U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Changes at our mine that could adversely affect the miner's health or safety Sec 46.8 (b)

- **Review and discuss all the changes that occurred in the past year that could affect health or safety**
- **Roadways and Highwall changes**
- **New equipment and task on equipment brought on the mine site**
- **Hearing Conservation Program Training if Applicable**.

  62.180 **Training.** (a) The mine operator must, within 30 days of a miner's enrollment into a hearing conservation program, provide the miner with training. The mine operator must give training every 12 months thereafter if the miner's noise exposure continues to equal or exceed the action level.

  Training must include:

  (1) The effects of noise on hearing;
  (2) The purpose and value of wearing hearing protectors;
  (3) The advantages and disadvantages of the hearing protectors to be offered;
  (4) The various types of hearing protectors offered by the mine operator and the care, fitting, and use of each type;
  (5) The general requirements of this part;
  (6) The mine operator's and miner's respective tasks in maintaining mine noise controls; and
  (7) The purpose and value of audiometric testing and a summary of the procedures.
  (b) The mine operator must certify the date and type of training given each miner, and maintain the miner's most recent certification for as long as the miner is enrolled in the hearing conservation program and for at least 6 months thereafter.

- **Respiratory Program if Applicable including 56.5002 monitoring program.**
  1. Respirators approved by NIOSH under 42 CFR Part 84 which are applicable and suitable for the purpose intended shall be furnished and miners shall use the protective equipment in accordance with training and instruction.
  2. (b) A respirator program consistent with the requirements of ANSI Z88.2–1969, published by the American National Standards Institute and entitled ''American National Standards Practices for Respiratory Protection ANSI Z88.2–1969,'' approved August 11, 1969.

- **Rules To Live By Standards**
    1. 56.9101 Operating speeds and control of equipment
    2. 56.12017 Work on power circuits
    3. 56.14101(a)* Brake performance
    4. 56.14105 Procedures during repairs or maintenance
    5. 56.14130(g) Seat belts shall be worn by equipment operators
    6. 56.14131(a) Seat belts shall be provided and worn in haul trucks
    7. 56.14205 Machinery, equipment, and tools used beyond design
    8. 56.14207 parking procedures for unattended equipment
    9. 56.15005 Safety belts and lines
    10. 56.16002(c) Bins, hoppers, silos, tanks, and surge piles
    11. 56.16009 Persons shall stay clear of suspended loads
    12. 56.20011 Barricades and warning signs
    13. 57.3360 Ground support use
    14. 46.7(a) New task training
    15. 56.3130 Wall, bank, and slope stability
    16. 56.3200 Correction of hazardous conditions
    17. 56.14100(b) Safety defects; examination, correction and records
    18. 56.15020 Life jackets and belts
    19. 57.14100(b) Safety defects; examination, correction and records

- **What's New on the WWW.MSHA.GOV such as: PIB,PIL,PPM, Fatalgrams,**

- **New Chemicals brought on site HAZCOM Part 47**
  Operators of mines which employ six or more miners must instruct each miner with information about the physical and health hazards of chemicals in the miner's work area, the protective measures a miner can take against these hazards, and the contents of the mine's HazCom program by September 23, 2002. Operators of mines that employ five or fewer miners must instruct each miner with information about the physical and health hazards of chemicals in the miner's work area, the protective measures a miner can take against these hazards, and the contents of the mine's HazCom program by March 21, 2003.

- **Do You Have Someone Currently trained in First Aid? 56.18010**

You Must Offer First Aid to all individuals interested in taking the course to maintain an individual currently trained at the mine site on all shifts.

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Oxygen – Acetylene Cutting Torches

- Keep your torch in good condition and free of oil and grease. 56.4602
- Repair damaged hoses immediately with correct fittings and crimping tools. 56.14100b
- Do not leave your torch unattended. 56.4603

Compressed Gases

- Never transport oxygen or acetylene bottles lying on their side.
- Firmly secure bottles in an upright position with protective cap in place. 56.16006
- Protect bottles and valves from being struck by foreign objects. 56.16005.

Eye Protection

- Face shields or goggles must be worn when operating a grinder. 56.14115; .15014
- Safety glasses should be worn in all working areas. 56.1504
- Ventilation and shielding for welding. 56.14213

Compressed Air

- Air receiver tanks. 56.13011
- Never direct compressed air at a person. 56.13020
- High pressure hose connections. 56.13021

Fatalgrams: 56.14100b

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Injuries

- Report all accidents to your supervisor.
- Treat injuries immediately to avoid infection.
- Get help when needed.

Stay Alert

- Note areas where spillage could occur and avoid these areas when the plant is operating. .
- Stay alert for backup alarms and note when one in your work area is not functioning and bring it to your supervisor's attention. 56.14132; 14100d
- Listen for changes in noise level that could signal a change in the operation of plant equipment.

Look Where You Are Walking

- Let your eyes scan above and ahead as well as down when walking in plant area to be alert for spillage or low headroom conditions. 56.11008
- Avoid walking backwards.
- Keep walkways free of tools, supplies and spillage so as to avoid tripping hazards. 56.20003
- Walk where there are established walkways. Do not walk on makeshift skylights, weak metal, or unfinished construction. 56.1101

Roadways and Stockpiles

- Roadways shall be maintained to be free of excessive spillage. 56.9313
- Dust control on roadways to be kept at a level for operator vision. 56.9315
- Stockpiles of material shall be trimmed to prevent hazardous conditions. 56.9315
- Do not go under loader buckets or booms unless they are properly blocked. 56.9317

Fatalgrams: 56.14132; 56.14100d; 56.20003; 56.9313

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Striking Tools

- Use the proper tools for the job, i.e., never use screwdriver as a chisel. 56.14205
- Keep face of tools clean and free of cracks or splinters. 56.14100b
- Strike tool squarely.

Hammers

- Do not use a hammer with a broken or loose handle. 56.14100b
- Use the correct size hammer for the job.
- Do not use other tools, such as wrenches and pliers as a hammer. 56.14205

Power Tools

- Hand held power tools shall be used in a method that requires constant hand pressure. 56.14116
- Stationary grinders shall be equipped with safety features that protect the operator. 56.14115
- Power tools shall not be used beyond their design capacity. 56.14205

Safety Practices and Operational Procedures

- Warnings prior to starting or moving equipment. 56.14200
- Conveyor start-up warnings. 56.14201
- Manual cleaning of conveyor pulleys shall not be done unless equipment is shut down and locked and tagged out of service. 56.14202
- Those working on the conveyor shall have their lock and tag on the power switch. 56.12016; .12017
- Application of belt dressing. 56.14203
- Machinery lubrication. 56.14204
- Machinery, equipment and tools should never be used beyond their design capacity. 56.14205
- Truck beds, loader buckets, booms, and forks should be returned to their travel mode for safe transportation. 56.14206
- Visible warning devices shall be used to warn of hazards extending from mobile equipment. 56.14208
- Proper blocking procedures shall be used when working around or under mobile equipment. 56.14211

Fatalgrams: 56.14100b; 56.14205; 56.14200; 56.14201; 56.14202; 56.12016; 56.12017; 56.14204; 56.14206; 56.14208; 56.14211

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Mobile Equipment

- Speed limits as well as all traffic patterns must be strictly obeyed. 56.9100
- Operating speeds and control of equipment consistent with conditions of roadway. 56.9101
- Yield right –of-way to large trucks and loaders.
- Generally, loaded trucks have right-of-way.
- Make sure the operators of large plant and pit equipment are aware of you before you attempt to pass.
- Communicate visually by flashing lights/hand signals or via radio with the other driver.
- Remember, you haven't communicated unless the other person answers you back.
- Do not follow trucks and loaders to closely, especially up grades.

Personal Items

- Never use butane lighter or matches as a striker.
- Never wear synthetic clothing while cutting or welding. 56.15007
- Keep long hair tucked under your hard hat to prevent getting it caught in moving machinery; use hairnets or snoods if needed.
- Jewelry and shirt sleeves can easily get caught in moving machinery. Always remove all jewelry before beginning your work and make sure shirt sleeves are rolled up above elbows.

Housekeeping

- Keep your work area, including lunch rooms, clean and neat to avoid trip hazards, fire hazards, and health related concerns. 56.20003; 20013; 20014
- Clean up scrap metal/wood and used parts after maintenance work is finished.
- Keep all work areas clear of oil and grease to prevent fire hazards along with slip/trip hazards. 56.4104

Electrical lighting

- Guarding around lights. 56.12034
- Inspection and cover plates for electrical outlets. 56.12032
- All outlets shall be identified in the junction box. 56.12018
- Electrical extension cords should be checked for damage before being used and properly repaired if necessary. 56.1204; .12013
- Continuity and resistance of grounding systems shall be checked annually and after repairs. 56.12028

Fatalgrams: 56.9100; 56.9101; 56.15007; 56.20003; 56.12004; 56.12013; 56.12028

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Equipment Operators

- Practice good housekeeping to keep cab, windows and mirrors clean. 56.14103
- Stay alert to your surroundings/weather/pedestrian/road conditions, etc.
- Report a; damaged steps, ladders, walkways and handrails on your equipment. 56.14100b
- Practice "Take the Keys**"- Turn keys over to the mechanic when turning equipment in for maintenance.**

Lockout Procedures

- Use your lock to identify the person working on the equipment, date and time. 56.12116; .12117
- Always use tags to identify the person working on the equipment, date and time.
- Remove your lock only after you have completed your job and replaced all guards or protective devices.
- Never remove tags belonging to other people.

Flammable Liquids

- Never use gasoline/starting fluid/other flammables as cleaning agents. 56.4400a
- Keep areas well ventilated and wear proper respirators when using chemicals and solvents. 56.16012
- Use chemicals and cleaning agents wisely. Always refer to MSDS sheets to identify chemical hazards before initiating a work task. 47.31
- Solvents should not be used near an open flame or other ignition source, near any source of heat, or in an atmosphere that can elevate the temperature of the solvent above flash point.

