application of water or fire extinguisher agents.
- 2) Insert AMS system warning/reaction guidelines and associated evacuation procedures, if applicable.
- 3) The type, location, and extent of the fire, if known, shall be reported immediately to the authorized person located on the surface. The authorized person located on the surface shall do the following immediately upon receiving information that a fire has occurred:
  - a. Contact the responsible person or designee at the mine, supervisors and/or personnel in all available areas of the mine;
  - b. Notify Division of Mines and MSHA officials immediately, at once without delay after confirming the incident and within 15 minutes;
  - c. Notify mine rescue teams and other support personnel as directed by the responsible person or designee.

Underground personnel evacuating should, if possible and time permitting, contact surface personnel from the first accessible telephone and provide the following information:

1. Location and extent of fire, if known, and conditions present at your location;
  2. Any miners evacuating from the mine and their location, condition, etc;
  3. Number of miners leaving a particular location;
  4. Direction, entry, and method of evacuation (riding, walking, crawling, etc.)
- 4) The location and size of a fire area in conjunction with methane liberation and other mine specific conditions must dictate whether miners will attempt to extinguish a fire or withdraw to the surface immediately.
  - 5) All underground personnel shall be accounted for, assembled to prepare for evacuation, and withdrawn to a location designated by the responsible person or his designee. Miners shall report changes in normal work areas to the responsible person or authorized person on the surface.
  - 6) All mine personnel not required for a mine emergency response shall evacuate from the mine by the quickest, most practical means that varies, depending on the situation, post-fire conditions, availability of transportation equipment, etc. If the fire cannot be extinguished and conditions are such that emergency response personnel are in imminent danger, then all personnel will be evacuated immediately to the surface.

- 7) All miners must know and understand the mine ventilation system and where smoke and toxic fire gases would travel from any fire location to your location in the mine. Mine fires create special dangers to all personnel located underground including: (1) restricted or zero visibility while attempting escape from the mine; (2) extreme heat that affects the body, lungs, and mine roof; (3) smoke; (4) carbon monoxide, carbon dioxide, and toxic smoke tars.
- 8) The electrical power to the affected equipment and/or area of the mine shall be de-energized as directed by the responsible person or his designee. Electrical power to other areas of the mine or equipment should be de-energized or disconnected as necessary, while considering evacuation of mine personnel.
- 9) All underground mine personnel should attempt evacuation from the mine – by identifying primary escapeway and alternate (secondary) escapeway entries and considering.
  - **FIRST CHOICE** – The entry traveled during your normal mode of transportation into and out of the mine is usually the quickest and is usually the primary or alternate (secondary) escapeway. The entry traveled into and out of the mine should be traveled until conditions such as physical obstructions, smoke, fire, etc. prevent further evacuation in this entry. The decision to evacuate and ride in the primary OR alternate (secondary) escapeway depends on several factors including the mine ventilation, presence of smoke, fire, toxic fire/explosion gases, physical obstructions, etc. This decision should be based on the entry, which would provide the most practical, safest, and most expedient evacuation from the mine.  
REMEMBER: You can always ride faster than you can walk or crawl and with conditions permitting, ride as far as you possibly can.
  - **SECOND CHOICE** – If at the beginning or during evacuation and you have no transportation equipment available to ride in the primary or alternate (secondary) escapeway, then with conditions permitting – walk or crawl the primary or secondary escapeway. The decision whether to travel the primary or secondary escapeway depends on many factors as previously described. If the escapeway being traveled becomes blocked with obstructions such as roof falls, water, smoke, fire, etc., then you have to consider further evacuation in a different escapeway entry.
  - **THIRD CHOICE** – An alternate (secondary) or intake escapeway not selected as the second choice.
- 10) Each miner shall have an SCSR in their possession and an additional SCSR readily accessible or on the transportation equipment. The additional SCSR storage locations are shown on both the mine map (surface) and escapeway map. Identify locations of stored SCSRs, if applicable. Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Mine operators are encouraged to provide air quality detectors so that miners will be able to better identify hazardous atmospheres.

