



Illinois Eastern Community Colleges

***Workforce Education***

***Mine Safety & Health Administration (MSHA) Rules  
and Regulations***

***Contractor's Compliance Manual***

*Independent contractors sometimes perform work that is outside the scope of duties of the average miner. While all MSHA-related training plans and materials must meet the requirements of the federal government, due to the nature of the work of independent contractors, there are specific topics that are especially pertinent.*

*This compliance manual is specifically intended to guide and educate employees on the most important issues that they need to be aware of when working on a mine site regulated by MSHA.*

*All independent contractors must be trained under a Part 46 or 48 MSHA approved training plan. Upon completing the training, each participant must be provided a completed MSHA 5000-23 form or a similar MSHA approved document.*

*Upon working on a mine site, every person must receive site-specific hazard training. This training must inform the person of the hazards that are specific to the mine property.*

*At a minimum, everyone should be trained and compliant with the subjects discussed in this addendum. Site-specific hazard training is not only an MSHA requirement; it plays an integral role in keeping workers safe, healthy and compliant.*

*The asterisk (\*) next to the priority standard indicates its inclusion in **MSHA's Fatality Prevention Program, "Rules to Live By."** MSHA highlights specific standards in metal and nonmetal mining that are frequently cited in fatal accident investigations. Failure to comply with these standards may result in a "significant and substantial" (S&S) violation.*

## **MSHA**

### **30 – Code of Federal Regulations (CFR)–**

**Subpart 46 – Metal/Non-Metal Training**

**Subpart 47 – Hazardous Communication**

**Subpart 48 –Surface and Underground Training**

**Subpart 50 – Reporting**

**Subpart 56 – Surface Metal/Non-Metal**

**Subpart 57 – Underground Metal/Non-Metal**

**Subpart 62 – Hearing Conservation**

**Subpart 75 – Underground Laws**

**Subpart 77 – Surface Laws**

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**SECTION I: PERSONAL PROTECTIVE EQUIPMENT\*<sup>1</sup>**

When arriving at a mine property, employees need to wear the appropriate PPE, which should include, but depending on company policies and the nature of the work, not be limited to the following items:

**Hard Hats, Eye & Foot Protection, Etc.**

- ✓ Hard Hat (56.15002)
  - Wear a hard hat at all times when leaving the cab of the vehicle.
  - On the inside of the hard hat, one can find the manufacturing date
  - Check the hard hat for cracks and damage
- ✓ Safety Glasses with Side Shields (56.15004)
  - The nature of the work or company policy may require safety goggles or face shields.
    - Face shields or goggles in good condition shall be worn when operating a grinding wheel. (56.15014)
- ✓ High-Visibility Vest
- ✓ Steel Toe or Composite Toe Boots (56.15003)
  - Some mines require metatarsal protection inside of boot
- ✓ Jewelry (i.e. necklaces, rings, etc.) should not be worn on site

Working conditions and/or company policy may also require:

- ✓ Gloves
- ✓ Respiratory Devices
- ✓ Life Jackets (56.15020)
  - Anytime there is a danger of falling into water, a life jacket must be worn.
- ✓ Hearing Protection
  - Employees need to ensure that they are in compliance with the site's hearing conservation program. According to 62.110 – Noise Exposure Assessment, every mine shall have a hearing conservation program (HCP) in place
    - If a miner's noise exposure<sup>2</sup>:
      - Equals or exceeds 85 dBA, then he/she must be enrolled in an HCP
      - Equals or exceeds 90 dBA but less than 105 dBA, then he/she must be enrolled in an HCP and be provided hearing protection (i.e. ear plugs)
      - Equal or exceeds 105 dBA, but less than 125 dBA, he/she must wear dual hearing protection.
  - A copy of the hearing conservation program must be readily available
    - determine if miners' noise exposures equal or exceed the action level (85 dBA), or exceeds the PEL (90 dBA) or dual hearing protection level (105 dBA);

<sup>1</sup> The asterisk (\*) next to the priority standard indicates its inclusion in **MSHA's Fatality Prevention Program, "Rules to Live By."** MSHA highlights several standards in metal and nonmetal mining that are frequently cited in fatal accident investigations. Failure to comply with these standards may result in a "significant and substantial" (S&S) violation.