Travel ways and Escape ways

- Crossovers, elevated walkways, elevated ramps and stairways shall be equipped with handrails and toe boards. 56.11002
- A safe means of access shall be provided to all working areas. 56.11001
- Walkways with railing are required wherever persons are required to walk along elevated conveyor belts. 56.11009
- Openings near travel ways through which persons or material may fall shall be protected. 56.11012
- Crossover shall be provided and used where necessary on conveyors. 56.11013; .11014
- Regularly used walkways and travel ways shall be treated for ice and snow. 56.11016

Fatalgrams: 56.14103; 56.14100b; 56.12116; 56.12017; 56.11002; 56.11001; 56.11012; 56.11013;

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Fire Extinguishers

- Fire extinguishers must be inspected every month and you must record the inspection. 56.4201
- Know the location of the nearest fire extinguisher in your work area.
- Be sure fire extinguishers are type ABC. Readily accessible, and securely mounted on mobile equipment, if required. 56.4200; .4230

Fire Safety

- Keep electrical rooms and storage areas clear of clutter and debris. 56.20003
- Never spray water on an electrical fire or a flammable liquid fire such as mineral spirits or grease. It will cause the fire to splatter or could lead to electrocution. Note what type of extinguisher you should use.
- Keep welding areas free of flammables and do not attempt to cut or weld of gloves or clothing has grease, oil or solvents on them.

Office Safety

- Good Housekeeping applies to office areas as well as production areas.
- Be alert to hazards such as file cabinets left open or opening to many drawers at once creating a tipping hazard.
- Do not overload electrical receptacles. Use approved surge protectors.
- Be aware of tripping hazards! Remove delivered parcels from in front of doorways and place them out of the way.

Travel ways with landings and scaffold working platforms.

- Railed landings, blackguards and other protection for fixed ladders. 56.11025
- Protection for inclined fixed ladders. 56.11026
- Scaffolds and working platforms. 56.11027
- When working from elevated heights fall protection is required if there is potential of falling even if there are hand rails. 56.15005

Fatalgrams: 56.4201; 56.20003; 56.11025; 56.11027; 56.15005

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Crane Safety – Manual/Operating

- Know your load chart and weight to be lifted so you can avoid tipping.
- Use Operator's Manual as a guide for correct inspection procedures.
- Refer to operating policies/procedures for proper hand signals.
- Crane must be level when making lift.
- Never attempt to swing load before lofting. "Side Loading" the boom could a\cause collapse.

Crane Safety - Operation

- Survey work area for pad conditions, overhead power lines, pipelines, etc.
- When operating a crane in close proximity of overhead power lines, NEVER permit people to be in location where they can contact the crane or load.
- Rigging must be kept in good condition; rigging is only as strong as its weakest component.
- Make sure crane operator and signalman communicate with proper crane hand signals.
- Avoid overloading and sudden jerks.
- Awkward loads should have Tag Lines to control loads when lifting.
- Hook latch must be in good working condition.
- Use the operator's manual as a guide for correct inspection procedures.
- A competent person must inspect all rigging before each use.
- Personal working tag lines should review area for slipping, tripping, and falling hazards. 56.16007
- Never work under suspended loads. 56.16009

Fatalgrams: 56.16007; 56.16009

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Containers

- Containers should have their contents clearly marked. 47.41
- Know the correct way to dispose of materials in your area. 56.4104
- Know the first aid procedures for chemicals in your area. 47.52; 47.54; 47.55
- Know the location of MSDS sheets and use them.

Backing Equipment

- If Driving, know where your co-workers are at all times, Don't go into an area where equipment is backing up.
- Make eye contact with the operators of large equipment before entering their area of operations. 56.9316
- Don't park service vehicles or your private vehicle behind large equipment. Park in designated parking areas only.
- Sound an alarm before moving mobile equipment. 56.14200
- Always make sure a spotter is available for backing equipment that does not have a back-up alarm. 56.14132

Lifting Procedures

- Always use a back support belt when lifting..
- Keep back straight, feet should width apart, and bend at the knees.
- Get help when needed.

Fatalgrams: 56.14200, 56.14132

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Remember, Accidents do not just happen. Invariably, they occur because of indifferences to safety rules and lack of information or effective training.

- ***SLAM Stop Look Analyze Manage*** *every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.*
- ***Task training is essential*** *for any new miners or on new equipment that has not been involved in these types of projects in the past. 46.7*
- ***Lock-out, tag-out, test***, ***Never*** *work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock at the completion of the project. 56.12016;.12017*
- ***Test*** *stored energy make sure any project you are working on will not move. Equipment with unbalanced drives may have a tendency to move. Blocking of moving parts is required when any possibility exist of non-powered movement.* ***56.14211***
- ***Inspect all tools*** *for damage prior to starting project. This includes grinders, drills, extension cords, ect.. Make sure tools are adequate for the task such as chains, cables, come-along never use tools beyond their design capacity.56.14100b;.14205*
- ***Proper PPE*** *is required hard hats, safety glasses, boots, gloves, goggles, hearing protection, flash ark curtains if others are in the area****, if there is a danger of falling fall protection is required. 56.15002;.15003;.15004;.15005;.15007;.15014;.14213***
- ***Survey your working area****, never use a welder where sparks will be a hazard, such as near a room containing flammable or combustible materials, keep flammable containers in a cabinet away from the working area.* ***56.4100;.4104;.4200;.4201;.18002***
- ***If welding is needing*** *to be done near flammable or combustible materials and materials cannot be removed, suitable fire-resistant guards, partitions, or covers must be used. Keep a spotter nearby with a fire extinguisher in case of an emergency.56.4600*
- ***Good housekeeping*** *is essential to reduce any potential for fires and explosions by keeping work areas clean. 56.20003*

- **Check the work area for hazards before starting your job. 56.18002**
- **Check your equipment for any defects. 56.14100**
- **Keep your local radio communication in good working order.**

Attitude

- **Have a good attitude when following directions.**
- **Keep a good attitude when things don't go your way.**
- **Demonstrate a positive, courteous, and respectful attitude when talking to your co=-workers, supervisors, or those you supervise.**

Eyes

- **To people this is their most precious possession.**
- **They are sensitive and vulnerable.**
- **Protect them at all times-wear your safety glasses. 56.15004**
- **Try using tinted safety glasses and sun visors to block out glare.**

- **Use screens around welding areas to prevent flash burns to the eyes.** 56.14213

Fatalgrams: 46.7; 56.12016; 56.12017; 56.14211; 56.14100b; 56.14205; 56.15005; 56.15007; 56.14100; 56.4201; 56.18002; 56.4600; 56.20003.

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Ground Control: working in areas of high walls.

Review procedures for inspecting and working high wall areas.

- Inspect high walls for loose rocks, overhanging materials, vertical and horizontal cracks. 56.3130; .3200; .3401
- Boulders, trees, or other material which might fall. 56.3131

Discuss hazards encountered at mine site while working around high walls.

- Discuss weather which affect ground conditions, including rain, snow, freezing, and thawing. 56.11016
- All work areas are sufficiently illuminated to inspect ground conditions. 56.17001
- Maintain berms at outer edge and base of walls. 56.9300
- Be aware of potential of falling rock when working on foot around high walls. 56.3200
- Do not work between equipment and high wall where equipment may hinder escape. 56.3430

Report immediately any unsafe conditions not readily corrected.

- Barricade and post areas where unsafe ground conditions have not been promptly corrected.
- Do not perform other work where unsafe conditions exist until unsafe conditions are corrected. 56.3202
- Barricade and post these areas for the hazard. 56.3200; .20011

Safety Belts and Lines shall be worn where there is a danger of falling.

- When working on high walls fall protection should be worn when drilling and loading shots. 56.15005
- Sufficient anchoring points should be determined.

Fatal grams: 56.3130; .3131; .3200; .3430; .9300; .15005; .17001; .20011

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Lighting Precautions

- Precautions during storms. 56.6604
- Stay inside buildings or vehicle during a lightning storm.
- Stay away from fences and metal pipelines that are not grounded.
- Stay away from trees or high structures and seek low ground if shelter is not available.

Crane Operations

- Respond to standard crane signals from only one person, but a "STOP" signal from anyone.
- Never swing a load over vehicles or personnel. 56.14210; .16009
- Use tag lines to guide loads when needed. 56.16007

Mobile Equipment

- Never leave equipment unattended while bucker, blade or other attachments are suspended in the air. 56.14210; .14207
- Warnings prior to starting or moving equipment. 56.14200
- Safety procedures for towing. 56.14209
- Block beds, buckets or repair the equipment in the raised position. 56.14105; .14211
- Make sure you have eye to eye contact with the equipment operator before mounting the equipment. 56.9316
- Tire repairs. 56.14104
- Operators' station. 56.14103
- Brakes on mobile equipment shall be inspected prior being put into operation. 56.14100; .14101

Major Electrical Installations

- All major electrical installations shall be locked out and checked for stored energy prior to work being performed. 56.12017
- When a potentially dangerous condition is found it shall be corrected before equipment or wiring is energized. 56.12030
- Authorized persons at major electrical stations. 56.12022
- Protection for persons working at switchgear. 56.12020
- Grounding for electrical connections and resistor grids. 56.12025
- Grounding transformers and switchgear enclosures. 56.12026
- Grounding for mobile equipment. 56.12027
- Annual ground testing and after repairs. 56.12028

Fatalgrams: 56.12002; .12017; .12025; .12028; .12030; .14100; .14101; .14103; .14104; .14105; .14200; .14207; .14209; .14211; .16007; .16009

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Drills

- Lubricating oil when drilling large holes.
- Keep drill bits sharp and in good repair.
- Make sure the drill has a ground pin on the power cord. 56.12025

Grinders

- Maintain proper gap between tool rest and grinding wheel (1/8") 56.14115b
- Use goggles or face shield when grinding. 56.14115a
- Turn grinder off when not in use.

Welding Accessories

- Keep welding hood and glasses clean and in good working order.
- Always use gloves when welding or cutting. 56.15007
- Always use an approved striker.

Hand tools

- Never use broken tools. 56.14100b
- Check punches and chisels for damaged or mushroomed heads and repair before using.
- Keep tools clean and in good repair for each use report any damaged tools for replacement.
- Use the proper tools for the jobs do not use tools beyond their design capacity. 56.14205
- Maintain safe working habits, were your PPE, never cut towards yourself with a knife and be aware of other employees around you. 56.15002; .15003; .15004; .15007; .15014

Chains and Come-Along

- Inspect come-along for damage and repair as often as necessary. 56.14100b
- Be aware of rated capacities, don't overload. 56.14205
- Never use a handle not designed for a come-along. 56.14205

Fatalgrams: 56.12025; .14100; .14205; .15002; .15007.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Conveyor Systems

Conveyor accidents that cause personal injuries do not normally occur because of faulty equipment design or component failure. These accidents are usually caused by human error, inadequate training, or lack of hazardous awareness.

