NATIONAL STONE, SAND & GRAVEL ASSOCIATION

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Core Principles of a Safety Program

The fundamental elements of a safety program that will help create an ideal culture in order to prevent accidents and injuries are:

- ✓ **Front Line Management Leadership and Commitment**
  - *Senior Management & CEO/Owner Commitment*
  - *Safety Director Role*
- ✓ **Training and Development**
- ✓ **Formal Auditing of All Employee Work Practices**
- ✓ **Employee Involvement & Participation**
  - ***Job Safety Analysis***
  - ***Safety Committees***
- ✓ **Incident Investigation**
- ✓ **Safety Communications**
  - *Alerts*
  - *Newsletters*
- ✓ **Regulatory Compliance Programs**
- ✓ **Operational Safety Best Practices**
- ✓ **Recognition Program**
- ✓ **Accountability System**
- ✓ **Substance Abuse Prevention Program**

The following pages will describe each of these elements and provide examples of how they can be used to achieve better safety performance at your company.

HEALTH AND SAFETY POLICY

Safety will be given primary importance in planning and operating all company activities in order to protect employees against occupational injuries and illnesses, and in order to protect the company against unnecessary financial burden and reduce efficiency. Accordingly, it is company policy to place safety and health on an equal basis with Quality, Quantity, and Cost of providing service.

All management and supervisory personnel are responsible for providing and maintaining a safe and healthy work environment and for the safe work conduct of all persons reporting or assigned to them.

All employees are responsible for their own safety, that of their fellow employees and the public. They must perform their work in a professional, safe manner and adhere to working practices and rules established for their safety.

This program has been prepared for all employees and is intended to be a reference to job safety in all company operations. It is intended to prevent accidents, which could result in property damage or injury to you, your fellow employees, the public, or our customers. Very simply, this program is a tool to assist and protect you in your work.

Our statement and general policy is:

- To provide adequate control of the health and safety risk arising from our work activities
- To consult with our employees on matters affecting their health and safety
- To provide and maintain safe work areas including plants and mobile equipment
- To insure safe handling and use of hazardous materials
- To provide information, instruction, and supervision for employees
- To ensure that all employees are competent to do their task, and give them adequate training
- To prevent accidents and cases of work related ill health
- To maintain safe and healthy working conditions; and
- To review and revise this policy as necessary at regular intervals

Company Official **Title** **Date**

Miner **Date**

- ✓ **Front Line Management Leadership and Commitment**
    - *Senior Management & CEO/Owner Commitment*
    - *Safety Director Role*

Management Leadership is the nucleus for creating a total safety culture. This "top-down" approach to safety includes being proactive through personal involvement, strategic planning, and excellent management practices. It is a mistake to undervalue the role a manager, especially an owner or CEO, can play in setting the tone regarding safety and health.

A clear commitment to safety and health must be established by the most senior official of the company and then communicated to all managers and employees. Sometimes breakdowns in communication or expectations occur within the middle-manager structure of an organization, and as a result safety performance suffers.

In addition, executives must allow employees to be actively involved in the safety process in order to develop empowerment or ownership of the program. Management commitment in combination with employee ownership can lead to an increase in employee morale, leading to reductions in both absenteeism and worker compensation costs, thereby increasing the safety performance, which ultimately can lead to an increase in production. An employee will respond to the expectations set by his/her manager; and if safety is not discussed and reviewed routinely, it could be assumed that it is not important.

The role of a safety director is an important one and should be considered even for a small operation. The safety director is really a resource to both management and to the production workforce. That person needs to ensure that employees have the training, tools, and support they need to perform their jobs safely. It is easy to get caught up in the demands of production. A safety director needs to be able to remind all employees that nothing is more important than their safety and health.

How can managers help convince employees that they are committed to safety?

Visible Involvement & Commitment

- Site visits
- Interaction with employees (feedback and follow-up)
- Follow through with policy (disciplinary issues)
- Safety concerns integrated into overall strategic planning
- Clear goals and objectives set and communicated
- Safety managed in the same manner as production and quality
- Clarify roles and responsibilities and establish expectations
- Clearly assigned safety responsibilities
- Safety director reports to president/owner
- Establish accountability

- Adequate authority given to carry out responsibilities
- Set a good example by following all safety and health rules, including use of the proper PPE

✓ **Training and Development**

Training is used to develop a worker's individual skills and competencies regarding company policy, regulations, and safe work practices. Safety training is vital in order to have confidence that your employees know and understand how to perform their jobs without putting themselves into hazardous situations or environments.

Not all hazards in our industry can be eliminated. However, through training we can educate our employees to identify potential hazards through effective risk assessment, leading to avoidance and mitigation.

MSHA's Part 46 regulation is a comprehensive guideline for employee training that must be followed.

Who should receive training?

- Executive management, operation managers and supervisors
- Craft employees
- New miners and newly hired experienced miners
- Independent contractors, subcontractors, and vendors performing work on the mine property

✓ **Formal Auditing of All Employee Work Practices**

A company must review the effectiveness of its safety program on at least an annual basis. An annual review will help clarify expectations and will compel both managers and employees to be accountable for their performance. Equally important are the monthly and quarterly reviews of accidents, trends, and observations.

Self-Evaluation Suggestions

- Record keeping requirements (e.g., MSHA Part 50)
- Industry-best benchmarks
- Work-site analysis – safety inspections/mock MSHA inspection
- Worker observation
- Statistical measurements (trending, incident rates, claims cost, etc.)

