Section 2
Safety & Health Regulations

Action Items

1. Learn how to access regulations and Program Policy Manuals on MSHA’s Internet Site. Regulations on MSHA’s Internet Site contain hyperlinks which, when clicked, automatically transfer you to appropriate information in MSHA’s Program Policy Manual.

2. If you do not have the Internet, Purchase a copy of the regulations (use ordering information in this section). The little blue book, and variations thereof have excellent indexes and contain 30CFR, Part 56, the part most used by surface mine supervisors.

3. If you use a hard copy of the regulations, you may also want to order a hard copy of MSHA’s Program Policy Manual following the instructions contained here.

4. Familiarize yourself with and make sure you are in compliance with the commonly-cited regulations listed in this section.
Where to get the most up-to-date MSHA Information

**MSHA Internet Site (www.msha.gov)**
The MSHA Internet site is the best, most complete, and most up-to-date source of official MSHA information. Among other things, Safety training instructor guides and training plan kits can be downloaded from this site. There are several ways to navigate the site.

**Top Violations Cited by MSHA**
Want to know what the most common Violations Cited by MSHA? – Go to the MSHA Internet site – MSHA.gov. Currently the specific address for this information is [http://www.msha.gov/REGDATA/MSHA/0.0.HTM](http://www.msha.gov/REGDATA/MSHA/0.0.HTM)

**How to Purchase 30 CFR, MSHA Program Policy Manual and the Little Blue Book**

**To order 30 CFR**: On the Internet, go to: [http://www.access.gpo.gov/su_docs/sale.html](http://www.access.gpo.gov/su_docs/sale.html)
Click on "Sales Product Catalog" and then type "30 CFR" into the search catalog box.
If you choose not to purchase a 30 CFR, the entire contents of 30 CFR is posted at MSHA's Internet site: www.msha.gov.
You can also write to the address listed below.

Title: Code of Federal Regulations, Title 30, Mineral Resources, Pt. 700-End.
Publisher: National Archives and Records Administration, Office of the Federal Register

Mail: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954
Phone: (202) 512-1800 (7:30am - 4:30pm Eastern) FAX: (202) 512-2250

Questions or Comments: Call the GPO Order Desk at 1-202-512-1800 or fax 1-202-512-2250 between 7:30 a.m. and 4:30 p.m. eastern time, Monday through Friday, for information about other print publications or CD-ROM sales.

**To order a copy of MSHA's Program Policy Manual**, Contact the National Mine Safety and Health Academy: National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813-9426 -- Phone: 304/256-3257

**To order the Little Blue Book or a Variation Thereof**: Note that Mine Safety Associates, Price Utah 84501 puts out these small 2"x 4" pocket-sized publications. There are different versions containing different parts of the 30 CFR standards. It is suggested that you call them at 1-800-430-2377 (Fax: 801-637-8614) to ensure that you get the edition you need. Copies cost about $12 each, and there are discounts for bulk orders.

**How to Contact Us**: Call Dave Carlson 906-487-2453, or email dcarlson@mtu.edu. Download training and other materials from our Internet Site – [http://www.mine-safety.mtu.edu](http://www.mine-safety.mtu.edu).
Some Regulations of Special Interest to Supervisors of Surface Metal/Nonmetal Mines

If an MSHA inspector comes to your property for an inspection, the following is a list of regulations that will likely be included in the inspection. Remember all mine operators are required to be in compliance with all MSHA regulations that apply to their mine operation. However, the following is a good checklist to start with.

NOTE: The narrative following the regulation number in this list is an abridged version of the full regulation. It is intended to give you a general idea of what that regulation states. For the full regulation and MSHA policy, see 30 CFR and MSHA's Program Policy Manual.

ACCESS

56.11001 - Access - safe
Safe means of access shall be provided and maintained to all working places.

56.11027 - Scaffolds and working platforms
Scaffolds and working platforms shall be safe to work on and maintained in a safe condition. Good information on scaffolding construction may be obtained from OSHA regulations in CFR 29 subpart L 1926.451

56.11012 - Openings around travelways
Openings above, below, or near travelways through which persons or materials may fall -- must be protected by railings, barriers, or covers. Where it is impractical to install such protective devices, adequate warning signals must be installed.