- ***SLAM Stop Look Analyze* Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training** for any new miners or new equipment who have not been involved in these types of projects in the past. 46.7
- **Lock-out, tag-out, test**, poking at or prodding, material on a belt, or any component of a moving belt, is prohibited. Never work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock when project is complete. 56.12016;12017
- **Stored energy** makes sure conveyors will not move loaded equipment may have a tendency to move. Blocking of conveyors is required when any possibility exists of non-powered movement.56.14211
- **Inspect all tools** for damage prior to starting project. This includes grinders, drills, extension cords, etc... Make sure tools are adequate for the task such as chains, cables, come-along never use tools beyond their design capacity.
  56.14100b; .14205
- **Proper PPE** is required hard hats, safety glasses, boots, gloves, goggles, hearing protection, flash ark curtains if welding is to be done**, if there is a danger of falling fall protection is required.** 56.15002; 15003;.15004;.15005;
  15007; .15014; .14213
- **Supervision by experienced personnel is essential at all times to assure safe operating procedures are maintained.**

Fatalgrams: ***46.7; 56.4600; .12004; .12013; .12016; .12017; .12028;.12030;.12071; .14100b; .14105;.14107; .14112; .4201; .14205; .14207; .14211; .15002; .15005; .15006; .15007: .16007; .16009; .18002; .18009; .2011.***

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Cutting Torch Safety

- **SLAM Stop Look Analyze Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Lock-out, tag-out, test, and never** work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock at the completion of the project. 56.12016;.12017
- **Test** stored energy make sure any project you are working on will not move. Equipment with unbalanced drives may have a tendency to move. Blocking of moving parts is required when any possibility exist of non-powered movement. 56.14211
- **Inspect all tools** for damage prior to starting project. This includes grinders, drills, extension cords, ect.. Make sure tools are adequate for the task such as chains, cables, come-along never use tools beyond their design capacity.56.14100b;.14205
- **Proper PPE** is required hard hats, safety glasses, boots, gloves, goggles, hearing protection, and flash ark curtains if others are in the area**, if there is a danger of falling fall protection is required. 56.15002;.15003;.15004;.15005;.15007;.15014;.14213**
- **Survey** your working area, never use a cutting torch where sparks will be a hazard, such as near a room containing flammable or combustible materials, keep flammable containers in a cabinet away from the working area.
  56.4100; .4104; .4200; .4201; .18002
- If cutting is needed to be done near flammable or combustible materials and materials cannot be removed, suitable fire-resistant guards, partitions, or covers must be used. Keep a spotter nearby with a fire extinguisher in case of an emergency.56.4600
- Good housekeeping is essential to reduce any potential for fires and explosions by keeping work areas clean. 56.20003
- Never cut into any barrels, drums, old drill steels until you have properly identified the products contained and cleaned of any left-over product. Never cut into a sealed barrel or drum as an explosion can occur from a build-up from gases.56.4604
- **Make sure the regulators are in good condition and the back flow check valve is working. Keep all oily tools and grease away from the regulators, that the cylinders are secure and up-right, with the valves covered when not in use or being transported. 56.4602;.16005;.16006**

Fatalgrams: 56.4100; .4201; .4600; .4604; .12016; .12017; .14100; .14205; .14211; .15002; .15005; .15007; . .18002; .20003 Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Mobile Equipment Safety

- **Speed Limits**
  - Observe all posted speed limits on entrance and haulage roads. 56.9100; .9300d4;
  - Report speeders. Don't wait until someone gets hurt.
  - If needed lower your speed to adjust for weather and road conditions. 56.9101
- **Mobile Equipment**
  - Inspect unit for safety defects before operating it. 56.14100
    Conduct "Pre Operation Examination" and complete the "Daily Operator's Report" every shift. 56.14100; .18002
  - Always wear your seatbelt. 56.14130; .14131
  - Do not operate if unit is in unsafe condition. 56.14100c
- **Riders**
  - Never allow anyone to ride on the side of your equipment. 56.9200
  - Do not transport people in the front-end loader buckets or allow anyone to perform work from an unsupported bucket. 56.14211

Fatalgrams: 56.9100; .9101; .9200; .9300; .14100; .14130; .14131; .14211; .18002

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

-

Overhead Hoist

Accidents that cause personal injuries do not normally occur because of faulty equipment design or component failure. These accidents are usually caused by human error, inadequate training, or lack of hazardous awareness.

- **SLAM Stop Look Analyze Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training is essential** for any new miners or new equipment that has not been involved in using this type of tool in the past. 46.7
- **Conduct an inspection** to make sure the hoist is in good working condition including safety clip on hook, and make sure the hoist is rated with a load safety factor high enough for the task to be performed. 56.14100b;.18002
- **Proper PPE** should be worn, hard hat, safety glasses, boots, work gloves. 56.15002;.15003;.15004
- **Position hoist** directly over the load, so the load will be raised straight and will not swing, stand clear of the load after hook up.56.16007;.16009
- **After hook-up**, remove hands before lifting. Have the load well balanced and use hook, tag-line or push pole to guide the object into place.
- **Clear a travel path** of other personnel and objects to make sure of no tripping hazards good housekeeping practice is essential to a safe work environment. 56.20003
- **Do not overload hoist capacity**, and keep working parts of hoist well maintained to make operation easier and remember to ask for help if needed. 56.14205

Fatalgrams: 46.7; 56.14100b; .14205; .15002; .16007; .16009; .18002; .20003.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Plant Maintenance and Repair.

- Mining equipment that is in an unsafe condition for operation should be reported to immediate supervisor and appropriate actions taken until equipment is repaired in a safe operating condition. 56.14100;18002
- Task training for any miners or new equipment who have not been involved in these types of projects in the past. 46.7
- Lock –out, tag-out, test. Contact with, or work on equipment should only occur while the equipment is stopped and locked and tagged out and the equipment has been tested, always be aware of the possibility for stored energy. 56.12016; .12017; .14105; .14211.
- All the individuals working on the equipment are required to have a lock on the equipment and key in their possession, locks should be removed by the individuals who applied the lock.
- Persons should not ride on, step on, or cross-over conveyors, except at designed cross-overs. 56.11013; 11014.
- Persons are required walk, or climb on mine equipment by using walkways, stairs, ladders, and cross-overs that are provided. 56.11001; .11002; .11005; .11009.
- All personnel should be barred by appropriate means, from entering an area where falling material may present a hazard. Warning signs and barricades should be used to prevent entry. 56.16010
- Good housekeeping is a prerequisite for safe conditions. Areas around where maintenance is being conducted should be kept free of excessive debris and other tripping hazards. 56.20003.
- First class maintenance is a prerequisite for safe mining operations. Maintenance including the proper tools, never use tools beyond their design capacity, lubrication, must be performed when the equipment power is locked-out and tagged. Special lubrication equipment, lube extensions, pipes can be installed so that lubrication of equipment can be done without any hazards. 56.14202; .14203; .14204; .14205.
- PPE is required when working in and around mining equipment, hard hats, safety glasses, boots, gloves, hearing protection, and dust mask when needed. Where there is a danger of falling fall protection is required. 56.15002; .15003; .15004; .15005; .15006; .15007; .15014.
- Close supervision is a good practice for a safe working environment.

Fatalgrams: 46.7; 56.11001; .11002; .11013; .12016; .12017; .14100; .14105; .14202; .14204; .14205; .14211; .15002; .15005; .15006; .15007; .16010; .18002; .20003.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

-

Personal Conduct

- **"Horseplay" is not permitted on the job.**
- **Walk, do not run, on the job.**
- **Let your supervisor know when you are not 100% - sick, on prescriptions, or over the counter medication.**

Operating Service Pickup Trucks

- **Drive defensively and never drive directly behind large equipment without the operator's knowledge – Make eye contact with the operator.**
- **Mobile equipment shall be inspected by the equipment operator prior to operation.** 56.14100
- **Operating speeds of mobile equipment shall be consistent with the conditions of roadways.** 56.9101
- **Always alert large haulage vehicles of your presence in the area.**
- **Do not transport persons in the bed of mobile equipment.** 56.9200
- **Visible warning devices shall be used on mobile equipment that has objects that project beyond the sides or rear.** 56.14208
- **Do not drive under crane booms or suspended loads.** 56.16009
- **Never leave a vehicle running and unattended.** 56.14207
- **Tire repair.** 56.14104

Fire Prevention and Control

- **NO SMOKING signs shall be strictly obeyed.** 56.4100; .4101
- **Spillage and leakage of combustible and flammable liquids shall be cleaned up timely.** 56.4102
- **Fueling internal combustion engines shall be shut off prior to fueling.** 56.4103
- **Combustible waste shall not be allowed to accumulate.** 56.4104
- **Gasoline will not be used as a cleaning agent.** 56.4400
- **All fire-fighting equipment shall be conspicuously located.** 56.4330
- **Keep equipment clean, clean up all trash, and any oil spills immediately.** 56.14103; .4104

Fatalgrams: 56.4100; .9101; .9200; .14100; .14103; .14104; .14207; .16009

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

-

Signs

Good judgment comes from experience and a lot of Accidents come from bad judgment.

- ***SLAM Stop Look Analyze Manage*** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- ***Task training is essential*** for any new miners or on new equipment that have not been involved in these types of projects in the past. 46.7
- ***Required signs*** will be strategically placed, maintained and visible at all times. When the hazard no longer exists the sign should be removed.
- ***Danger Signs,*** should have ***RED*** as the predominating color and will be used when an immediate hazard exists. Employees shall be instructed that this type of area has special precautions and restrictions.
  56.3200; .4101; .4502 .6130; .6132;.6133; .6202;. .6306;.6311; .7805; .12021; .20011
- ***Caution Signs,*** should have ***YELLOW*** as the predominating color and will be used to warn against potential hazards against unsafe conditions. Employees shall be instructed that this type of area has certain hazards that they should be made aware of.
- ***Exit Signs,*** should have ***RED*** letters on a ***WHITE*** field and will be placed appropriately where the main exit points are located.
- ***Directional and Traffic Signs,*** should be used as you would observe them along major roads in your area or a common black and white background. .56.9100
- ***Barricades,*** must be of substantial construction to prevent persons from entering or accessing the area. ***Caution tape is not considered a barricade.*** 56.6306; .9300; .20011
- ***Tags***, are used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc., they should be affixed to the tools or equipment. 56.14100

Fatalgrams: 46.7; ; 56.6306; .9100; .9300; .14100; .20011

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Use of Explosives

Remember, Accidents do not just happen. Invariably, they occur because of indifferences to safety rules and lack of information or effective training.