- 11) During evacuation, the miners should get an escapeway map, if applicable, to take with them. The escapeway entry, primary or alternate (secondary), that will be traveled shall be explained to all miners. The authorized person located on the surface should be informed of the number of miners beginning evacuation and the escape route that will be used while exiting the mine.
- 12) If walking or crawling, the supervisor should travel in front with all persons using the lifeline to ensure no one is left behind. The miners should move fast but should never run even when coal heights allow. The miners should regulate their travel speed to accommodate the slower personnel in the group.
- 13) Mining personnel should consider the following if a decision is made to extinguish the fire:
  - Ventilation to the fire area should be established, maintained, and evaluated periodically to provide access for fire-fighting efforts;
  - Fire-fighting efforts should be conducted from the outby, fresh air ventilation side, of the fire area;
  - Fire-fighting equipment should be assembled immediately and preparations made for fire-fighting efforts. Equipment would include water hose and nozzles, rock dust, fire extinguishers, saws, hammers, nails, ventilation curtain, etc.;
  - Water and/or foam can be used for fire fighting when conditions prohibit a close-up, direct approach to the fire area. Always de-energize electrical power to affected equipment or areas of the mine prior to applying water and/or foam to a fire;
  - Ventilation stoppings located inby or outby the fire area may have to be removed or altered to short-circuit the ventilation to allow close access necessary to extinguish the fire. Use extreme caution while traveling inby a fire area to perform this type ventilation work.
- 14) The miners should consider barricading or entering a refuge chamber only when all escape routes are blocked or too hazardous to travel. When all possible means of escape are exhausted and barricading is the only alternative, then barricade using all available resources to make the barricaded area airtight as possible while knowing that one (1) cubic yard of air per person per hour is required for survival. A note should be left outside the barricade indicating the number of miners and time the barricade was built. Oxygen tanks, water, food, all available SCSRs, and a sounding device for striking roof supports for seismic location from the surface must be taken into the barricade.

## Explosion Scenario Training

- 1) The location and extent of the explosion, if known, shall be reported immediately to the authorized person located on the surface. The authorized person located on the surface shall do the following immediately upon receiving information that an explosion has occurred:
  - a. Contact the responsible person or designee at the mine, supervisors, and/or personnel in all available areas of the mine;
  - b. Notify Division of Mines and MSHA officials immediately, at once without delay after confirming the incident and within 15 minutes;
  - c. Notify mine rescue teams and other support personnel as directed by the responsible person or his designee.

Underground personnel evacuating should, if possible and time permitting, contact surface personnel from the first accessible telephone and provide the following information:

1. Location and extent of explosion, if known, and conditions present at your location;
  2. Any miners evacuating from the mine and their location, condition, etc;
  3. Number of miners leaving a particular location;
  4. Direction, entry, and method of evacuation (riding, walking, crawling, etc.)
- 2) All mine personnel not required for a mine emergency response shall evacuate from the mine by the quickest, most practical means that varies, depending on the situation, post-explosion conditions, availability of transportation equipment, etc.
- 3) All underground personnel shall be accounted for, assembled to prepare for evacuation and withdrawn to a location designated by the responsible person or his designee. Miners shall report changes in normal work areas to the responsible person or authorized person on the surface.
- 4) The electrical power to the affected area of the mine shall be de-energized as directed by the responsible person or his designee. Electrical power to other areas of the mine should be de-energized as necessary, while considering evacuation of mine personnel.
- 5) All underground personnel not required for emergency response shall evacuate by traveling the primary or alternate (secondary) escapeway as directed by the mine responsible person or his designee, taking into consideration:
  - **FIRST CHOICE** – The entry traveled using the normal mode of transportation into and out of the mine is usually the quickest and is usually the primary or alternate (secondary) escapeway. The entry traveled into and out of the mine should be traveled until conditions such as physical obstructions, smoke, fire, etc. prevent further evacuation in this entry. The decision to evacuate and ride in the primary or alternate (secondary)

escapeway depends on several factors including the mine ventilation, presence of smoke, fire, toxic fire/explosion gases, physical obstructions, etc. This decision should be based on the entry, which would provide the most practical, safest and most expedient evacuation from the mine. **REMEMBER:** You can always ride faster than you can walk or crawl and with conditions permitting, ride as far as you possibly can.