56.11016 - Snow and ice cleanup
Regularly used walkways and travelways shall be sanded, salted, or cleared of snow and ice as soon as practicable.

56.11002 - Toeboards and handrails
Crossovers, elevated walkways, elevated ramps, and stairways shall be of substantial construction provided with handrails, and maintained in good condition. Where necessary, toeboards shall be provided. Toeboards prevent tools and materials from falling off a walkway and creating a hazard to workers below. They also help prevent workers from slipping under the guardrail.

COMPRESSED GASES

56.16005 - Compressed and liquid gas cylinders
Compressed and liquid gas cylinders shall be secured in a safe manner.

56.16006 - Compressed gas cylinders - Valves
Compressed and liquid gas cylinder valves shall be protected by covers when being transported or stored, and by a safe location when the cylinders are in use.

Cylinders shall not be stored in rooms or areas used or designated for storage of flammable or combustible liquids, including grease.
ELECTRICAL

56.12032 - Cover plates
Inspection and cover plates on electrical equipment and junction boxes must be kept on except during testing or repairs.

56.12030 - Dangerous condition, correction of
When a potentially dangerous condition is found it must be corrected before equipment or wiring is energized.

56.12004 - Electrical conductor size
Electrical conductors must be of sufficient size and load carrying capacity and also protected from mechanical damage.

56.12001 - Fuses and circuit breakers
Circuits must be protected by fuses or circuit breakers of the correct type and capacity.

56.12034 - Guarding lights
Portable extension lights and other lights that by their location present a shock or burn hazard must be guarded.

56.12025 - Grounding
All metal enclosing or encasing electrical circuits must be grounded or provided with equivalent protection. This requirement does not apply to battery-operated equipment.

56.12028 – Testing of grounding systems
Continuity and resistance of grounding systems shall be tested immediately after installation, repair, and modification, and annually thereafter. A record of the resistance measured during the most recent tests shall be made available on a request by the Secretary or his duly authorized representative.

56.12008 - Insulation on wires and fittings
Wires and cables must be insulated where they enter electrical compartments. Cables must enter metal frames through proper fittings. The holes must be bushed with insulated bushings.

56.12018 - Labeling power switches
Principal power switches must be labeled to show which units they control, unless obvious by location.

56.12035 - Lamp sockets construction
Lamp sockets must be of a weatherproof type where they are exposed to weather or wet conditions that may interfere with illumination or create a shock hazard.

56.12016 and .12017 - Lockout/Tagout
Electrically powered equipment must be de-energized before performing mechanical work. Power switches must be locked out or other measures taken. Suitable warning notices must be posted at the power switch and signed by the individuals doing the work. Locks are to be removed only by persons who installed them or authorized personnel. Power circuits shall be de-energized before work is done on such circuits unless hot-line tools are used. The individuals who are to do the work shall post suitable warning signs. Switches shall be locked out or other measures taken which shall prevent the power circuits from being energized without the
knowledge of the individuals working on them. Such locks, signs, or preventative devices shall be removed only by the person who installed them or by authorized personnel.

56.12013 - Splices, Permanent
Permanent splices and repairs made in power cables, including the ground conductor where provided, shall have the equivalent of or better conductivity, strength and insulation characteristics than the original conductor.

56.12021 - Signs, Danger
Suitable danger signs must be posted at all major electrical installations.

56.12067 - Transformer enclosures
Transformers must be totally enclosed, or placed at least 8 feet above the ground, or installed in a transformer house, or surrounded by a substantial fence at least 6 feet high and at least 3 feet from any energized parts, casings, or wiring.

56.12068 - Transformer enclosures
Transformer enclosures must be kept locked against unauthorized entry.

DUST/NOISE – See Health

EMERGENCIES

56.15001 - Emergency supplies
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
Requires posting at appropriate telephones. Note: It does little good to have emergency phone numbers if the employees are not trained to describe how emergency personnel can locate the site of the emergency.

56.18013 - Emergency communication system
Emergency communication system required at the mine to obtain assistance in the event of an emergency.

56.18014 - Emergency medical assistance and transportation
Requires arrangements be made in advance for obtaining emergency medical help and transportation for injured persons.

56.18010 - First Aid Training
Requires individual currently trained in specified topics and capable of providing first aid to be available on all shifts. First aid training must be made available to all interested miners.