- **SLAM Stop Look Analyze *Manage*** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training is essential** for any new miners or on new equipment that has not been involved in these types of projects in the past. 46.7
- **Proper PPE** is required hard hats, safety glasses, boots, gloves, goggles. 56.15002;.15003;.15004.
- **Survey your working area**, conduct a work place examination of the high wall that includes the high wall face to assure ground conditions are safe to work on. Clear any loose material in and around the area to be loaded. 56.3200; .3401; .
- **Fall protection is required whenever there is a danger of falling. Assure that everyone working near the edge is using the proper fall protection and is tied off to sufficient anchor point.** 56.15005
- **Never drill and load at the same time**, complete all drilling before loading holes begins. Never move drilling equipment, or any other equipment across blasting area. 56.6306
- Use only vehicles equipped for transporting explosives. 56.6202
- Separation of transported explosive materials. 56.6200; .6201; .6300
- Initiation preparation shall be made up at the blast site. 56.6303; .6305; .6308
- Be aware of any misfires and observe proper waiting period. 56.6310; .6311; .
- **Keep explosives on the ground**, and away from heat sources, lower bags to the ground, do not throw bags of anfo, do not allow any smoking. 56.6904
- **Listen to weather forecast, clear area if a storm approaches.** 56.6604

Fatalgrams: 46.7; 56.3200; .3401; .15005.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Oxygen – Acetylene Torches

- Always close the fuel and oxygen valves when not in use. 56.4603
- Turn off regulators of tank valves that have been closed.
- Repair any hose leak immediately and discard those hoses that are in poor condition. Use correct wrenches when installing or removing regulators. 56.14100b;4602
- Never store oxygen cylinders with flammable or combustible liquids. 56.4601
- Secure all compressed and liquid gas cylinders in a safe manner. 56.16005
- Protection of all gas cylinder valves when being transported and stored, and by safe location when in use. 56.16006

Jump Starting Batteries

- Always use approved jumper cables.
- Correctly connect positive and negative terminals.
- Make the last connection for the dead battery by placing negative cable to engine frame. Away from battery to avoid possible explosion.
- Remove all flammable material, including cleaners and solvents, from the area before jumping.

Electrical Distribution Boxes

- Lock out of all power boxes. 56.12016; 12017
- Sufficient access shall be provided to all electrical distribution boxes. 56.12019
- Identification of power switches. 56.12018
- Distribution boxes shall be provided with a disconnecting device for each branch circuit. 56.12006
- Insulation and fittings for power cables. 56.12008
- Openings in electrical boxes that create hazards shall be covered with the recommended cover plates. 56.12032
- Splices and repair of electrical cables. 56.12013

Fatalgrams: 56.12013; .12016; .12017; .14100;.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Welding Hazards

Remember, Accidents do not just happen. Invariably, they occur because of indifferences to safety rules and lack of information or effective training.

- **SLAM Stop Look Analyze Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training is essential** for any new miners or on new equipment that has not been involved in these types of projects in the past. 46.7
- **Lock-out, tag-out, test**, **Never** work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock at the completion of the project. 56.12016;.12017
- **Test** stored energy make sure any project you are working on will not move. Equipment with unbalanced drives may have a tendency to move. Blocking of moving parts is required when any possibility exist of non-powered movement. 56.14211
- **Inspect all tools** for damage prior to starting project. This includes grinders, drills, extension cords, etc... Make sure tools are adequate for the task such as chains, cables, come-along never use tools beyond their design capacity.56.14100b;.14205
- **Proper PPE** is required hard hats, safety glasses, boots, gloves, goggles, hearing protection, flash ark curtains if others are in the area**, if there is a danger of falling fall protection is required.** 56.15002;.15003;.15004;.15005;.15007;.15014;.14213
- **Survey your working area**, never use a welder where sparks will be a hazard, such as near a room containing flammable or combustible materials, keep flammable containers in a cabinet away from the working area.
  56.4100; .4104; .4200; .4201; .18002
- **If welding needs** to be done near flammable or combustible materials and materials cannot be removed, suitable fire-resistant guards, partitions, or covers must be used. Keep a spotter nearby with a fire extinguisher in case of an emergency.56.4600
- **Good housekeeping** is essential to reduce any potential for fires and explosions by keeping work areas clean. 56.20003
- **Never weld on** any barrels, drums, old drill steels until you have properly identified the products contained and cleaned of any left-over product. Never weld on a sealed barrel or drum as an explosion can occur from a build-up from gases.56.4604

- **Make sure that the welder** is equipped with a conveniently located power disconnect and that any repair or adjustments made to the temperature is done when the welder is powered off.
- **Properly ground welders,** stray current may develop, which can cause severe shock if ungrounded parts are touched. Never ground to pipes that carry gases or flammable liquids. Keep connections tight between cables and electrode holders.
- **Do not change the polarity switch** while the welder is under load. Wait until the welder idles and the circuit is open, the contact surface of the switch may be burned, and the person throwing the switch may receive a severe burn from the arching.
- **Do not change range switch under load**, the range switch, which determines the current setting, should be changed only while the welder is off. Switching the current while the welder is under load will cause an arc to form between contact surfaces.
- ***Weld only in dry areas,*** use suitable material to stand on under damp or wet conditions. Keep hands and clothing dry; avoid contact with grounded metal while welding.

Fatalgrams: 46.7; .56.4100; .4201; .4600; .4604; .12016; .12017; .14100; .14205; .14211; .15002; .15005; .20003

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Ladders

- Ladders should be secured at the top when needed.
- Should be long enough to extend at least 3 feet above the landing. 56.11006
- Remove broken ladders from service. 56.11003
- Climb with both hands-hoist materials and supplies. 56.11011
- Fixed ladders shall be anchored securely and installed to provide at least 3 inches of toe clearance. 56.11005
- Vertical clearance above stair steps required for head clearance. 56.11010

Berms and Dump sites

- Must be as high as the axle of the largest piece of mobile equipment traveling the roadway. 56.9300
- Report any section of elevated roadway that is not bermed. 56.18002
- Whenever haulage trucks dump on stockpiles, a berm must be provided on the ramp and edge of stockpile. 56.9301
- Ramps and dumping facilities shall be designed and constructed of materials capable of supporting the loads to which they will be subjected. 56.9303
- Dumping locations shall be visually inspected prior to work commencing and as ground conditions warrant. 56.9304

Safety Devices and Maintenance Requirements

- Self-propelled mobile equipment to be use during a shift shall be inspected by the equipment operator before being put into operation. 56.14100
- Brakes shall be checked and meet all of the minimum standards. 56.14101
- Operator station shall be kept clean and free of hazards that could impair the safe operation of the mobile equipment this includes window repair. 56.14103
- Safety procedures for tire repair. 56.14104
- Procedures during repair or maintenance that require blocking of equipment to prevent motion or falling. 56.14105
- Falling object protection. 56.14106
- ROPS and Seat Belts requirements. 56.14130; .14131
- Horns and back-up alarm for mobile equipment. 56.14132

Fatalgrams: 56.9300; .9301; .9303; .9304; .11011; .14100; .14101; .14103; .14104; .14105; .14130; .14132.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Ladder Safety

Remember, Accidents do not just happen. Invariably, they occur because of indifferences to safety rules and lack of information or effective training.

- **SLAM Stop Look Analyze Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training is essential** for any new miners or on new equipment that has not been involved in these types of projects in the past. Ladders present opportunities for fall hazards if they used improperly or under unsafe conditions. 46.7
- **Lock-out, Tag-out, Test**, **Never** work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock at the completion of the project. **TEST**, for stored energy make sure any project you are working on will not move. Equipment with unbalanced drives may have a tendency to move. Blocking of moving parts is required when any possibility exists of non-powered movement. 56.12016;.12017; .14211
- **Inspect all tools** for damage prior to starting project. Ladders come in four categories, Type IA 300# extra heavy duty; TypeI-250# heavy duty; Type II-225# medium duty; TypeIII-200# light duty ladders should not be used beyond the manufacturer's recommendations . The use of damaged ladders is prohibited, damaged foot cleats, broken or missing steps, or rungs, broken or split side rails or other defects should be taken out of service immediately and tagged out of service until repaired or removed from the mine site. Painted ladders are not allowed on mine sites as the paint could hide potentially dangerous defects. Rungs and steps should be clean of any grease, oil mud ,snow and ice before climbing.56.11007; .14100b; .14205
- **Proper PPE** is required hard hats, safety glasses, boots rubber soles to prevent slipping, gloves, **if there is a danger of falling fall protection is required.** 56.15002; .15003; .15004; .15005;
- **Survey your working area**, to make sure you are not working around any doors where persons would not be aware of individuals working from a ladder. If you need to work in this type of area make sure signs are posted and or area is barricaded. Pick up ladder and walk it into an upright position, making sure it will not contact and electrical wires. Ladders should never be used as a scaffold with plank boards for a working surface. 56.11001; .11003; .11004; .11005; .11006.
- **Best practices for ladders**. Use 4 to 1 ratio when leaning single or extension ladder make sure to tie off the ladder before work begins, always open a stepladder complexly and make sure the spreader is locked completely, do not stand on the top 2 rungs of step or straight ladders,

straight ladders should extend 3 rungs or 3 feet past the landing, do not leave tools or materials on top of a ladder, never try to rock a ladder to move it. Persons using ladders shall face the ladder and have both hands free for climbing and descending a rope may be used to lift materials after climbing. 56.11011

- **Good Housekeeping** is a prerequisite for safe conditions. All areas around mine equipment particularly those areas around drives, walkways, safety devices, and control stations should be kept free of debris or any other obstacles. Any posted warning signs or instructions should be kept current. 56.20003

Fatalgrams: 46.7; 56.1101; .11004; .12016; .12017; .14100; .14205; .14211; .15002; .15005; .20003.

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Equipment Inspections

- Operators must make a pre-operation safety inspection. 56.14100a
- Defects that affect safety shall be corrected in a timely manner. 56.14100b
- Report "imminent danger" defects to your supervisor immediately. 56.14100c
- Deficiencies not corrected immediately must be reported and recorded. 56.14100d

Housekeeping

- Walkways must be kept free of debris. 56.20003
- Oil and grease must be cleaned up and disposed of properly. 56.4101; 4102
- Every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards, as practicable. 56.20003c
- Workplaces. Passageways. Store rooms, and service rooms shall be kept clean and orderly.