<sup>2</sup> The noise exposure levels are based on an 8-hour time-weighted average sound level (TWA<sub>8</sub>).

**First Aid Materials (56.15001)**

- Adequate first-aid materials, including stretchers and blankets, shall be provided at places convenient to all working areas. Water or neutralizing agents shall be available where corrosive chemicals or other harmful substances are stored, handled, or used.

**Fall Protection (56.15005)\***

- Safety belts and lines shall be worn when persons work where there is danger of falling
- A second person shall tend the lifeline when bins, tanks, or other dangerous areas are entered

**SECTION II: PREOPERATIONAL CHECKS OF VEHICLES AND MACHINERY**

Operators of vehicles and machinery are required to go through a preoperational check to ensure that their respective mobile equipment is in safe and proper working condition.

**Perform a Preoperational Check (56.14100(a))**

- A preoperational check must be performed prior to using any piece of mobile equipment
- Each person using a piece of mobile equipment must perform a preoperational check. Every shift, Every day.
- Must be documented on the appropriate form and readily available
- Examples of items that need checked:
  - Driver/Passenger Side
    - Tires (Properly Inflated and Adequate Tread)
    - Windows (Clean and No Cracks)
    - Side Mirrors (Condition, Properly Placed, etc.)
  - Rear of Vehicle
    - Bumper and License Plate (Securely Attached)
    - Inside of Truck or Truck Bed (Spare Tire, Jack, Wrench, Free of Debris, Clean)
    - Rear Window (Broken, Cracked, Missing, Cleanliness)
    - Brake Lights (Tested and Working Properly)
  - Front of Vehicle
    - Headlights – Normal & Bright Lights (Tested and Working Properly)
    - Turn Signals (Tested and Working Properly)
    - Bumper (Securely Attached)
    - Windshield (Broken, Cracked, Missing, Cleanliness)
    - Windshield Wiper Blades (Properly Installed, Damaged, Working Properly)
  - Under the Hood
    - Battery (Properly Secured, Cables Secured, Working Properly)
    - Air Filter (Cleanliness)
    - Leaks (Cracks in Hoses, Fluid on Ground, Leaks from Filters)
    - Windshield Fluid, Transmission Fluid, Engine Coolant, Engine Oil
      - Proper levels of fluids

- *Inside Vehicle*
  - *Overall Interior (Cleanliness and Free of Debris)*
  - *Parking Brake (Tested on Grade and Working Properly)*
  - *Horn (Tested and Working Properly)*
  - *Seat Belts (Tested, Working Properly, Frays, Cuts, Snags)*
  - *Gauges (Working Condition)*
  - *Rearview Mirror (Properly Placed, Working Condition, Cleanliness)*
- *Fire Extinguisher*
- *If Required:*
  - *Light Beacon (Tested and Working Properly)*
  - *Whip Flag (Available, Installed and Working Properly)*

### **SECTION III: VEHICLE OPERATIONS**

- *Engage Parking Brake*
- *Apply Wheel Chocks When Vehicle is Parked*
  - *Never leave mobile equipment unattended unless the controls are placed in the park position with the parking brake set*
  - *When parked on a grade, the wheels or tracks of mobile equipment must be either chocked or turned into a bank.*
- *Keep the Vehicle Free of Clutter*
  - *No projectiles or heat ignition sources in the vehicle*
- *Objects in the Cab or Bed Must be Properly Secured*
- *Obey Traffic Rules*