- **SECOND CHOICE** – If at the beginning or during evacuation and you have no transportation equipment available to ride in the primary or alternate (secondary) escapeway, then with conditions permitting – walk or crawl the primary or secondary escapeway. The decision whether to travel the primary or secondary escapeway depends on many factors as previously described. If the escapeway being traveled becomes blocked with obstructions such as roof falls, water, smoke, fire, etc., then you have to consider further evacuation in a different escapeway entry.
  - **THIRD CHOICE** – An alternate (secondary) or intake escapeway not selected as the second choice.
- 6) Each miner shall have an SCSR in their possession and an additional SCSR readily accessible or on the transportation equipment. The additional SCSR storage locations are shown on both the mine map (surface) and escapeway map. Identify locations of stored SCSRs, if applicable. Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Mine operators are encouraged to provide air quality detectors so that miners will be able to better identify hazardous atmospheres.
  - 7) Lifelines or equivalent devices are provided in both the primary and secondary (alternate) escapeway entries.
  - 8) Additional SCSRs are stored on active working sections; sections being installed or removed; at rehabilitation sites; located at crosscut no.(s) \_\_\_\_ \_\_\_\_; and are physically attached to the lifelines or equivalent devices. Reflective, direction signs are conspicuously posted in each entry that identifies each storage location.
  - 9) During evacuation, the miners should get an escapeway map, if applicable, to take with them. The escapeway entry, primary or alternate (secondary), that will be traveled shall be explained to all miners. The authorized person located on the surface should be informed of the number of miners beginning evacuation and the escape route that will be used while exiting the mine.
  - 10) If walking or crawling, the supervisor should travel in front with all persons using the lifeline to ensure no one is left behind. The miners should move fast but should never run even when coal heights allow. The miners should regulate their travel speed to accommodate the slower personnel in the group.
  - 11) The miners should consider barricading or entering a refuge chamber only when all escape routes are physically blocked or too hazardous to travel. When all possible means of escape are exhausted and barricading is the only alternative,



## Gas Inundation Scenario Training

- 1) The location and extent of the gas inundation, if known, shall be reported immediately to the authorized person located on the surface. The authorized person located on the surface shall do the following immediately upon receiving information that a gas inundation has occurred:
  - a. Contact the responsible person or designee at the mine, supervisors and/or personnel in all available areas of the mine;
  - b. Notify Division of Mines and MSHA officials immediately, at once without delay after confirming the incident and within 15 minutes;
  - c. Notify mine rescue teams and other support personnel as directed by the responsible person or designee.

Underground personnel evacuating should, if possible and time permitting, contact surface personnel from the first accessible telephone and provide the following information:

1. Location and extent of gas inundation, if known, and conditions present at your location;
  2. Any miners evacuating from the mine and their location, condition, etc.;
  3. Number of miners leaving a particular location;
  4. Direction, entry, and method of evacuation (riding, walking, crawling, etc.)
- 2) All mine personnel not required for a mine emergency response shall evacuate from the mine by the quickest, most practical means that varies, depending on the situation, post-inundation conditions, availability of transportation equipment, etc.
  - 3) All underground personnel shall be accounted for, assembled to prepare for evacuation, and withdrawn to a location designated by the responsible person or his designee. Miners shall report changes in normal work areas to the responsible person or authorized person on the surface.
  - 4) The electrical power to the affected area of the mine shall be de-energized as directed by the responsible person or his designee. Electrical power to other areas of the mine should be de-energized as necessary, while considering evacuation of mine personnel.
  - 5) All underground mine personnel should attempt evacuation from the mine - identifying primary escapeway and alternate (secondary) escapeway entries, taking into consideration:
    - **FIRST CHOICE** – The entry traveled during your normal mode of transportation into and out of the mine is usually the quickest and is usually the primary or alternate (secondary) escapeway. The entry traveled into and out of the mine should be traveled until conditions such as physical obstructions prevent further evacuation in this entry. The decision to evacuate

and ride in the primary OR alternate (secondary) escapeway depends on several factors including the mine ventilation, presence of explosive gases, physical obstructions, irrespirable atmosphere, etc. Diesel-powered equipment is inoperative in high concentrations of methane and in irrespirable atmospheres. Battery-powered equipment must not be operated in explosive atmospheres. This decision should be based on the entry, which would provide the most practical, safest and most expedient evacuation from the mine.