Watch Your Step

- Hold onto handrails as you walk up or down stairs or steps.
- Don't run in work areas.
- Stay alert for broken walkways decks, and handrails 56.11002
- Walk where there are established walkways. Do not walk on makeshift skylights, weak metal, or unfinished construction.
- Report hazardous walkways to your supervisor. 56.18002

Traffic Safety

- To provide for the safe movement of self-propelled mobile equipment. 56.9100
- Operator of self-propelled mobile equipment shall maintain control of the equipment while it is in motion. 56.9101
- Signage showing the direction of travel should be posted for a safe flow of traffic.
- Persons shall not be transported in unsafe manner on mobile equipment. 56.9200
- Loading, hauling, and unloading of equipment or supplies. 56.9201
- Large rocks to be hauled on mobile equipment shall be broken down to a smaller size for safe transportation. 56.9202

Fatalgrams: 56 .9100; .9101; .9200; .9201; .11002; .14100; .18002; .20003

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Hand Safety

- Stay alert to where you place your hands.
- Most pinch points can destroy your hands.
- Use work gloves. Select the proper safety glove for the job. 56.15006
- Keep welding gloves dry and free from grease and oil.
- Using improper hand tools or the proper hand tool the wrong way can result in hand injuries. 56.14205.

Safety Lines

- People have died from injuries sustained from "short" falls. 56.15005
- When entering a confined space you must always have another person attending your line. 56.16002

  Wear fall protection when working from platforms, decks, scaffolds, etc. 56.15005

Mobile Equipment

- Each operator is responsible for the Safe operation of his/her vehicle. 56.9101
- Never park a vehicle in a high traffic or congested work area.
- Check your vehicle's backup alarm throughout the shift. 56.14132
- Always perform pre-operational checks. 56.14100
- Report all problems to the supervisor and mechanic if directed. 56.14100d
- **DO NOT OPERATE UNSAFE EQUIPMENT**. 56.14100c

Safety Provisions and Procedures for Roadways, Loading and Dump Sites

- Berms or guardrails are required on the banks of roadways where a drop-off exists. 56.9300
- Mobile equipment dumping locations shall be visually inspected. 56.9304
- Dump site restraints shall be provided at dump locations. 56.9301
- Ramps at dumping facilities shall be of sustainable construction to handle the equipment subjected to that area. 56.9303
- If truck spotters are being utilized at dumping locations they should be in a safe location that everyone knows of their presence. 56.9305

Fatalgrams: 56.9101; .9300; .9301; .9303; .9304; .9305; .14100; .14132; .15005; .15006; .16002

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Dehydration

- Dehydration is a major factor in most heat disorders. The average body loses approximately 2 ½ quarts of sweat a day. When performing strenuous work the body can lose up to 1 ½ quarts of sweat per hour. It is essential to drink more than is needed to satisfy thirst.

Salt Replacement

- Sweat not only contains water, but salt and other electrolytes. The body needs a certain amount of salt to function properly, but salt tablets **are not recommended** because of stomach irritation, nausea, and vomiting. Each employee should drink normal water throughout the day, but may drink an electrolyte solution after in a hot environment, if desired. Individuals on a salt restricted diet or those persons being treated for high blood pressure or heart problems must **NOT** try to replace salt without the advice of their physician.

Recommended Protective Clothing

- Loose fitting clothing made of light cotton allows sweat to evaporate and transfer heat better than tight fitting synthetic fibers.

Safe Work Practices

- Watch out for the safety of coworkers. Take scheduled breaks in cool areas; employees should be provided with access to shade. Drink plenty of cool water. Supervisors should consider scheduling the hottest work for the coolest part of the day, assigning extra workers to high demand tasks, and using a wide variety of work saving devices such as power tools, hoists or other lifting aids to reduce the body's work load. Water should be provided in sufficient quantities throughout the day.

Fatalgrams:

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Body Reaction to Cold

- Cold injuries are classified as either localized (such as frostnip, frostbite) or generalized as in hypothermia (a lowering of the body's core temperature)

Frostnip occurs when the face or other extremities are exposed to cold wind which caused the skin to turn white. Symptoms may include firm, cold, white areas on the face, ears, or other extremities, peeling or blistering that may appear similar to sunburn. Treatment for the frostnip area should be treated by re-warming the area with an unaffected hand or warm object. DO NOT use hot water.

Frostbite occurs when there is freezing of the skin. It can occur without hypothermia when the extremities do not receive sufficient heat from central body stores because of inadequate clothing or circulation. The most vulnerable parts of the body are the nose, cheeks, ears, fingers, and toes. Damage from frostbite can be serious, scarring, tissue death, and amputation is all possible. Symptoms may include in these areas cold, hard, white and anesthetic. On warming it becomes blotchy red, swollen and painful. Depending on the extent of the injury the area may recover normally or deteriorate into something more serious. Treatment would be to warm the area and seek medical attention.

Hypothermia occurs when the body cannot maintain a normal core temperature of 98.6 degrees F. Hypothermia can take an employee by surprise since it can occur above freezing. Wind, physical exhaustion, and wet clothing all make a person more prone to hypothermia. Air temperature alone is not enough to judge the cold hazard of an environment. Wind chill should also be considered. Symptoms may include, numbness, stiffness or pain (especially in the neck arms, and legs) poor coordination, slurred speech and drowsiness, slow, irregular breathing and heartbeat, severe shivering. Treatment for an unconscious person would be to get them out of frozen, wet or tight clothes treated by experienced medical personnel and transported to the hospital.

Fatalgrams:

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Heat Exhaustion

- Caused by loss of water through sweating without adequate fluid replacement. It is the most common heat related illness.
- **Signs and symptoms**: Heavy (excessive) sweating with skin feeling cool and clammy or moist, pale, gray or flushed looking, headache, weakness, dizziness, nausea.
- **Treatment:** Move the victim to a cool or shady area. Loosen or remove sweat soaked clothing. Pour water on and fan victim. If conscious slowly drink 4 oz. cool water every 15 minutes. Elevate legs. If possible, avoid strenuous activity for the remainder of the day. Monitor the victim until the symptoms are gone, or medical aid arrives.
- **Heat Stroke**
- If heat exhaustion is ignored, this is what may happen. Heatstroke must be considered a medical emergency that may result in death of treatment is delayed.
- **Signs/Symptoms**: It is caused by failure of the body's cooling mechanisms. Inadequate sweating is a factor. /skin is red(flushed), hot and dry, changes in consciousness, rapid weak pulse and rapid shallow breathing, may experience weakness, dizziness, confusion, headaches, seizures, nausea.
- **Treatment**: Cool victim immediately. Loosen or remove victim's clothing. Spray or pour water on victim; fan to permit a coolant effect of evaporation. Massage extremities and skin which increases the blood flow to those body areas, thus aiding the cooling process. Elevate legs. Slowly drink water if conscious.

Fatalgrams:

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Belt Conveyor Safety

- Conveyor start-up warnings. 56.14201
- Emergency stop cords must be in good working condition and tested regularly. 56.14109
- Poking at, or prodding materials on the belt, or any component of a moving belt is prohibited. 56.14202
- Stand on non-conductive mats when working on or energizing or de-energizing equipment. 56.12020
- DE-energize and lock-out and tag-out belt power, mechanically block belt from rolling without power. 56.14105; .14113
- All moving machine parts must be guarded to prevent persons from contacting; Belt conveyor pinch points can KILL you. 56.14107, .14108, .14112
- Walkways must be kept clear of material spillage to prevent tripping hazards. 56.20003
- Watch for material falling off conveyor belts. Use proper skirting to prevent material from falling off belts. 56.14110
- First class maintenance is a prerequisite for the safest conveyor operation. Lube extensions can be installed so that lubrication of an operating conveyor can be done without any hazards. 56.14203, .14204

Loader Safety

- Roll-over protective structures and seat belts are required while operating loading equipment. 56.14130
- Be alert to the position and clearance of your bucket; keep it close to the ground while traveling. 56.14206
- Never allow anyone, including your-self to walk or stand under the raised bucket. 56.14210, .14211
- Never allow anyone to ride on the side of your loading equipment. 56.9200
- Always sound an alarm before moving mobile equipment. 56.14132, .14200
- A properly sized tow bar or other effective means of control shall be used to tow mobile equipment. 56.14209
-

Fatalgrams: 56.9200; .14105; .14107; .14110; .14112; .14132; .14200; .14201; .14202; .14204; .14206; .14209; .20003

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Mobile Equipment

- Self-propelled mobile equipment shall be inspected by the equipment operator. 56.14100
- Mobile equipment shall be equipped with braking systems capable of holding the equipment on the maximum grade it travels. 56.14101
- Operating stations (Cabs) provided with windows. 56.14103
- Roll-over protective structures and seat belts. 56.14130
- Horns and back-up alarms. 56.14132, .14200
- Booms, buckets, forks, beds shall be placed in the travel mode before moving. 56.14206
- Mobile equipment shall not be left unattended unless the parking brakes are applied and the wheels or tracks chocked or turned into a bank. 56.14207
- Visible warnings devices are required to be used on mobile equipment when hazards exists that create a hazard to persons. 56.14208
- Proper towing bars or other effective means of controls when towing equipment. 56.14209
- Movement of dippers, buckets, loading booms or suspended loads. 56.14210
- Check the fire extinguisher on your equipment. 56.4201
- Blocking equipment in a raised position. 56.14211
- Don't jump out of moving equipment!! "Stay Alive – Keep Inside"

Equipment Operation

- Haul truck operators should stay inside the truck while being loaded, the only exception is while being loaded with large rip rap, then you should stand outside, away from your truck where the loader operator can clearly see you. 56.9100, .9101,.9200, .9202
- Operate equipment with extreme caution around and on stockpiles keep a safe distance from the edge when dumping. 56.9300, .9301, .9303 ,.9304, .9305, .9306
- Use low gear when descending and ascending ramps. 56.9101, .9313
- Dust control on haul roads. 56.9315
- Notifying the equipment operator. 56.9316, .9318
- At no time should a person go under a suspended load. 56.9317
- To provide a working environment that protects the safety and health of all employees.
- Remember _ Safety is a Value You Can Live With!!!

Fatalgrams: 56.9100; .9101; .9200; .9300; .9301; .9303; .9304; .9305; .9306; .9313; .14100; .14101; .14103; .14130; .14132; .14200; .14201; .14206; .14207; .14211

Attendee:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Pickup Truck Safety

- When using vehicles to haul tools and materials visible warning devices should be used to warn persons of hazards. 56.14208
- When mobile equipment is left unattended the mobile equipment shall have the parking brake set, and chocked or turned into a bank. 56.14207
- If welding or cutting is being done a fire extinguisher is required to be available. 56.4600
- Securing gas cylinders and protecting valves on compressed gas cylinders. 56.16005, .16006, .4603
- Never approach equipment operator without making eye contact with the operator either visually or verbally. 56.9316, .9318
- Persons should not be transported in the beds unless provisions are made for secure travel. 56.9200
- Vehicles transporting explosives. 56.6200, .6201, .6202

Concentration

- Keep your mind on the job at hand-"Stay Alert, Don't Get Hurt"
- "Think Before You Act"-Take a few minutes to assess all hazards before preforming the work "Plan the Work" and "Work the Plan"
- If you feel tired or unable to concentrate properly, report to your supervisor before you hurt yourself or someone else.