#### **Transporting Persons (56.9200)**

- *Persons shall not be transported:*
  - *In beds of mobile equipment or railcars, unless –*
    - *Provisions are made for secure travel and means are taken to prevent accidental unloading if the equipment is provided with unloading devices*
  - *On top of loads in mobile equipment*
- *Obey Traffic Rules*

#### **Activity Between the Machinery/Equipment and the Highwall or Bank**

- *Persons shall NOT work or travel between machinery/equipment and the highwall or bank where the machinery/equipment may hinder escape from falls or slides of the highwall or bank. Travel is permitted when necessary for person to dismount.*

#### **Brakes (56.14101(a))\***

- *Self-propelled mobile equipment shall be equipped with a service brake system capable of stopping and holding the equipment with its typical load on the maximum grade it travels.*
- *Parking brakes shall be capable of holding the equipment with its typical load on the maximum grade it travels.*
- *All braking systems installed on the equipment shall be maintained in functional condition.*





**Procedures during Repairs or Maintenance (56.14105)\***

- Repairs or maintenance of machinery or equipment shall be performed only after the power is off, and the machinery or equipment blocked against hazardous motion.
- Employ proper lock out tag out procedures
- Machinery or equipment motion or activation is permitted to the extent that adjustments or testing cannot be performed without motion or activation, provided that persons are effectively protected from hazardous motion.

**Horns and Backup Alarms (56.14132)**

- Horns and all other audible equipment must be maintained and in working condition at all times
  - If the mobile equipment is not equipped with a back-up alarm, a spotter must be used every time it is moved.
    - The spotter must NOT be placed in a hazardous position.
- When the operator has an obstructed view the self-propelled mobile equipment must have:
  - Automatic reverse-activated signal alarm
  - Wheel-mounted bell alarm that sounds at least once for each three feet of reverse movement
  - Distinct backup alarm loud enough to be heard over surrounding noise
  - Observer to signal when it is safe to backup
  - At nighttime, an automatic reverse-activated strobe light may be used in lieu of an audible reverse alarm

**Roll-Over Protective Structures (ROPS) and Seat Belts (56.14130(b))\***

- A readable ROPS sticker must be on the structure that shows the approved ROPS structure that is on the mobile equipment is the correct structure for that unit.

**Seat Belts (56.14130(g))\* and (56.14131(a))\***

- Seat belts must be worn when operating mobile equipment
- The identifier "SAE J386" must legibly appear on the tag of the seat belt.

**Machinery, Equipment and Tools Usage (56.14205)\***

- Machinery, equipment, and tools shall NOT be used beyond the design capacity intended by the manufacturer where such use may create a hazard to persons.

**Parking Procedures for Unattended Equipment (56.14207)\***

- Mobile equipment shall NOT be left unattended unless the controls are placed in the park position and the parking brake, if provided, is set.
- When parked on a grade, the wheels or tracks must be either chocked or turned into a bank.
- If applicable, all blades, forks and/or buckets must be lowered to the ground



**Operating Speeds and Control of Equipment (56.9101)\***

- Operators of self-propelled mobile equipment shall maintain control of the equipment while it is in motion.
- Operating speeds shall be consistent with conditions of roadways, tracks, grades, clearance, visibility, and traffic, and the type of equipment used.
- Operating speeds shall be consistent with posted signs

**SECTION IV: ELECTRICAL HAZARDS**

Electrical lines shall be protected where they pass through metal openings that could potentially damage the cord.

Mobile equipment shall NOT be allowed to travel over electrical cords.

- Also, be watchful for guide wires on poles, which if damaged may create an electrical hazard

**Electrical Controls and Switches (56.12002)**

- Electrical disconnects must be marked/labeled for what they control
- Mark all shut-offs and switches

**Electrical Overload Protection (56.12001)**

- All electrical circuits and motors must be protected from circuit overload and the wiring must be of sufficient size to carry the intended load.

**Work on Power Circuits (56.12017)\***

- Power circuits shall be deenergized before work is done on such circuits
- Switches should be locked out or other measures taken which shall prevent the power circuits from being energized without the knowledge of the individuals working on them.