- **REMEMBER:** You can always ride faster than you can walk or crawl and with conditions permitting, ride as far as you possibly can.
  - **SECOND CHOICE** – If at the beginning or during evacuation and you have no transportation equipment available to ride in the primary or alternate (secondary) escapeway, then with conditions permitting – walk or crawl the primary or secondary escapeway. The decision whether to travel the primary or secondary escapeway depends on many factors as previously described. If the escapeway being traveled becomes blocked with obstructions, then you have to consider further evacuation in a different escapeway entry.
  - **THIRD CHOICE** – An alternate (secondary) or intake escapeway not selected as the second choice.
- 6) Each miner shall have an SCSR in their possession and an additional SCSR readily accessible or on the transportation equipment. The additional SCSR storage locations are shown on both the mine map (surface) and escapeway map. Identify locations of stored SCSRs, if applicable. Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Mine operators are encouraged to provide air quality detectors so that miners will be able to better identify hazardous atmospheres.
  - 7) Lifelines or equivalent devices are provided in both the primary and secondary (alternate) escapeway entries.
  - 8) Additional SCSRs are stored on active working sections; sections being installed or removed; at rehabilitation sites; located at crosscut no.(s) \_\_\_\_ \_\_\_\_; and are physically attached to the lifelines or equivalent devices. Reflective, direction signs are conspicuously posted in each entry that identifies each storage location.
  - 9) During evacuation, the miners should get an escapeway map, if applicable, to take with them. The escapeway entry, primary or alternate (secondary), that will be traveled shall be explained to all miners. The authorized person located on the surface should be informed of the number of miners beginning evacuation and the escape route that will be used while exiting the mine.
  - 10) If walking or crawling, the supervisor should travel in front with all persons using the lifeline to ensure no one is left behind. The miners should move fast but should never run even when coal heights allow. The miners should regulate their travel speed to accommodate the slower personnel in the group.



- 11)** All miners should know and understand the following:
- Mine gases including methane, low oxygen, blackdamp, carbon dioxide, etc. could enter your mine from another mine or from underlying, overlying, or adjacent strata;
  - The rate of flow of gases into your mine depend on your ventilation system, elevations of other mines, if applicable, in relation to your mine and whether or not the mine gases are pressurized;
  - Mine gases will have a tendency to be drawn into your mine from underlying/overlying strata, old mines, etc. if your mine fan is exhausting;
  - Mine ventilation associated with a blowing fan will have a tendency to apply some pressure against the inundating mine gases but pressurized gases entering your mine could override your mine ventilation system.
- 12)** The miners should consider barricading or entering a refuge chamber only when all escape routes are physically blocked or too hazardous to travel. When all possible means of escape are exhausted and barricading is the only alternative, then barricade using all available resources to make the barricaded area airtight as possible while knowing that one (1) cubic yard of air per person per hour is required for survival. A note should be left outside the barricade indicating the number of miners and time the barricade was built. Oxygen tanks, water, food, all available SCSRs and a sounding device for striking roof supports for seismic location from the surface must be taken into the barricade.

## Water Inundation Training Scenario

- 1) The location and extent of the water inundation, if known, shall be reported immediately to the authorized person located on the surface. The authorized person located on the surface shall do the following immediately upon receiving information that a water inundation has occurred:
  - a. Contact the responsible person or designee at the mine, supervisors, and/or personnel in all available areas of the mine;
  - b. Notify Division of Mines and MSHA officials immediately, at once without delay after confirming the incident and within 15 minutes;
  - c. Notify mine rescue teams and other support personnel as directed by the responsible person or designee.