Lubricating Equipment

- Lockout/tag-out machinery before attempting to lubricate it unless it can be done with all guards in place. 56.12016, .12017
- Install and use remote grease fittings/lines for hazardous areas Consider automatic lubrication systems for these areas. 56.14203, .14204
- Keep areas clean and free of material buildup. 56.20003
- Block machinery against motion. 56.14105, .14211

Fatalgrams: 56.4600; .9200; .12016; .12017; .14105; .14204 .14207; .14211; .20003

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Falls from Equipment

- Always maintain three contact points while mounting or dismounting.
- Keep steps clean and in good condition. 56.14100
- Always look in the direction that you're traveling.
- Be sure the parking brake is set and all blades or buckets are on the ground before dismounting equipment. 56.14206, .14207
- Never attempt to mount equipment in motion or mount equipment without communicating with the operator. 56.9316, .9318

Teamwork

- Keep in mind how your job performance affects others working with you.
- Remember the Golden Rule – "Treat others as you would want to be treated"
- Alert co-workers to hazards and be proactive in preventing accidents.
- Always be ready to go above and beyond the call of duty to protect your fellow miners.
- Safety requires your commitment and responsibility to yourself and your fellow miners. The front page of the MINE ACT OF 1977 states. (It is the responsibility of the mine operator with the assistance of the miners to create a safe working environment.)

Fire Extinguishers

- Once the seal has been broken and the extinguisher partially used, it must be replaced. 56.4203
- Don't try and be a hero! Portable fire extinguishers are for small fires. 56.4200
- Call the Fire Department when in doubt. 56.4330
- Never place yourself where the fire is between you and an exit. 56.4230

Fatalgrams: 56.14100; .14206; .14207

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Safety Lines

- Safety lines must be worn when there is a hazard from falling. 56.15005
- Safety lines must be attended by a second person whenever work is being performed in a confined space and the danger exists of someone being engulfed by loose material.
- Inspect safety lines for defects before each use and replace when necessary. 56.14100b; .15006

Electrical Safety

- Never work on machinery without locking out and tagging out the power source. 56.12016; .12017
- Don't go into electrical switchgear. That's a job for the electrician. 56.12022
- Replace damaged extension and damaged drop light cords. 56.12004
- Protection of power cords from mobile equipment. 56.12005

Take a Few Minutes for Safety-General Safety Precautions

- Always take a little time to assess the task at hand and evaluate potential hazards. 46.7
- Think Before You Act- Stop, Look, Analyze, Manage.
- Always look where you are walking and beware of your surroundings.
- Never walk under suspended load. 56.16007; .16009
- If you see a hazard, alert your supervisor and barricade area. 56.18002; .20011
- Always get proper tools for the job! Before beginning the job, reference maintenance and operating manuals. 56.14205
- Always wear Personal Protective Equipment. 56.15002; .15003; .15004; .15005; .15006; .15007; .15014; .15020

Fatalgrams: **46.7; 56.15005; 56.14100b; 56.12016; 56.12017; 56.12004; 56.16007; 56.16009; 56.18002; 56.20011; 56.14205 ;56.15002; 56.15006; 56.15007; 56.15020**

Attendees:

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Our Safety & Health Goals

- **Provide a work place where Safety and Health hazards do not exist and take appropriate action to identify and correct all hazards. 56.18002**
- **Include all employees in the development of the Safety and Health programs.**
- **Observe as minimum requirements, all State and Federal Regulations regarding workplace safety & Health.**
- **Maintain equipment and facilities. 56.14100**
- **Use appropriate personal protective equipment.**
- **Train all employees concerning workplace hazards and the need to work safely and follow established work practices.**
- **Promptly report all accidents or injuries, regardless how minor they appear. 7000-1**
- **Encourage communications and suggestions on all safety and health matters.**
- **Changes At The Mine.**
- **Hear Conservation Program Part 62**
- **Respiratory Protection Program 56.5002**
- **Rules To Live By Program Rules to Live By**
  What's New in Mine Safety and Health Administration " www.MSHA.gov "

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Safety Programs

1) 56.18002 Examination of working places.

(a) 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. The operator shall promptly initiate appropriate action to correct such conditions. (b) A record that such examinations were conducted shall be kept by the operator for a period of one year, and shall be made available for review by the Secretary or his authorized representative. (c) In addition, conditions that may present an imminent danger which are noted by the person conducting the examination shall be brought to the immediate attention of the operator who shall withdraw all persons from the area affected (except persons referred to in section 104(c) of the Federal Mine Safety and Health Act of 1977) until the danger is abated.

2)56.18006 New employees.

New employees shall be indoctrinated in safety rules and safe work procedures.

3) 56.18009 Designation of person in charge.

When persons are working at the mine, a competent person designated by the mine operator shall be in attendance to take charge in case of an emergency.

4) 56.18010 First aid.

An individual capable of providing first aid shall be available on all shifts. The individual shall be currently trained and have the skills to perform patient assessment and artificial respiration; control bleeding; and treat shock, wounds, burns, and musculoskeletal injuries. First aid training shall be made available to all interested miners.

5) 56.18012 Emergency telephone numbers.

Emergency telephone numbers shall be posted at appropriate telephones.

6) 56.18013 Emergency communications system.

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

7) 56.18014 Emergency medical assistance and transportation.

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

8) 56.18020 Working alone.

No employee shall be assigned, or allowed, or be required to perform work alone in any area where hazardous conditions exist that would endanger his safety unless he can communicate with others, can be heard, or can be seen.

- **Fatal grams: 56.18002, 56.18006, 56.18009, 56.18013, 56.18014, 56.18020**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Personnel Safety

Attitude and Teamwork

- No matter how big the job: teamwork divides the task and multiplies the success.
- A good listener is a good team member.
- There is no "**I**" in TEAM however there is a "**ME**".
- A safer day for everyone starts with a safe day for **YOU**.

- **Cell Phone Safety**
  - **A Cell phone can be more than a convenience if an emergency arises**

However:

- **Park before using your cell phone even in emergencies** 56.14207
- Do not text on the job—Texting is more distracting.
- **Cell phones and hand tools don't mix**. Distractions cause injuries!

REMEMBER
We will have a better day tomorrow if we have a safe day today

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Personal Protection

56.15001 **First-aid materials.** 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.

56.15002 **Hard hats.** All persons shall wear suitable hard hats when in or around a mine or plant where falling objects may create a hazard.

56.15003 **Protective footwear.** All persons shall wear suitable protective footwear when in or around an area of a mine or plant where a hazard exists which could cause an injury to the feet.

56.15004 **Eye protection.** All persons shall wear safety glasses, goggles, or face shields or other suitable protective devices when in or around an area of a mine or plant where a hazard exists which could cause injury to unprotected eyes.

56.15005 **Safety belts and lines.** 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.

56.15006 **Protective equipment and clothing for hazards and irritants.** Special protective equipment and special protective clothing shall be provided, maintained in a sanitary and reliable condition and used whenever hazards of process or environment, chemical hazards, radiological hazards, or mechanical irritants are encountered in a manner capable of causing injury or impairment.

56.15007 **Protective equipment or clothing for welding, cutting, or working with molten metal.** Protective clothing or equipment and face shields, or goggles shall be worn when welding, cutting, or working with molten metal.

56.15014 **Eye protection when operating grinding wheels.** Face shields or goggles in good condition shall be worn when operating a grinding wheel.

56.15020 **Life jackets and belts.** Life jackets or belts shall be worn where there is danger from falling into water.

- **Fatal grams: 56.15002 56.15005, 56.15006, 56.15007, 56.15020,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Mobile Equipment Safety

- Speed Limit s
  - Observe all posted speed limits on entrance and haulage roads. 56.9100
  - Report speeders. Don't wait until someone gets hurt.
  - If needed lower your speed to adjust for weather and road conditions. 56.9300d4
  - Operators of self-propelled mobile equipment shall maintain control of the equipment while it is in motion. 56.9101
- Mobile Equipment
  - Inspect unit for safety defects before operating it. 56.14100
    Conduct "Pre Operation Examination" and complete the "Daily Operator's Report" every shift.
  - Always wear your seatbelt. 56.14130
  - Do not operate if unit is in unsafe condition. 56, 14131, 56.14100c,
- Riders
  - Never allow anyone to ride on the side of your equipment.
  - Don't transport people in the front-end loader buckets or allow anyone to perform work from an unsupported bucket. 56.14211

- **Fatal grams: 56.9100, 56.9101, 56.14130, 56.14131, 56.14100c, 56.14211,**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Prevention of Accidents

- **Lock Out / Tag out Procedures 56.12016, 56.12017,**
  - Cut off power at main disconnect
  - Each person working on the item should secure with their lock on proper disconnect and tag
  - Try start button before beginning work
- **Safety Belts in Vehicles**
  - Company rule and MSHA regulation
  - Tell your supervisor if the belt is broken or doesn't work properly inspection should be made daily **56.14100b, 56.14130a, g**
  - All mobile equipment operators should wear their seat belt at all times when in motion You should wear them in your car or truck it is the law
- **Guardrails, Handrails, & Steps**
  - Report broken railing, guardrails, or steps. **56.11002**
  - When broken, take temporary precautions: post warning signs, use rope or chain, **56.20011**
  - Repair or replace broken railing guardrail and steps ASAP **56.11001**

- **Fatal grams: 56.12016, 56.12017, 56.14100b, 56.14130a, 56.14130g, 56.11002, 56.20011, 56.11001**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

FIREFIGHTING EQUIPMENT

1) 56.4200 General requirements.
(a) For fighting fires that could endanger persons, each mine shall have
(1) Onsite firefighting equipment for fighting fires in their early stages; and
(2) Onsite firefighting equipment for fighting fires beyond their early stages, or the mine shall have made prior arrangements with a local fire department to fight such fires.
(b) This onsite firefighting equipment shall be
(1) Of the type, size, and quantity that can extinguish fires of any class which could occur as a result of the hazards present; and
(2) Strategically located, readily accessible, plainly marked, and maintained in fire-ready condition.
2) 56.4201 Inspection
(a) Firefighting equipment shall be inspected according to the following schedules:
(1) Fire extinguishers shall be inspected visually at least once a month to determine that they are fully charged and operable.
(2) At least once every twelve months, maintenance checks shall be made of mechanical parts, the amount and condition of extinguishing agent and expellant, and the condition of the hose, nozzle, and vessel to determine that the fire extinguishers will operate effectively.
3) 56.4203 Extinguisher recharging or replacement.
Fire extinguishers shall be recharged or replaced with a fully charged extinguisher promptly after any discharge.
4) 56.4230 Self-propelled equipment.
(a)(1) Whenever a fire or its effects could impede escape from self-propelled equipment, a fire extinguisher shall be on the equipment.
(2) Whenever a fire or its effects would not impede escape from the equipment but could affect the escape of other persons in the area, a fire extinguisher shall be on the equipment or within 100 feet of the equipment.
(b) A fire suppression system may be used as an alternative to fire extinguishers if the system can be manually activated.
(c) Fire extinguishers or fire suppression systems shall be of a type and size that can extinguish fires of any class in their early stages which could originate from the equipment's inherent fire hazards. Fire extinguishers or manual actuators for the suppression system shall be located to permit their use by persons whose escape could be impeded by fire.