56.18009 Person in charge of mine
Competent person designated by the mine operator shall be in attendance to take charge in case of an emergency.

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 the employee's safety unless the employee can communicate with others, can be heard, or can be seen.
EQUIPMENT -- MOBILE

56.14132 (a) (b) - Backup alarm requirements
a) Manually operated horns or other audible warning devices provided on self-propelled mobile equipment as a safety feature shall be maintained in functional condition.
b) (1) When the operator has an obstructed view to the rear, self-propelled mobile equipment shall have-- (i) An automatic reverse-activated signal alarm; (ii) A wheel-mounted bell alarm which sounds at least once for each three feet of reverse movement; (iii) A discriminating backup alarm that covers the area of obstructed view; or (iv) An observer to signal when it is safe to back up. (2) Alarms shall be audible above the surrounding noise level. (3) An automatic reverse-activated strobe light may be used at night in lieu of an audible reverse alarm.

56.9301 - Berms - dumping locations
Berms, bumper blocks, safety hooks, or similar impeding devices must be provided at dumping locations where there is a hazard of overtravel or overturning.

56.9300 - Berms/guardrails - roadways
Berms or guardrails of at least mid-axle height (of largest vehicle) must be provided and maintained on banks of roadways with drop-off of sufficient grade or depth to cause vehicle to overturn or endanger persons in equipment. Berms may have openings for roadway drainage. Berms are not required on infrequently traveled roads used only by service or maintenance vehicles, when all of the following exist: (1) Locked gates are installed at the entrance points to the roadway, (2) Signs are posted warning that the roadway is not bermed, (3) Delineators are installed along the perimeter of the elevated roadway so that, for both directions of travel, the reflective surfaces of at least three delineators along each elevated shoulder are always visible to the driver and spaced at intervals sufficient to indicate the edges and attitude of the roadway, (4) A maximum speed limit is posted and observed for the elevated unbermed portions of the roadway (factors to consider when establishing the maximum speed limit must include the width, slope and alignment of the road, the type of equipment using the road, the road material, and any hazardous conditions which may exist), (5) Road surface traction is not impaired by weather conditions, such as sleet and snow, unless corrective measures are taken to improve traction.

56.14101 (a) (3) - Brakes
Minimum requirements for self-propelled mobile equipment - Service brake system must be capable of stopping and holding the equipment with its typical load on the maximum grade it travels. Not applicable to equipment not originally equipped with brakes unless the manner in which the equipment is being operated requires the use of brakes for safe operation. (Not applicable to rail equipment.) (2) If equipped, parking brakes must be capable of holding the equipment with its typical load on the maximum grade it travels. (3) All braking systems must be maintained in functional condition.

56.9201 - Loading, transporting, and unloading
Loading, transporting, and unloading of equipment and supplies must not create a hazard to persons from falling or shifting equipment or supplies.

56.14207 - Parking requirements for mobile equipment
Mobile equipment shall not be left unattended unless the controls are placed in the park position and the parking brake, if provided, is set. When parked on a grade, the wheels or tracks of mobile equipment shall be either chocked or turned into a bank or rib.
56.9313 - Road cleanup
Water, debris, or spilled material on roadways, which creates hazards to the operation of mobile equipment, must be removed.

56.14130 (a) - Seat Belts and ROPs requirement and construction
Tells where and how rollover protective structures (ROPS) and seat belts must be installed, how constructed, how maintained, limitations in altering, exceptions (manufactured before 1969) etc. Wearing seat belts. The equipment operator shall wear seat belts except that when operating graders from a standing position, the grader operator shall wear safety lines and a harness in place of a seat belt. Seat belts and tethers shall meet the requirements of SAE J386, "Operator Restraint Systems for Off-Road Work Machines", 1985; or SAE J1194, "Roll-Over Protective structures (ROPS) construction - as under "Wheeled Agricultural Tractors", 1983, as applicable, which are incorporated by reference.

56.14130(i) - Seat belts maintenance
Seat belts shall be maintained in a functional condition, and replaced when necessary to assure proper performance.

56.9100 - Traffic control rules
Requires traffic control rules governing speed, right-of-way, direction of movement, and the use of headlights to assure appropriate visibility; also properly placed signs or signals that warn of hazardous conditions.

