

# **Mining Safety (MSHA)**

## **MSHA – New Miner**

### **Lesson 1 - Line of Authority**

#### **Description:**

This lesson is included in the New Miner Training program in the form of a worksheet to be completed by the competent person/instructor and reviewed by the new miner in order to become familiar with the specific line of authority at the mine site.

### **Lesson 2 - Introduction**

#### **Description:**

This lesson is presented in the form of a checklist to be completed by the competent person/instructor while presenting the new miner with an introduction to the mine site, its layout and its hazards.

### **Lesson 3 - Emergency Procedures**

#### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- Part 46 - Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines.
- Sections 46.1 – 46.12

#### **Description:**

Injuries, fire, and equipment damage are typical emergencies that may occur at a mine. Other emergencies might include earthquakes, tornadoes, explosions, bomb threats, hazardous spills, and acts of violence. Knowing the actions to take could be the difference between life and death. This lesson describes emergency procedures mines have in place for handling emergencies. Students will learn who to contact, how warning signals notify employees of emergencies, how to evacuate, and where to report.

#### **Goal:**

Each mine employee will identify the correct procedures in the event of serious injury, fire, or other emergency.

#### **Objectives:**

- Identify medical emergency procedures that may take place at a mine.
- Identify the typical fire warning signals, fire fighting equipment, and how to use a fire extinguisher.
- Recognize the emergency evacuation plans and reporting procedures at a typical mine site.
- Identify how to respond to weather-related and natural disasters.
- Identify how to respond to other types of emergencies such as explosions, bomb threats, hazardous spills, and acts of violence.

## **Lesson 4 - Statutory Rights**

### **Requirement References:**

- MSHA Part 46 Training Regulations
- Title 30 CFR

### **Description:**

When congress enacted the Federal Mine Safety and Health Act of 1977, certain statutory rights were given to miners and their representatives. This lesson provides an awareness of the rights that directly affect miners their representatives.

### **Goal:**

The goal of this lesson is to provide miners with an awareness of their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.

### **Objectives:**

- Identify their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.

## **Lesson 5 - Hazard Recognition and Avoidance**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- 30 CFR 46.1 Scope
- 30 CFR § 46.2 Definitions
- 30 CFR § 46.3 Training plans
- 30 CFR § 46.4 Training plan implementation
- 30 CFR § 46.5 New miner training
- 30 CFR § 46.6 Newly hired experienced miner training
- 30 CFR § 46.7 New task training
- 30 CFR § 46.8 Annual refresher training
- 30 CFR & 46.9 Records of training
- 30 CFR § 46.10 Compensation for training
- 30 CFR § 46.11 Site-specific hazard awareness training
- 30 CFR § 46.12 Responsibility for independent contractor training

### **Description:**

Miners work in an environment where there are both mechanical and physical hazards such as mobile equipment, heavy machinery, electricity, unsafe ground conditions, loud noise, and heavy dust. To work safely at a mine site, miners must learn to recognize these hazards and take appropriate steps to avoid the risks.

### **Goal:**

Each mine employee will know how to identify some of the more common hazards found at mine sites and the protective measures used to minimize the risk.

### **Objectives:**

- Identify the three primary methods of controlling hazards.
- Identify the hazards and protective measures involving mobile equipment.
- Identify the potential mechanical hazards at mine sites and how to minimize the risk.
- Identify the hazards involving electricity and how to minimize the risk.
- Identify hazards that may result in "struck by" incidents and how to minimize the risk.
- Identify unsafe ground conditions and how to minimize the risk.
- Identify slip, trip, and fall hazards and how to minimize the risk.
- Identify several environmental hazards and how to minimize the risk.

## **Lesson 6 - Reporting Hazards**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- 30 CFR 46.1 Scope
- 30 CFR § 46.2 Definitions
- 30 CFR § 46.3 Training plans
- 30 CFR § 46.4 Training plan implementation
- 30 CFR § 46.5 New miner training
- 30 CFR § 46.6 Newly hired experienced miner training
- 30 CFR § 46.7 New task training
- 30 CFR § 46.8 Annual refresher training
- 30 CFR & 46.9 Records of training
- 30 CFR § 46.10 Compensation for training
- 30 CFR § 46.11 Site-specific hazard awareness training
- 30 CFR § 46.12 Responsibility for independent contractor training

### **Description:**

Miners work in an environment where there are many hazards such as mobile equipment, heavy machinery, electricity, unsafe ground conditions, loud noise, and heavy dust. To work safely at a mine site, miners must learn to recognize these hazards and take appropriate steps to avoid the risks and to promptly report hazards. In this lesson you will learn the importance of promptly reporting hazards.