- **Fatal grams: 56.4201,**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Welding Safety

- Proper eye protection is needed 56.15007
  a. Use a combination of safety glasses, face shields and welding hoods
- Check protective clothing to make sure it is in good condition
  a. Long sleeve shirts
  b. Trousers should cover your shoe tops
  c. Clothing should not be worn or frayed
  d. Keep clothes free from grease and oil
- Have fire protection ready for immediate use 56.4600
- Is natural ventilation provided? If not, use supplemental fans 56.14213
- Make sure all people that are welding are properly trained in the task
- Welding or Cutting on Tanks Safely

- **Welding Electrical Safety**
  - Always inspect you work area prior to starting 56.18002
  - Use well insulated electrode holder and cables
  - Wear dry hole-free gloves
  - Inspect your electrode holder and cables regularly for cracks or missing insulation
  - Never change electrodes with bare hands or wet gloves
  - Inspect cords for nicks, cracks and visible wiring

- **Fatal grams: 56.15007, 56.4600, 56.18002,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

PPE and Electrical Safety

1) Protect your valuable assets!

- Look at your hands and fingers
- Look at your feet
- You are using your eyes 56.15004

USE YOUR PPE!!

2) Electrical Safety

- Use only grounded or double insulated electrical tools and equipment
- Use GFCI receptacles or pigtails in damp or wet locations at mines or when in confined spaces.
- Inspect your electrical tools, cords and equipment

a. Make sure the ground prong isn't broken off
b. Inspect cords for nicks, cracks and visible wiring or conductors
    - Never attempt to repair a cut or broken electrical cord
    - Never use electrical tool trigger locks 56.14116
    - Always lock and tag out electrical boxes when making repairs 56.12016

- **Fatal grams: 56.12016**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Statutory Rights of Miners
and their Representatives under the Act

- **These statutory rights are guaranteed to all miners by Federal law**
  Right to select a representative for safety and health purposes
  Right to refuse to work under conditions or practices believed to be unsafe, unhealthy, or illegal
  Right to report a suspected violation or danger to the operator, miner's representative, or MSHA without discrimination or reprisal
  Right to have a representative participate in a pre- and post-inspection conference
  Right to have a representative accompany an MSHA inspector during inspection without loss of pay ("walkaround" rights)
  Right to effective health and safety training
  Right to free Black Lung examinations and tests
  Right to protection from discrimination for exercising statutory rights

  Rights

- **Able to list miners' rights and those of representative of miners.**

- **Able to name persons in charge of mine and the responsibility of their agents.**

- **Will be able to explain company rules relating to miner's job.**

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Hearing Conservation Program
(Consist of a written plan containing these five provisions)
(See SMO Binder Part 62 for sample plan)

- **A system of monitoring under 30 CFR Part 62.110**
  Noise exposure assessment

- **Provision and use of hearing protectors under 30 CFR Part 62.160**
  Proper usage
  Good hygiene

- **Audiometric testing under 30 CFR Part 62.170**
  Offered yearly and documented

- **Training under 30 CFR Part 62.180**
  On all seven topics

- **Record keeping under 30 CFR Part 62.190**

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Respiratory Protection Program

- **A system of monitoring under 30 CFR Part 56.5002**
  Dust, Gas, Mist, Fume, exposure assessment
- **Written Procedures**
- **Employee training**
- **Fit-testing**
  1. All persons required to use a respirator will be fit tested first
  2. Annual fit testing to be conducted
- **Respirator cleaning and disinfecting**
- **Records of actions taken**
  1. Records of fit-test which identifies:
  a. The exact model and size respirator
  b. Date of testing
  c. The fit-test method and
  d. Whether the person passed or failed the test.
  2. Records of training provided which include at least:
  a. Identification of persons
  b. Date of training and
  c. Topics covered.
- **A statement of use**
  1. Assigned respirators will be worn by persons at all times while in the normal work areas where persons may be overexposed; These areas will be posted "Respirator Required" and
  2. Work area(s) affected will be periodically checked to ensure that employees are using respirators and to check dust controls, employee exposure, and employee stress due to breathing resistance or heat. The area supervisor will include this check on his/her daily walk-around inspection.

- **Fatal grams: 56.5002**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

"Rules to Live By"

From CY 2000 - 2008, 589 miners lost their lives, mostly in single and double fatality accidents. MSHA analyzed these fatal accidents to identify conditions and practices that contributed to the 589 deaths, safety standards violated, root causes, and abatement practices**. These Hazards accounted for 45% of all the Fatalities in this time period. Discuss each Standard!!!**

56.9101 Operating speeds and control of equipment
56.12017 Work on power circuits
56.14101(a)* Brake performance
56.14105 Procedures during repairs or maintenance
56.14130(g) Seat belts shall be worn by equipment operators
56.14131(a) Seat belts shall be provided and worn in haul trucks
56.14205 Machinery, equipment, and tools used beyond design
56.14207 parking procedures for unattended equipment
56.15005 Safety belts and lines
56.16002(c) Bins, hoppers, silos, tanks, and surge piles
56.16009 Persons shall stay clear of suspended loads
56.20011 Barricades and warning signs
57.3360 Ground support use
46.7(a) New task training
56.3130 Wall, bank, and slope stability
56.3200 Correction of hazardous conditions
56.14100(b) Safety defects; examination, correction and records
56.15020 Life jackets and belts
57.14100(b) Safety defects; examination, correction and records

- **Fatal grams: 56.9101, 56.12017, 56.14101a, 56.14105, 56.14130g, 56.14131, 56.14205, 56.14207, 56.15005, 56.16002c, 56.16009, 56.20011, 57.3360, 46.7, 56.3130, 56.3200, 56.14100b, 56.15020, 57.14100b,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

HAZCOM
Part 47

- **HAZARD DETERMINATION**

  Each chemical brought on mine property and each chemical produced on mine property will be evaluated to determine if it is hazardous. 47.21

- **LABELS AND OTHER FORMS OF WARNING 47.41, 47.42, 47.43, 47.44,**

- **MATERIAL SAFETY DATA SHEETS (MSDS)**

  This program includes a current, legible, and accessible Material Safety Data Sheet (MSDS) for each hazardous chemical at this mine site. MSDS's will be accessible to miners during each work shift for each hazardous chemical to which they may be exposed. 47.51, 47.52, 47.53, 47.54, 47.55

- **MINER TRAINING**

  All miners will receive instruction about the physical and health hazards of chemicals in their work areas, the protective measures they can take against these hazards (personal protective equipment, ventilation, warning signs, etc.), and the contents of the mine's HazCom Program (47.2).

- **TRAINING FOR OTHER OPERATORS**

  Other operators at this mine will be provided with access to MSDS's and informed about hazardous chemicals to which their miners can be exposed, the labeling system on the containers of these chemicals, and appropriate protective measures. 47.71,

- **LIST OF HAZARDOUS CHEMICALS**

  A current list of all hazardous chemicals known to be at this mine should be available. 47.32

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mines Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Welding Regulations

1) 56.4600 Extinguishing equipment.
(a) When welding, cutting, soldering, thawing, or bending-
(1) With an electric arc or with an open flame where an electrically conductive extinguishing agent could create an electrical hazard, a multipurpose dry-chemical fire extinguisher or other extinguisher with at least a 2–A:10–B:C rating shall be at the worksite.
(2) With an open flame in an area where no electrical hazard exists, a multipurpose dry-chemical fire extinguisher or equivalent fire extinguishing equipment for the class of fire hazard present shall be at the worksite.
(b) Use of halogenated fire extinguishing agents to meet the requirements of this standard shall be limited to Halon 1211 (CBrClF2) and Halon 1301 (CBrF3). When these agents are used in confined or unventilated areas, precautions based on the manufacturer's use instructions shall be taken so that
the gases produced by thermal decomposition of the agents are not inhaled.

2) 56.4601 Oxygen cylinder storage.
Oxygen cylinders shall not be stored in rooms or areas used or designated for storage of flammable or combustible liquids, including grease.

3) 56.4602 Gauges and regulators.
Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.

4) 56.4603 Closure of valves.
To prevent accidental release of gases from hoses and torches attached to oxygen and acetylene cylinders or to manifold systems, cylinder or manifold system valves shall be closed when—
(a) The cylinders are moved; (b) The torch and hoses are left unattended; or (c) The task or series of tasks is completed.

5) 56.4604 Preparation of pipelines or containers.
Before welding, cutting, or applying heat with an open flame to pipelines or containers that have contained flammable or combustible liquids, flammable gases, or explosive solids, the pipelines or containers shall be— (a) Drained, ventilated, and thoroughly cleaned of any residue; (b) Vented to prevent pressure buildup during the application of heat; and (c)(1) Filled with an inert gas or water, where compatible; or (2) Determined to be free of flammable gases by a flammable gas detection device prior to and at frequent intervals during the application of heat.

Always Remember Personnel Protective Equipment for the Task

- **Fatal grams: 56.4600, 56.4604,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mines Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Tire Repair

- **What is company's Policy on tire repair**

1. Establish policies and procedures for conducting specific tasks on tire repair.
2. Before beginning any work, ensure that persons are task trained and understand the hazards associated with the work to be performed.
3. Do not perform work on a mobile equipment until the power is off, locked, and tagged, and equipment components are blocked against hazardous motion park brake set and wheels chocked to prevent movement and equipment blocked in a raised position to prevent falling.