56.14103 (a) - Window construction on mobile equipment
Mobile equipment windows must be made of safety glass or material with equivalent safety characteristics. The windows must be maintained to provide visibility for safe operation.

EQUIPMENT -- STATIONARY
Detailed examples of proper guarding are illustrated in MSHA's Guarding Manual, which can be purchased by contacting National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813-9426 or Phone: 304/256-3257. The entire booklet is also available at http://www.msha.gov/.

56.14201(b) - Conveyor startup warning
When the entire length of the conveyor is not visible from the starting switch, a visible or audible startup warning is required. The conveyor must start within 30 seconds.

56.14112 (a) (b) - Guard construction
Guards must be constructed and maintained to-- (1) Withstand the vibration, shock, and wear to which they will be subjected during normal operation; and (2) not create a hazard by their use. Guards must be securely in place while machinery is being operated, except when testing or making adjustments, which cannot be performed without removal of the guard.

56.14109 - Guarding conveyors next to travelways
Unguarded conveyors next to travelways must be equipped with-- (a) Emergency stop devices which are located so that a person falling on or against the conveyor can readily deactivate the conveyor drive motor; or (b) Railings which (1) Are positioned to prevent persons from falling on or against the conveyor; (2) Will be able to withstand the vibration, shock, and wear to which they will be subjected during normal operation; and (3) Are constructed and maintained so that they will not create a hazard.

56.14110 - Guarding - flying or falling materials
In areas where flying or falling materials generated from the operation of screens, crushers, or conveyors present a hazard, guards, shields, or other devices that provide protection against such flying or falling materials shall be provided to protect persons.

**56.14107 (a) - Guarding of moving machine parts**
Moving machine parts must be guarded to protect persons from contacting gears, sprockets, chains, drive, head, tail, and take-up pulleys, flywheels, couplings, shafts, fan blades, and similar moving parts that can cause injury. Guards aren't required where the exposed moving parts are at least seven feet away from walking or working surfaces.

**56.14108 - Guarding of overhead drive belts**
Overhead drive belts must be guarded to contain the whipping action of a broken belt if that action could be hazardous to persons.

**56.14112 - Guards - securing**
Guards must be securely in place when machinery is operated.

**56.13021 - High pressure hose safety chains**
Safety chains or other suitable locking devices shall be used on high-pressure hose lines of ¾ inch inside diameter or larger.

**56.14200 - Startup alarm requirements**
Before starting crushers or moving self-propelled mobile equipment, equipment operators shall sound a warning that is audible above the surrounding noise level or use other effective means to warn all persons who could be exposed to a hazard from the equipment. The alarm is not required for conveyors where the operator has a clear view of personnel along the entire belt.

EXAMINATIONS (See RECORDS AND EXAMINATIONS here, also see “RECORD-KEEPING -- SECTION 3”)

EXPLOSIVES (See 56-6000 through 56.6502 if you use explosives)
Explosives permits that might be required: Check local, State, DOT and ATF for requirements

FIRE PREVENTION

**56.4200 (b) (1) - Fire fighting equipment**
A mine must have on-site equipment for fighting fires that could endanger persons including: (1) Equipment for fires in their early stages; (2) Equipment for fires beyond their early stages, or prior arrangements with a local fire department to fight such fires. This onsite equipment must be of the type, size, and quantity that can extinguish fires of any class which could occur as a result of the hazards present and is strategically located, readily accessible, plainly marked, and maintained in fire-ready condition.

**56.4201 (a) (1,2,3) - Fire extinguisher inspection** - records required - (monthly check for full charge and operability) and annual maintenance checks), also must meet hydrostatic testing schedule in standard.

**56.4201(a)(4) - Other fire fighting system** quarterly inspection and annual use tests.

**56.4201(a)(5) - Fire suppression system annual inspection** based on the manufacturer's specifications to determine that system remains functional. Surface fire suppression systems are
exempt from these inspection requirements if the systems are used solely for the protection of property and a fire would affect no persons.

**56.4501 - Fuel lines**
Fuel Lines must be valved for shutoff in case of fire - (doesn't pertain to self-propelled equipment).