### **Goal:**

Each mine employee will know how to properly report risks.

### **Objectives:**

- Recognize the importance of promptly reporting hazards.

## **Lesson 7 - Health and Safety Aspects of Assigned Tasks**

### **Description:**

The competent person/instructor uses this checklist as a guideline to ensure that the health and safety aspects of a new task are adequately addressed for the miner assigned to the task.

## **Lesson 8 - Respiratory Protection**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- Part 46 - Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines. Sections 46.1 – 46.12
- 30 CFR Subchapter K Metal and Nonmetal Mine Safety and Health
- Part 56 Safety and Health Standards – Surface Metal and Nonmetal Mines
- Subpart D – Air Quality and Physical Agents – Air Quality
- Section 56.5001, 56.5002, 56.5005 and 56.5006
- American National Standards Practices for Respiratory Protection ANSI Z88.2-1969

### **Goal:**

The goal of this lesson is to discuss why a miner may need to wear a respirator, how to select the right respirator and how to wear it properly.

### **Audience:**

Miners who wear respirators on the job.

### **Objectives:**

- Recognize the respiratory hazards associated with surface mining dust.
- Recognize the basic respirator user qualifications and training requirements.
- Identify how to select the right respirator for the task.
- Recognize how to use and care for respirators.

## **Lesson 9 - First Aid**

### **Requirement References:**

- 30 CFR Subchapter K Metal and Nonmetal Mine Safety and Health
- Part 56 Safety and Health Standards – Surface Metal and Nonmetal Mines
- Subpart N – Personal Protection
- Section 56.15001
- Subpart Q – Safety Programs
- Section 56.18010, 56.18012, 56.18013, 56.18014
- MSHA's Program Policy Manual

### **Description:**

Each employee will know how to initially respond to an accident or injury situation, become aware of first aid guidelines and "good practices."

### **Goal:**

Each employee will know how to initially respond to an accident or injury situation.

### **Objectives:**

- Identify the correct actions to take during an initial response to an accident or first aid situation.
- Identify situations involving bleeding.
- Identify the symptoms of shock.
- .Identify situations involving burns.
- Identify situations of electrical shock.
- Identify the symptoms associated with a head injury.
- Identify situations involving fractures.
- Identify potential poisoning accidents.
- Identify the signs and symptoms associated with environmental emergencies including snakebites and heat and cold stress.

# **MSHA – Part 46 Refresher**

## **Emergency Procedures**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- Part 46 - Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines.
- Sections 46.1 – 46.12

### **Goal:**

Each mine employee will identify the correct procedures in the event of serious injury, fire, or other emergency.

### **Objectives:**

- Identify medical emergency procedures that may take place at a mine.
- Identify the typical fire warning signals, fire fighting equipment, and how to use a fire extinguisher.
- Recognize the emergency evacuation plans and reporting procedures at a typical mine site.
- Identify how to respond to weather-related and natural disasters.
- Identify how to respond to other types of emergencies such as explosions, bomb threats, hazardous spills, and acts of violence.

## **First Aid**

### **Requirement References:**

- 30 CFR Subchapter K Metal and Nonmetal Mine Safety and Health
- Part 56 Safety and Health Standards – Surface Metal and Nonmetal Mines
- Subpart N – Personal Protection
- Section 56.15001
- Subpart Q – Safety Programs
- Section 56.18010, 56.18012, 56.18013, 56.18014
- MSHA's Program Policy Manual

### **Goal:**

Each employee will know how to initially respond to an accident or injury situation, become aware of first aid guidelines and “good practices,” and be able to properly treat injuries and respond to emergencies.

### **Objectives:**

- Identify the correct actions to take during an initial response to an accident or first aid situation.
- Identify the correct actions to take when providing first aid in situations involving bleeding.
- Identify the symptoms of shock and the correct actions to take when providing first aid in situations involving shock.
- Identify the correct actions to take when providing first aid in situations involving burns.
- Identify the correct actions to take when providing first aid in electrical accident situations.
- Identify the symptoms associated with a head injury and the correct actions to take when providing first aid in situations involving potential head injuries.
- Identify when to suspect a spinal injury and the correct actions to take when providing first aid in situations involving potential spinal injuries.
- Identify the correct actions to take when providing first aid in situations involving fractures.
- Identify the signs and symptoms of poisonings and the correct actions to take when providing first aid in poisoning accidents.
- Identify the signs and symptoms associated with environmental emergencies including snakebites and heat and cold stress and the correct actions to take when providing first aid in these situations.