**Inspection and Cover Plates (56.12032)**

- Electrical equipment and junction boxes must have cover plates

**SECTION V: HAND-HELD POWER TOOLS**

Power drills, disc sanders, grinders and circular and chain saws, when used in the hand-held mode shall be operated with controls which require constant hand or finger pressure.

- Circular saws and chain saws shall not be equipped with devices which lock-on the operating controls
- GFCI's should be used at all times

### **Testing Grounding Systems (56.12028)**

- *A continuous grounding test must be performed when electrical equipment is installed. This test must be conducted immediately before placing the equipment in service.*
- *Test results must be documented and readily available*
- *Electrical drop cords shall be tested for grounding continuity*

### **SECTION VI: CONFINED SPACE (56.16002(c))\***

- *Examples: bins, hoppers, silos, tanks and surge piles*
- *No person shall enter the confined space until the supply and discharge of materials have ceased and the supply and discharge equipment is locked out.*
- *Persons entering bins, hoppers, silos, tanks or surge piles must wear fall protection where there is a fall hazard. This individual(s) must wear a safety belt or harness equipped with a lifeline suitably fastened.*
- *A second person, similarly equipped shall be stationed near where the lifeline is fastened and shall constantly adjust it or keep it tight as needed, with minimum slack.*
- *Safe access in and around the work area must be provided*

### **SECTION VII: STORING & LABELING FLAMMABLE & COMBUSTIBLE MATERIALS**

#### **Containers for Hazardous Materials (56.16004)**

- *Hazardous materials may only be carried in containers specifically approved by recognized agencies*
  - *Example: Gasoline must be carried in a metal safety gas can with a self-closing lid and labeled “Danger, No Smoking, No Open Flames.” It must also be labeled “flammable” and “combustible.”*
    - *Gasoline must be carried/stored in red containers. Diesel must be in yellow containers.*

#### **Safety Can Use (56.4402)**

- *All combustible and flammable liquids must be kept in safety cans that are labeled to indicate the contents.*
  - *Must also be marked “No Smoking” and “No Open Flames”*

**SECTION VIII: SUSPENDED LOADS, TAGLINES, HITCHES & SLINGS**

**Taglines, Hitches, and Slings (56.16007)**

- Taglines shall be attached to loads that may require steadying or guidance while suspended
- Hitches and slings used to hoist materials shall be suitable for the particular material being handled

**Suspended Loads (56.16009)\***

- Persons must stay clear of suspended loads

**SECTION IX: HOUSEKEEPING (56.20003)**

Workplaces, passageways, storerooms, and service rooms shall be kept clean and orderly.

- No debris, loose boards, protruding nails, splinters and holes

**SECTION X: GARBAGE RECEPTACLES (56.20013)**

Any garbage container that contains food waste must have a cover.

Do not allow food to be consumed in restroom areas

Plastic garbage receptacles cannot contain oily rags, etc.

**SECTION XI: BARRICADES AND WARNING SIGNS (56.20011)\***

All hazards must be adequately marked (i.e. barricaded and/or warning signs)

Warning signs must be visibly and legibly posted at all approaches and meet the following criteria:

- Indicate the danger that exists (i.e. Construction area)
- Protective action required (i.e. Keep Out)

**SECTION XII: FIRE PREVENTION AND CONTROL**

**Smoking and Use of Open Flames (56.4100)**

- No person shall smoke or use an open flame where flammable or combustible liquids, including greases, or flammable gases are used or transported in a manner that could create a fire hazard or stored or handled.