**56.4402 - Fuel safety cans**
Small amounts of flammable liquids must be kept in properly labeled safety cans.

**56.6101 - Storage of explosives**
Explosives must be stored at least 25 feet from combustibles including dry grass except live trees 10 feet or higher. Other combustibles must not be stored or allowed to accumulate within 50 feet. Drainage of stored combustible liquids must be away from explosive material storage facilities.

**56.4601 - Storage of oxygen cylinders**
Oxygen cannot be stored in rooms or areas used or designated for storage of flammable or combustible liquids including grease. Oxygen must be separated from any fuel gas by a distance of at least 20 feet or by a 5 foot high wall with a fire resistance rating of ½ hour.

**56.4104 - Storage of waste materials**
Waste materials, including liquids, must not accumulate in quantities that could create a fire hazard. Waste or rags containing flammable or combustible liquids that could create a fire hazard must be placed in covered metal containers or equivalent.

**GROUND CONTROL**

**56.3130 Wall, bank, and slope stability.**
Mining methods shall be used that will maintain wall, bank, and slope stability in places where persons work or travel in performing their assigned tasks. When benching is necessary, the width and height shall be based on the type of equipment used for cleaning of benches or for scaling of walls, banks, and slopes.

**56.3131 - Loose or unconsolidated material slopes**
In places where persons work or travel, loose or unconsolidated material must be sloped to the angle of repose or stripped back for at least 10 feet from the top of the pit or quarry wall. Other conditions at or near the perimeter of the pit or quarry wall, which create a fall-of-material hazard to persons, must be corrected.

**56.3200 Correction of hazardous conditions. Scaling and Support**
Ground conditions that create a hazard to persons shall be taken down or supported before other work or travel is permitted in the affected area. Until corrective work is completed, the area shall be posted with a warning against entry and, when left unattended, a barrier shall be installed to impede unauthorized entry.

**56.3401 Examination of ground conditions.**
Persons experienced in examining and testing for loose ground shall be designated by the mine operator. Appropriate supervisors or other designated persons shall examine and, where applicable, test ground conditions in areas where work is to be performed prior to work commencing, after blasting, and as ground conditions warrant during the work shift. Highwalls
and banks adjoining travelways shall be examined weekly or more often if changing ground conditions warrant.

56.3430 Activity between machinery or equipment and the highwall or bank. 
Persons shall not work or travel between machinery or equipment and the highwall or bank where the machinery or equipment may hinder escape from falls or slides of the highwall or bank. Travel is permitted when necessary for persons to dismount.

56.9304 Unstable ground. 
Dumping locations shall be visually inspected prior to work commencing and as ground conditions warrant. Where there is evidence that the ground at a dumping location may fail to support the mobile equipment, loads shall be dumped a safe distance back from the edge of the unstable area of the bank.

HAZCOM

Part 47 – See More Details in Section 9 of this Handout – The HazCom (Hazard Communication or Right to Know) standard is a training and information standard. Its purpose is to ensure that workers are aware of the hazards and protective measures for the chemicals they work with or know where they can obtain such information immediately. HazCom does not restrict the use of chemicals in the workplace or set exposure limits.

The HazCom standard was implemented June 21, 2002. It became effective September 23, 2002 for mines with 6 or more employees and March 21, 2003 for mines with 5 or less employees. The mine operator must, at the minimum, have a written Hazcom program and a list of the hazardous chemicals miners are exposed to. An alphabetized notebook of MSDSs for each hazardous chemical is usually considered to be an adequate list. MSDSs can be obtained from the suppliers of the chemicals. The MSDSs must be available to the miners at all times (such as having them in a 3-ring binder in work area).

Miner’s must be trained on the contents of the company’s written Hazcom program and on the hazards and protective measures for the chemicals a miner works with (it’s very important that they know how to use an MSDS to get critical information). This training must take place before each new miner or new experienced miner goes to work or before any miner or contractor performs a new task in which he/she uses hazardous chemicals. The training need only take place once, usually in new miner, new experienced miner or task training, where training certificates indicate that the training has been completed, unless changes (new chemicals, exposures etc.) require retraining. Note – If you have not already done so, your Part 46 Plan must be revised to add HazCom to each of these types of training. Contact dcarlson@mtu.edu for assistance.