## **Hazard Communication**

### **Requirement References:**

- 30 CFR Part 47 Sections 47.2, 47.31-.32

### **Goal:**

To train miners on the hazards of chemicals in their work area, information on chemical labels and MSDS, how to access this information when needed, and how miners can protect themselves from harmful exposure.

### **Objectives:**

- Identify the physical and health hazards of chemical exposure.
- Identify the type of information provided on a chemical container label.
- Identify the type of information provided on an MSDS and how to access the information when needed.
- Identify how to determine if a chemical is hazardous and the importance of a written HazCom Program.
- Identify what measures to take to protect against harmful exposures to chemicals and emergency procedures to take in the event of a chemical spill.

## **Hazard Recognition and Avoidance**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- 30 CFR 46.1 Scope
- 30 CFR § 46.2 Definitions
- 30 CFR § 46.3 Training plans
- 30 CFR § 46.4 Training plan implementation
- 30 CFR § 46.5 New miner training
- 30 CFR § 46.6 Newly hired experienced miner training
- 30 CFR § 46.7 New task training
- 30 CFR § 46.8 Annual refresher training
- 30 CFR & 46.9 Records of training
- 30 CFR § 46.10 Compensation for training
- 30 CFR § 46.11 Site-specific hazard awareness training
- 30 CFR § 46.12 Responsibility for independent contractor training

### **Goal:**

Each mine employee will know how to identify some of the more common hazards found at mine sites and the protective measures used to minimize the risk.

### **Objectives:**

- Identify the three primary methods of controlling hazards.
- Identify the hazards and protective measures involving mobile equipment.
- Identify the potential mechanical hazards at mine sites and how to minimize the risk.
- Identify the hazards involving electricity and how to minimize the risk.
- Identify hazards that may result in "struck by" incidents and how to minimize the risk.
- Identify unsafe ground conditions and how to minimize the risk.
- Identify slip, trip, and fall hazards and how to minimize the risk.
- Identify several environmental hazards and how to minimize the risk.

## **Respiratory Protection**

### **Requirement References:**

- 30 CFR SUBCHAPTER H -- EDUCATION AND TRAINING
- Part 46 - Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines. Sections 46.1 – 46.12
- 30 CFR Subchapter K Metal and Nonmetal Mine Safety and Health
- Part 56 Safety and Health Standards – Surface Metal and Nonmetal Mines
- Subpart D – Air Quality and Physical Agents – Air Quality
- Section 56.5001, 56.5002, 56.5005 and 56.5006
- American National Standards Practices for Respiratory Protection ANSI Z88.2-1969

### **Goal:**

The goal of this lesson is to ensure users are qualified and properly trained in the use and maintenance of respirators.

### **Objectives:**

- Recognize the respiratory hazards associated with surface mining dust.
- Recognize the basic respirator user qualifications and training requirements.
- Identify how to select the right respirator for the task.
- Recognize how to use and care for respirators.
- Recognize what to do in emergency situations.

## **Statutory Rights**

### **Requirement References:**

- MSHA Part 46 Training Regulations
- Title 30 CFR

### **Goal:**

The goal of this lesson is to provide miners with an awareness of their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.

### **Objectives:**

- Identify their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.

# MSHA – Part 48 Refresher

## Hazard Communication

### Requirement References:

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING, Part 47
  - Subpart A--Purpose, Scope, Applicability, and Initial Miner Training, Sections 47.1-.2
  - Subpart D--HazCom Program, Sections 47.31-.32

### Goal:

To train miners on the hazards of chemicals in their work area, information on chemical labels and MSDS, how to access this information when needed, and how miners can protect themselves from harmful exposure.

### Objectives:

- Identify the physical and health hazards of chemical exposure.
- Identify the type of information provided on a chemical container label.
- Identify the type of information provided on an MSDS and how to access the information when needed.
- Identify how to determine if a chemical is hazardous and the importance of a written HazCom Program.
- Identify what measures to take to protect against harmful exposures to chemicals and emergency procedures to take in the event of a chemical spill.