**Fire Extinguisher Inspections (56.4201(a)1,2,3)**

- At least once per month to determine that they are fully charged and operable.
  - Inspection must be noted on the tag attached to the fire extinguisher

- At least once every twelve months
  - Maintenance checks of all mechanical parts
    - Amount and condition of the extinguishing agent and expellant
    - Condition of the hose, nozzle and vessel to ensure that the fire extinguisher will operate effectively
- Hydrostatically tested according to Table C-1 or a schedule based on the manufacturer's specifications to determine the integrity of extinguishing agent vessels
- Fire extinguishers are an item that should be included in preoperational checks

### **SECTION XIII: AIR QUALITY AND PHYSICAL AGENTS**

#### **Exposure Monitoring (56.50002)**

- Dust, gas, mist and fume surveys must be conducted as frequently as necessary to determine the adequacy of control measures.
- A written policy must be available, implemented and comply with ANSI Z88.2.

### **SECTION XIV: HAZARD COMMUNICATION**

Employees must be informed and trained on the physical and health hazards in their work area (47.2)

#### **Safety Data Sheets (SDS)(47.51)**

- Employees know where to locate the SDS
- If the SDS' are located on a computer, each employee must be able to demonstrate their capability of accessing those documents

### **SECTION XV: SAFETY PROGRAMS**

#### **Examination of Working Places (56.18002)**

- A competent person designated by the operator shall examine each working place at least once each shift for conditions which may adversely affect safety or health.
- A record that such examinations were conducted shall be readily available and kept by the operator for a period of one year.

#### **Emergency Phone Numbers (56.18012)**

- Emergency telephone numbers must be posted at the appropriate telephones

#### **Emergency Communications Systems (56.18013)**

- A suitable communication system shall be provided at the mine to obtain assistance in the event of an emergency.

**Emergency Medical Assistance and Transportation (56.18014)**

- Arrangements shall be made in advance for obtaining emergency medical assistance and transportation for injured persons.

**SECTION XVI: REPORTING OF ACCIDENTS, INJURIES AND ILLNESSES**

**Preparation and Submission of MSHA Report Form 7000-1 (50.20)**

- When an accident occurs that meets the criteria for an MSHA reportable accident it must be reported to MSHA using the 7000-1 form and be reported in the prescribed time period.
- Any incident to property or person must be reported to the mining company

**SECTION XVII: POTABLE DRINKING WATER (56.20002)**

An adequate supply of potable drinking water shall be provided at all active working stations.

- The common drinking cup and containers from which drinking water must be dipped or poured are prohibited.
- Where single service cups are supplied, a sanitary container for unused cups and a receptacle for used cups shall be provided.
- When water is cooled by ice, the ice shall either be of potable water or shall not come in contact with the water
- Potable water outlets shall be posted

**SECTION XVIII: MINERS' RIGHTS**

All persons (including supervisors, contractors, construction or demolition workers, and truck drivers) working at a mine are considered to be "miners" and may exercise the rights given to them by the Federal Mine Safety & Health Act of 1977.

Contractors should first consult with mine management

**Miners have a right to:**

- File or make a complaint of an alleged danger or safety or health violation to a Federal or State agency, a mine operator, an operator's agent or a miner's representative.
- Participate in proceedings under the Act such as: testifying, assisting, or participating in any proceeding instituted under the Act, or filing a complaint with the Federal Mine Safety and Health Review Commission.
- A medical evaluation or to be considered for transfer to another job location because of harmful physical agents and toxic substances. (For example: a coal miner has the right to a chest x-ray and physical examination for black lung disease [pneumoconiosis] and potential transfer to a less dusty position if the miner has a positive diagnosis.)
- Withdraw yourself from the mine for not having the required health and safety training.

- *Refuse to work in unsafe or unhealthy conditions. NOTE: You must notify the operator of the condition and give them an opportunity to address the situation.*
- *Exercise any statutory rights afforded by the Act.*

**SECTION XIX: DRUGS & ALCOHOL (56.20001)**

*The possession or use of illegal drugs or alcohol is prohibited on mine property.*

**SECTION XX: FIREARMS**

*The possession of firearms is prohibited on mine sites or vehicles that are entering mine sites.*