See Section 9 of this manual and also Part 47 of the standard for other requirements on labeling, etc., which are, in general, designed to ensure that all containers of hazardous chemicals are clearly marked so the miner has no question about what he/she is working with and the associated hazards. Mines must also have an MSDS for hazardous products containing, among other things, crystalline silica. These must be provided to miners and customers upon request.

56.16004 - Storage of hazardous materials
Hazardous materials shall be stored in containers of a type approved for such use by recognized agencies; such containers shall be labeled appropriately.
HEALTH

56.5001 – Employee Exposure to Airborne Contaminants
(a) Except as provided in paragraph (b) of this section, the exposure to airborne contaminants shall not exceed, on the basis of a time weighted average, the threshold limit values adopted by the American Conference of Governmental Industrial Hygienists, as set forth and explained in the 1973 edition of the Conference's publication, entitled "TLV's Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1973," pages 1 through 54 etc. (this publication may be obtained from the American Conference of Governmental industrial Hygienists by writing to the Secretary-Treasurer, P.O Box 1937, Cincinnati, Ohio 45201, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration). It is important for mine employees to be aware that once an overexposure condition is found by MSHA, the mine operator and its employees are subject to numerous requirements. These include the need to supply and use respirators, possible medical evaluations of all affected employees, respirator fit testing and training, monitoring, the need to develop effective engineering controls, additional record keeping etc. The best way to avoid these time-consuming requirements is to control employee exposure to airborne contaminants now, by the proper use of water sprays, control booths, ventilation and other means to keep employee exposure to dust to a minimum.

(b) The 8-hour time weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 2 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450 magnification (4 millimeter objective) phase contrast illumination. No employees shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers longer than 5 micrometers, per milliliter of air, as determined by the membrane filter method over a minimum sampling time of 15 minutes. "Asbestos" is a generic term for a number of hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils. Although there are many asbestos minerals, the term "asbestos" as used herein is limited to the following minerals: chrysotile, amosite, crocidolite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos. Employees shall be withdrawn from areas where there is present an airborne contaminant given a "C" designation by the Conference and the concentration exceeds the threshold limit value listed for that contaminant. MSHA will require a complete respiratory protection program (See Section 6 of this manual) where MSHA monitoring and analysis indicates that these standards cannot be met using feasible engineering and administrative controls.

56.9315 - Dust control
Dust must be controlled at muck piles, material transfer points, crushers, and on haulage roads where hazards to persons would be created as a result of impaired visibility.

62 (all Parts) – Noise Standard – See details in Section 4. The minimum requirement to comply with the Part 62 Noise standard is that the mine operator monitor (not necessarily measure) worker exposure to mine noise. Some common-sense suggestions that may minimize operator compliance cost follow:
unless the mine operator already has noise measurement data on its workers from MSHA monitoring or from other sources such as equipment manufacturer data or data from similar equipment measured elsewhere, the operator must determine employee exposure. We suggest the operator purchase a low cost ($30 to $40) slow-response sound level meter which measures noise on the A scale from 80 to 140 dBA. Use this instrument to determine what, if any, noise sources on the minesite emit noise at levels above 85 dBA. If there are none, simply keep the measurement data on file to show it to the MSHA inspector when he/she requests it. You’ve fulfilled your requirements.

However, if sources above 85 dBA are found, the operator should try to make changes that reduce these sources to levels below 85 dBA, or restrict employees from working regularly or for extended times in these areas using posted warnings and other means. If the MSHA inspector makes measurements and finds that the 8-hour average noise exposure for any miner exceeds 85 dBA, the mine will probably be cited unless the miner has been enrolled in a hearing conservation program (HCP -- requirements include training, offering hearing protection, audiometric testing etc.). The citation will probably amount to $60 for each violation, unless the miner’s 8-hour average exposure exceeds 90 dBA and the miner is not wearing hearing protection, where the violation may be considered S&S, and the fine may greatly increase.

When the operator finds sources of noise in excess of 90 dBA and there is any chance that the 8-hour average exposure of any miner exceeds 90 dBA, the operator should require that the potentially overexposed miners wear hearing protection and also meet the other requirements for those exposed over 85 dBA. When miners are exposed to 8-hour average noise in excess of 90 dBA, the mine operator must also implement feasible engineering controls or control overexposure by restricting access to the work area (posting the area or reducing hours of work in the area etc.).