- **Hazcom Part 47**

1. Develop, implement, and maintain a written Hazard Communication (HazCom) program.
2. Ensure that a Material Safety Data Sheet (MSDS) is accessible to persons for each hazardous chemical to which they may be exposed.
3. Review and discuss MSDS control section recommendations.
4. Establish and discuss safe work procedures before starting any work and identify and control all hazards.
5. Train all persons to recognize and understand safe job procedures, including the physical and health hazards of chemicals that are being used and the proper use of respiratory protection.
6. Ensure that adequate exhaust ventilation is provided to all work areas.
7. Ensure that persons are not required to perform work alone in any area where hazardous conditions exist that would endanger their safety.

- **Fatal grams: Tire Repair,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Suspended Load

- **Safe Load Handling Best Practices**
  1. Attach taglines to loads that may require steadying or guidance while suspended.
  2. Securely block equipment against hazardous motion to ensure energy cannot be released while performing work.
  3. Never work in the fall path of objects/materials of massive weights having the potential of becoming off-balanced while in a raised position.
  4. Implement measures to ensure persons are properly positioned and protected from hazards while performing a task.
  5. Monitor personnel routinely to determine that safe work procedures are followed.
  6. Establish and discuss safe work procedures. Identify and control all hazards associated with the work to be performed along with the methods to properly protect persons.
  7. Task train all persons to recognize all potential hazardous conditions and to understand safe job procedures for elimination of the hazards before beginning work.
- **Explosives**
  1. Do not initiate a blast until it has been determined that all persons have been evacuated from the blast area.
  2. Establish and discuss safe work procedures. Identify and control all hazards associated with the work to be performed along with the methods to properly protect persons.
  3. Task train all persons to recognize all potential hazardous conditions, to ensure all persons have left the blast area, and to understand safe job procedures for elimination of the hazards before beginning work.
  4. Maintain and use all available methods of communication, such as sirens and radios, to warn persons of an impending blast. Establish methods to ensure that all persons are out of the blast area.
  5. Before firing a blast give ample warning to allow all persons to be evacuated.
  6. Guard or barricade all access routes to the blast area to prevent the passage of persons or vehicles.
  7. Verify that the blasting procedures are effective and being followed at all times.

- **Fatal grams:**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Explosives

- **STORAGE** 56.6100, 56.6101, 56.6102, 56.6130, 56.6131, 56.6132, 56.6133,
  Separation of stored explosive material. Areas around explosive material storage facilities. Magazine requirements.
- **TRANSPORTATION** 56.6200, 56.6201, 56.6202, 56.6203, 56.6204, 56.6205,
  Separation of transported explosive material. Vehicles.
- **USE** 56.6300, 56.6301, 56.6302, 56.6303, 56.6304, 56.6305, 56.6306, 56.6307, 56.6308, 56.6309, 56.6310, 56.6311, 56.6312,
  Control of blasting operations. Unused explosive material. Loading, blasting, and security. Initiation systems. Misfire waiting period. Handling of misfires.
- **ELECTRIC BLASTING** 56.6400, 56.6401, 56.6402, 56.6403, 56.6404, 56.6405, 56.6406, 56.6407,
  Firing devices. Circuit testing.
- **NONELECTRIC BLASTING** 56.6500, 56.6501, 56.6502,
  Damaged initiating material. Nonelectric initiation systems. Safety fuse.
- **EXTRANEOUS ELECTRICITY** 56.6600, 56.6601, 56.6602, 56.6603, 56.6604, 56.6605,
  Loading practices. Grounding. Static electricity dissipation during loading. Air gap. Precautions during storms. Isolation of blasting circuits.
- **EQUIPMENT/TOOLS** 56.6700, 56.6701,
  Nonsparking tools.
- **MAINTENANCE** 56.6800, 56.6801, 56.6802, 56.6803,
- Storage facilities.
- **GENERAL REQUIREMENTS** 56.6900, 56.6901, 56.6902, 56.6903, 56.6904, 56.6905,
  Damaged or deteriorated explosive material. Black powder. Excessive temperatures. Burning explosive material. Smoking and open flames. Protection of explosive material.

- **Fatal grams: 56.6302, 56.6306, 56.6407, 56.6900, 56.6905,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Fall Hazards

- **Fall Protection** 56.15005
  1. Always use fall protection when working where a fall hazard exists.
  2. Install railings or cables when persons are required to work or travel near the edge of a structure. Program Policy Letter P14-IV-02
  3. Establish and discuss safe work procedures. Before starting any work, identify and control all hazards.
  4. Train all persons to recognize and understand safe job procedures, including the proper use of fall protection.
  5. Always use fall protection with a lanyard anchored securely when working where there is a danger of falling.
  6. Examine workplaces for changing conditions when the strata, drill patterns, or other workplace conditions change.
  7. Establish policies and procedures for safely clearing hung or stuck material and ensure that persons follow those safe policies and procedures.
  8. Ensure that persons are task-trained and understand the hazards associated with the work being performed. 46.7
  9. Ensure that areas are barricaded or have warning signs posted at all approaches where hazards exist that are not immediately obvious.
  10. Consider using a "miner in distress" call feature available on many communication and tracking systems carried by miners. This feature is designed to improve emergency response if a miner working alone or out of sight of other miners requires immediate assistance.

- **Fatal grams: 56.15005**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

FIREFIGHTING PROCEDURES/ALARMS/ DRILLS

1) 56.4330 **Firefighting, evacuation, and rescue procedures.**
   (a) Mine operators shall establish emergency firefighting, evacuation, and rescue procedures. These procedures shall be coordinated in advance with available firefighting organizations.
   (b) Fire alarm procedures or systems shall be established to promptly warn every person who could be endangered by a fire.
   (c) Fire alarm systems shall be maintained in operable condition.
2) 56.4331 **Firefighting drills.**
   Emergency firefighting drills shall be held at least once every six months for persons assigned firefighting responsibilities by the mine operator.

- **Fatal grams:**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

First Aid

- **56.18010 First Aid**
  An individual capable of providing first aid shall be available on all shifts. **The individual shall be currently trained** and have the skills to perform patient assessment and artificial respiration; control bleeding; and treat shock, wounds, burns, and musculoskeletal injuries. First aid training shall be made available to all interested miners.

- **56.15001 First-aid materials.**
  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.

- **56.18012 Emergency telephone numbers.**
  Emergency telephone numbers shall be posted at appropriate telephones.

- **56.18013 Emergency communications system.**
  A suitable communication system shall be provided at the mine to obtain assistance in the event of an emergency.

- **56.18014 Emergency medical assistance and transportation.**
  Arrangements shall be made in advance for obtaining emergency medical assistance and transportation for injured persons.

- **Fatal grams: 56.18013, 56.18014,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Guarding

- **Moving Machine Parts** 56.14107
  a. Ensure guarding is in place to cover potential pinch points and moving parts in areas routinely accessed by personnel.
  b. Establish and discuss safe work procedures. Identify and control all hazards associated with the work to be performed along with the methods to properly protect persons.
  c. Always follow the equipment manufacturer's recommended maintenance procedures when conducting repairs to machinery.
  d. Task train all persons to recognize all potential hazardous conditions and understand safe job procedures to eliminate all hazards before beginning work.
  e. Before working on or near equipment, ensure that the equipment power circuits are locked out/tagged out and that the equipment is blocked against hazardous motion.
  f. Require all persons to be positioned to prevent them from being exposed to any hazards. Monitor personnel to ensure safe work procedures, including lock out/ tag out and safe work positioning, are followed.
- **Parking Procedures for unattended equipment** 56.14207, 56.14210, 56.14211, 56.14100,
  a. Block mobile equipment against motion by lowering the blade or bucket and or ripper to the ground and setting the parking brake.
  b. The wheels or tracks of mobile equipment shall be chocked or turned into a bank. Inspect equipment before placing it in operation for the shift
  c. Correct safety and operational defects on equipment in a timely manner to prevent the creation of a hazard to persons.
  d. Establish safe work procedures and identify and remove hazards before beginning a task.
  e. Prior to beginning work, ensure that persons are task-trained and understand the hazards associated with the work being performed. Know and follow safe work procedures before beginning repairs.
  f. Do not place yourself in a position that will expose you to hazards while performing a task.
- **Monitor personnel routinely to determine that safe work procedures are followed.**

- **Fatal grams: 56.14107, 56.14207, 56.14211, 56.14100,**

- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Illumination

1) **56.17001 Illumination of surface working areas.**
   Illumination sufficient to provide safe working conditions shall be provided in and on all surface structures, paths, walkways, stairways, switch panels, loading and dumping sites, and work areas.
2) **56.12034 Guarding around lights.**
   Portable extension lights, and other lights that by their location present a shock or burn hazard, shall be guarded.
3) **56.12035 Weatherproof lamp sockets.**
   Lamp sockets shall be of a weatherproof type where they are exposed to weather or wet conditions that may interfere with illumination or create a shock hazard.
4) **56.14100 Safety defects; examination, correction and records.**
   (d) Defects on self-propelled mobile equipment affecting safety, which are not corrected immediately, shall be reported to and recorded by the mine operator. The records shall be kept at the mine or nearest mine office from the date the defects are recorded, until the defects are corrected. Such records shall be made available for inspection by an authorized representative of the Secretary.
   This includes illumination of Taillights and Headlights on mobile equipment being used.

- **Fatal grams: 56.17001, 56.14100,**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

What's New

- **http://www.msha.gov**
- **Code of Federal Regulations (30 CFR)**
- **Program Information Bulletins**
- **Program Policy Letters**
- **Program Policy Manual**
- **Fatalgrams**
- **Procedure Instruction Letters**
- **Statutory and Regulatory Information**
- **GOOD GUIDANCE PRACTICES**
- **Learn to use the MSHA web page for your benefit**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Self-Rescue and Respiratory Devices
Sec.46.8 (c))

- Review when to use a respirator and what type of hazard; 56.15006,
- Review the use, care, and maintenance of respirator.
- If you have employees enrolled in a respirator protection program comply with all requirements.
- Self-Rescue for underground use 57.15030, 57.15031,

- **Fatal grams:**
- **Attendees:**

U.S. Department of Labor

Mine Safety and Health Administration
Educational Field and Small Mine Services

Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Transportation, Controls and Communication Systems
Sec.46.8 (c)

- Discuss the regulations and the company rules regarding the transportation of personnel and materials.
- Discuss company policy concerning the type and use of communication devices.
- Discuss warning and directional signs located along our haulage roads and at the mine site.

- **Fatal grams:**
- **Attendees:**