## Escape, Evacuation & Emergencies

### Requirement References:

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING, Part 48 Subpart B--Training and Retraining of Miners Working at Surface Mines and Surface Areas of Underground Mines

### Goal:

Each mine employee will identify the correct procedures in the event of serious injury, fire, or other emergency.

### Objectives:

- Identify medical emergency procedures that may take place at a mine.
- Identify the typical fire warning signals, fire fighting equipment, and how to use a fire extinguisher.
- Recognize the emergency evacuation plans and reporting procedures at a typical mine site.
- Identify how to respond to weather-related and natural disasters.
- Identify how to respond to other types of emergencies such as explosions, bomb threats, hazardous spills, and acts of violence.

## First Aid

### Requirement References:

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING
  - Part 48 Subpart B--Training and Retraining of Miners Working at Surface Mines and Surface Areas of Underground Mines
- MSHA 30 CFR, SUBCHAPTER K -- METAL AND NONMETAL MINE SAFETY AND HEALTH
  - Part 56 Subpart N – Personal Protection, Section 56.15001
  - Part 56 Subpart Q – Safety Programs, Sections 56.18010, 56.18012, 56.18013, 56.18014
- MSHA's Program Policy Manual

### Goal:

Each employee will know how to initially respond to an accident or injury situation, become aware of first aid guidelines and "good practices," and be able to properly treat injuries and respond to emergencies.

### Objectives:

- Identify the correct actions to take during an initial response to an accident or first aid situation.
- Identify the correct actions to take when providing first aid in situations involving bleeding.
- Identify the symptoms of shock and the correct actions to take when providing first aid in situations involving shock.
- Identify the correct actions to take when providing first aid in situations involving burns.
- Identify the correct actions to take when providing first aid in electrical accident situations.
- Identify the symptoms associated with a head injury and the correct actions to take when providing first aid in situations involving potential head injuries.
- Identify when to suspect a spinal injury and the correct actions to take when providing first aid in situations involving potential spinal injuries.
- Identify the correct actions to take when providing first aid in situations involving fractures.
- Identify the signs and symptoms of poisonings and the correct actions to take when providing first aid in poisoning accidents.
- Identify the signs and symptoms associated with environmental emergencies including snakebites and heat and cold stress and the correct actions to take when providing first aid in these situations.

## Primary Prevention

### Requirement References:

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING, Part 48 Subpart B--Training and Retraining of Miners Working at Surface Mines and Surface Areas of Underground Mines

### Goal:

Each mine employee will know how to identify some of the more common hazards found at mine sites and the protective measures used to minimize the risk.

### Objectives:

- Identify the three primary methods of controlling hazards.
- Identify the hazards and protective measures involving mobile equipment.
- Identify the potential mechanical hazards at mine sites and how to minimize the risk.
- Identify the hazards involving electricity and how to minimize the risk.
- Identify hazards that may result in "struck by" incidents and how to minimize the risk.
- Identify unsafe ground conditions and how to minimize the risk.
- Identify slip, trip, and fall hazards and how to minimize the risk.
- Identify several environmental hazards and how to minimize the risk.

## **Respiratory Protection**

### **Requirement References:**

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING
  - Part 48 Subpart B--Training and Retraining of Miners Working at Surface Mines and Surface Areas of Underground Mines
- MSHA 30 CFR, SUBCHAPTER K -- METAL AND NONMETAL MINE SAFETY AND HEALTH
  - Part 56 Subpart D – Air Quality and Physical Agents
- 29 CFR 1910.134 - Respiratory Protection: Personal Protective Equipment
- American National Standards Practices for Respiratory Protection ANSI Z88.2-1969

### **Goal:**

The goal of this lesson is to ensure users are qualified and properly trained in the use and maintenance of respirators.

### **Objectives:**

- Recognize the respiratory hazards associated with surface mining dust.
- Recognize the basic respirator user qualifications and training requirements.
- Identify how to select the right respirator for the task.
- Recognize how to use and care for respirators.
- Recognize what to do in emergency situations.

## **Statutory Rights**

### **Requirement References:**

- MSHA 30 CFR, SUBCHAPTER H -- EDUCATION AND TRAINING, Part 48 Subpart B--Training and Retraining of Miners Working at Surface Mines and Surface Areas of Underground Mines

### **Goal:**

The goal of this lesson is to provide miners with an awareness of their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.

### **Objectives:**

- Identify their rights and the rights of their representatives under the Federal Mine Safety and Health Act of 1977.