Remember that the MSHA won’t cite you for noise levels regardless of how high they are -- legal limits are based on the 8-hour average miner exposure. If workshifts are longer than 8 hours the limits are reduced (for simplicity, you may think of it this way: 16 hours at 90 dBA is equal to 8 hours at 95 dBA, so if you estimate an average of 85 dBA in an 8 hour test and a miner works 16 hours at this noise level, your estimate of his exposure should be increased to an 8-hour average of 90 dBA – that is, the time a miner can be exposed is cut in half for each 5 dBA increase in the noise level).

If miners are thought to be exposed to sources in excess of 105 dBA, these miners should be required to wear double hearing protection and all 90 dBA overexposure requirements must also be met. An exposure to 105 dBA for 1 hour is equal to an exposure of 90 dBA for 8 hours (Legal Limits: 90 dBA = 8 hours, 95 = 4 hours, 100 = 2 hours, 105 = 1 hour etc.). Any additional time of exposure over 90 dBA is over the legal limit. For example, if the miner is exposed to 105 dBA for 1 hour, he cannot legally be exposed to any more noise over 90dBA for the remainder of the workday, regardless of the hearing protection used (MSHA can issue p-code exemptions when they determine that control is not feasible). No miner can ever be exposed to noise levels in excess of 115 dBA. regardless of the amount or type of hearing protection worn.

HOISTING

56.9317 - Suspended loads
Persons must stay clear of suspended loads.
HOUSEKEEPING

56.20003 - Housekeeping
At all mining operations -(a) Workplaces, passageways, storerooms, and service rooms shall be kept clean and orderly; (b) The floor of every workplace shall be maintained in a clean and, so far as possible, dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places shall be provided where practicable; and (c) Every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards, as practicable.

56.16001 - Storage of supplies
Supplies shall not be stacked or stored in a manner, which creates tripping or fall-of-material hazards.

56.20008 - Toilet facilities
Toilet facilities shall be provided at locations that are compatible with the mine operations and that are readily accessible to mine personnel. The facilities must be kept clean and sanitary. Separate toilet facilities shall be provided for each sex except where toilet rooms will be occupied by no more than one person at a time and can be locked from the inside. Toilets should be located where moving equipment does not endanger workers going to or from them.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

MSHA considers engineering controls which eliminate the hazard to be the best approach to controlling hazards. However, when a mine operator demonstrates that engineering controls are not feasible, MSHA may allow alternative solutions. The second priority for alternative control is administrative control. An example of an administrative control is removing an employee from the danger such as posting and barricading an area to prevent employees from entering it, or in the case of a health hazard, to limit the amount of time the employee can spend in the areas affected. When neither engineering nor administrative controls are feasible, MSHA may require a mine operator to use PPE. Under these conditions, PPE is viewed by MSHA to be only a temporary solution for use while suitable engineering controls are being developed. Certain PPE (head, eye, foot) are almost always required by company policy in all mine areas except offices.

56.5005 – Respiratory protection program/fit-testing See also 56.5001 under “HEALTH”
A respiratory protection program including fit testing is required if over-exposure is found during MSHA health sampling (See Section 6 concerning a respiratory protection program for silica dust). The requirement to monitor is not enforced/required by MSHA if no overexposure is found. Respirator use in an "Immediately Dangerous to Life and Health (IDLH)" atmosphere requires another person standing by with backup and rescue capability.

56.15005 - Fall protection
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. Note -- Now that full-body harnesses are available, no one should ever use a safety belt for a fall arrest system, because a belt will likely kill the worker in stopping the fall. Minimum acceptable fall arrest equipment includes: an anchor point that will support at least 5000 lbs, a shock-absorbing lanyard, and a full-body harness. The anchor point should always be at least shoulder height to limit the force on the worker when the fall is arrested and the lanyard
should be short to limit the distance and fall-arrest forces). Belts and lifelines may be suitable for fall-prevention, but not for fall-arrest systems.

56.15003 - 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. Note that rubber boots offer significant protection against electrocution during ground faults, when working around low-voltage electrically powered equipment.

56.15004 - Glasses
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.

56.15002 - Hard hats
All persons shall wear suitable hard hats when in or around a mine or plant where falling objects may create a hazard. Note that there are various types of hard hats which offer protection against different hazards.