Underground personnel evacuating should, if possible and time permitting, contact surface personnel from the first accessible telephone and provide the following information:

1. Location and extent of water inundation, if known, and conditions present at your location;
  2. Any miners evacuating from the mine and their location, condition, etc;
  3. Number of miners leaving a particular location;
  4. Direction, entry, and method of evacuation (riding, walking, crawling, etc.)
- 2) All mine personnel shall evacuate from the mine by the quickest, most practical means that varies, depending on the situation, post-inundation conditions, availability of transportation equipment, etc.
  - 3) All underground personnel shall be accounted for, assembled to prepare for evacuation, and withdrawn to a location designated by the responsible person or his designee. Miners shall report changes in normal work areas to the responsible person or authorized person on the surface.
  - 4) The electrical power to the affected area of the mine shall be de-energized as directed by the responsible person or his designee. Electrical power to other areas of the mine should be de-energized as necessary, while considering evacuation of mine personnel.
  - 5) All underground mine personnel should attempt evacuation from the mine - identifying primary escapeway and alternate (secondary) escapeway entries, taking into consideration:
    - **FIRST CHOICE** – The entry traveled during your normal mode of transportation into and out of the mine is usually the quickest and is usually the primary or alternate (secondary) escapeway. The entry traveled into and out of the mine should be traveled until conditions such as physical obstructions prevent further evacuation in this entry. The decision to evacuate

and ride in the primary or alternate (secondary) escapeway depends on several factors including the mine ventilation, irrespirable atmospheres, physical obstructions, etc. This decision should be based on the entry, which would provide the most practical, safest, and most expedient evacuation from the mine.

- **REMEMBER: You can always ride faster than you can walk or crawl and with conditions permitting, ride as far as you possibly can.**
  - **SECOND CHOICE** – If at the beginning or during evacuation and you have no transportation equipment available to ride in the primary or alternate (secondary) escapeway, then with conditions permitting – walk or crawl the primary or secondary escapeway. The decision whether to travel the primary or secondary escapeway depends on many factors as previously described. If the escapeway being traveled becomes blocked with obstructions such as water, then you have to consider further evacuation in a different escapeway entry.
  - **THIRD CHOICE** – An alternate (secondary) or intake escapeway not selected as the second choice.
- 6) Each miner shall have an SCSR in their possession and an additional SCSR readily accessible or on the transportation equipment. The additional SCSR storage locations are shown on both the mine map (surface) and escapeway map. Identify locations of stored SCSRs, if applicable. Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Mine operators are encouraged to provide air quality detectors so that miners will be able to better identify hazardous atmospheres.
  - 7) Lifelines or equivalent devices are provided in both the primary and secondary (alternate) escapeway entries.
  - 8) Additional SCSRs are stored on active working sections; sections being installed or removed; at rehabilitation sites; located at crosscut no.(s) \_\_\_ \_\_\_; and are physically attached to the lifelines or equivalent devices. Reflective, direction signs are conspicuously posted in each entry that identifies each storage location.
  - 9) During evacuation, the miners should get an escapeway map, if applicable, to take with them. The escapeway entry, primary or alternate (secondary), that will be traveled shall be explained to all miners. The authorized person located on the surface should be informed of the number of miners beginning evacuation and the escape route that will be used while exiting the mine.
  - 10) If walking or crawling, the supervisor should travel in front with all persons using the lifeline to ensure no one is left behind. The miners should move fast but should never run even when coal heights allow. The miners should regulate their travel speed to accommodate the slower personnel in the group.

- 11)** All miners should know and understand the following:
- The mine emergency escapeways;
  - The mine ventilation system;
  - Mine elevations (coal contour lines) and all low places, dips, etc. in your mine – water and blackdamp (carbon dioxide) will flow to low-lying areas;
  - Where and how water drains in your mine and how water accumulations affect the mine ventilation system, especially in escapeway entries;
  - The mine water drainage system and pumps located in the emergency escapeway entries and the result when such pumps are de-energized.
- 12)** The miners should consider traveling to the highest, most accessible area of the mine and/or barricading or entering a refuge chamber only when all escape routes are blocked. These two options should only be considered as a last resort and only when all escape routes are physically blocked, or too hazardous to travel. When all possible means of escape are exhausted and moving to higher ground and/or barricading are the only alternatives, then barricade using all available resources to make the barricaded area airtight as possible while knowing that one (1) cubic yard of air per person per hour is required for survival. A note should be left outside the barricade indicating the number of miners and time the barricade was built. Oxygen tanks, water, food, all available SCSRs and a sounding device for striking roof supports for seismic location from the surface must be taken into the barricade.