RECORDS & EXAMINATIONS – See Table in Section 3 for a more complete list
Some of the Parts of 30 CFR requiring records and examinations are listed below along with the Standard’s requirements:

50.20 - Accident, Injury and Illness Report - MSHA Report Form 7000-1 – Requires preparation and submission (details are presented in Section 8).

56.13015(b) - Compressed Air receiver inspection - Inspected by holder of valid National Board Commission in accordance with National Board Inspection Code, a Manual for Boiler and Pressure Vessel Inspectors, 1979 -- For receivers >250psi and >15 cu ft.

56.12028 - Electrical continuity and resistance of grounding systems - record of testing and results of most recent test are required. Test must be done immediately after installation, repair, and modification; and annually (see Section 10).

56.18010 – Person trained in in Advanced first aid – see under “EMERGENCIES”.

56.4201 - Hydrostatic testing - Certifications of hydrostatic testing shall be retained until the fire extinguisher is re-tested or permanently removed from service. Some extinguishers must be hydrostatically tested (replacement may be a better option!) every 5 years and others every 12 years (see table accompanying 56.4201). Other certifications shall be retained for one year.

41.11 to 41.30 - Identity (Legal) of operator - MSHA must be notified in writing of legal identity of operator or any changes within 30 days using form 2000-7 "legal identity report".

45.4 - Independent contractor list - Requires independent contractor to provide the production-operator certain written information including identification, description of work, MSHA ID number, address of record etc. The production operator must have this information available at the mine for MSHA.
56.14100 (a) - Inspection of self-propelled mobile equipment for defects - records of inspections and certifications. - Equipment must be examined for defects by the equipment operator each shift before operating. The record listing any defects found must be kept until the defects are corrected.

56.18002(a) - Inspection of working places - Inspection of working places once each shift by competent person. (b) - Records of examination - Requires record of examination to be kept for at least a year. Part (c) of this regulation requires immediate withdrawal of persons if an imminent danger is found.

56.1000 - Notice of commencement or closing - MSHA must be notified in writing of either commencement or closing of mine. A phone call notifying MSHA is acceptable at many MSHA field offices.

56.13030 Pressure vessel inspection - Inspected by holder of valid National Board Commission in accordance with National Board Inspection Code, a Manual for Boiler and Pressure Vessel Inspectors, 1979 -- Not typically applicable to household type water heaters, etc.

50.30 - Quarterly Employment and Coal Production Report - MSHA Form 7000-2 Requires preparation and submission (See details in Section 8 of Manual).

40.1 to 40.5 - Representative of miners - How a person becomes a miner's representative and requirements of position. Mine operator must keep up-to-date information posted.

56.12028 - Testing for continuity and resistance of grounding systems - Test these systems immediately after installation, repair, and modification; and annually. Requires available record of the resistance (impedance for AC systems) measured during the most recent tests. This also applies to power cords etc. (See Section 10).

56.4201 (a) (1,2,3) - Fire extinguisher inspection - records required - (monthly check for full charge and operability) and annual maintenance checks), also must meet hydrostatic testing schedule in standard.

56.4201(a)(4) - Other fire fighting system quarterly inspection and annual use tests.

56.4201(a)(5) - Fire suppression system annual inspection based on the manufacturer's specifications to determine that system remains functional. Surface fire suppression systems are exempt from these inspection requirements if the systems are used solely for the protection of property and a fire would affect no persons.

56.4201(b) - Records of inspections and certifications of hydrostatic testing are required for fire extinguishers of the pressurized type.

TRAINING

46 & 48 (All) - Safety Training and Retraining (See Section 7 in this manual for details) A company Training Plan is required for Part 46 Training (Call Dave Carlson – 906-487-2453 for assistance in preparing your training plan). Every mine or mining contractor subject to Part 46 Training Requirements must have an approved Part 46 training plan on file. For Part 48
training, a company doesn’t need its own training plan and may train under the certified trainer’s training plan (Dave Carlson – 906-487-2453). Required training includes 8 hours of Annual Refresher Training each year, New Inexperienced Miner Training, New Experienced Miner Training, Independent Contractor Training, Site Specific Hazard Awareness Training, and New Task Training.