- ✓ **Employee Involvement & Participation**
  - *Job Safety Analysis/Job Task Analysis*
  - *Safety Committees*

The people most exposed to the hazards that exist in our industry may have the solutions to eliminate or mitigate them. Doesn't it make sense to get them involved? *Job Safety Analysis and Safety Committees* are two great ways to do just that. There is tremendous value in allowing your employees to become part of the solution to a safety problem. They will feel part of the process, they will own it, and as a result, they will look for other opportunities to get involved.

A *Job Safety Analysis (JSA) or Job Task Analysis (JTA)* essentially breaks down a job or task to its most fundamental components, identifying all potential hazards along the way and devising a procedure to ensure safe completion of the job. MSHA has provided a number of examples on their website (www.MSHA.gov) and even outlines how to perform a JTA. An example of a JSA for "Equipment Lockout Procedures" is provided in Attachment 1.

Safety Committees are another effective way to identify hazards and unsafe work practices, and correct them before they result in an accident or injury. A safety committee allows employees to get involved in creating solutions and taking ownership. Often a safety director may facilitate these meetings, and having the site manager or company CEO/owner attend really demonstrates the commitment to a safe work place.

- ✓ **Incident Investigation**

Following an incident, it is very important to perform an investigation so that the root causes can be identified in order to prevent similar incidents from reoccurring. An incident could be as simple as a "Near Miss" or as tragic as a fatality. The more near misses and minor incidents that can be fully investigated, the better chance you have to avoid a more serious accident or fatality. An example of a Near-Miss Incident Investigation Report is provided in Attachment 2.

As part of a thorough investigation, the following should be asked or explored:

- What happened?
- What job was being performed?
- What were the root causes and have system errors been corrected?
- Who was involved?
- Witness statements
- Tools/equipment being used
- Photos/video
- Solutions/prevention

- In severe incidents, the scene should be secured so that nothing is disturbed

✓ **Safety Communications**
  - *Alerts*
  - *Newsletters*

Safety Communications, including *Alerts* or *Newsletters*, are great ways to get the message out and to communicate with your employees. These types of items can be included with the employee's paycheck so that they are more likely to be read. Safety alerts and newsletters are also great vehicles to recognize employees or operations for their good work, be it safety related or something else. The better informed your workforce is, the better prepared they will be to complete the job safely! An example of a Safety and Health Newsletter is provided in Attachment 3.

✓ **Regulatory Compliance Programs**

Mining and processing operations are governed by numerous state and federal laws and regulations that address employee safety and health. As part of an effective safety program, it is essential that companies understand and comply with those laws and regulations. Each company should develop an effective compliance program. The following are just a few of the federal laws and regulations governing mine safety and health.

Federal Mine Safety & Health Act of 1977,
Public Law 91-173, as amended by Public Law 95-164

SEC. 2. Congress declares that--
(a) the first priority and concern of all in the coal or other mining industry must be the health and safety of its most precious resource--the miner;
(b) deaths and serious injuries from unsafe and unhealthful conditions and practices in coal or other mines cause grief and suffering to the miners and to their families;
(c) there is an urgent need to provide more effective means and measures for improving the working conditions and practices in the Nation's coal or other mines in order to prevent death and serious physical harm, and in order to prevent occupational diseases originating in such mines;
(d) the existence of unsafe and unhealthful conditions and practices in the Nation's coal or other mines is a serious impediment to the future growth of the coal or other mining industry and cannot be tolerated;
(e) the operators of such mines with the assistance of the miners have the primary responsibility to prevent the existence of such conditions and practices in such mines.

Management is responsible for the overall health and safety of our employees. However, all employees are responsible for:

- Co-operating with supervisors and management on health and safety issues
- Not interfering or impeding safeguards installed to protect safety and health
- Taking responsible care of their own safety and health
- Taking responsibility for looking out for co-workers, safe work practices
- Reporting all safety and health concerns to an appropriate manager

Legal Identity
30 CFR § 41.10
Scope.

Section 109(d) of the Federal Mine Safety and Health Act of 1977 (Pub. L. 91-173, as amended by Pub. L. 95-164), requires each operator of a coal or other mine subject to the Act to file with the Secretary of Labor the name and address of such mine, the name and address of the person who controls or operates the mine, and any revisions in such names and addresses.

Quarterly Employment Reports
30 CFR § 50.30(a)
Preparation and submission of MSHA Form 7000-2-Quarterly Employment and Coal Production Report.

Each operator of a mine in which an individual worked during any day of a calendar quarter shall complete a MSHA Form 7000-2 in accordance with the instructions and criteria in §50.30-1 and submit the original to the Denver Safety and Health Technology Center, P.O. Box 25367, Denver Federal Center, Denver, Colo. 80225, within 15 days after the end of each calendar quarter. These forms may be obtained from MSHA Metal and Nonmetal Mine Safety and Health District Offices and from MSHA Coal Mine Health and Safety Subdistrict Offices. Each operator shall retain an operator's copy at the mine office nearest the mine for 5 years after the submission date.

Continuity and Resistance Test
30 CFR § 56.12028 –
Testing 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.

Fire Fighting Equipment Examinations
30 CFR § 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) Fire extinguishers shall be hydrostatically tested according to Table C-1 or a schedule based on the manufacturer's specifications to determine the integrity of extinguishing agent vessels.

(4) Water pipes, valves, outlets, hydrants, and hoses that are part of the mine's firefighting system shall be visually inspected at least once every three months for damage or deterioration and use-tested at least once every twelve months to determine that they remain functional.

(5) Fire suppression systems shall be inspected at least once every twelve months. An inspection schedule based on the manufacturer's specifications or the equivalent shall be established for individual components of a system and followed to determine that the 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 no persons would be affected by a fire.

(b) At the completion of each inspection or test required by this standard, the person making the inspection or test shall certify that the inspection or test has been made and the date on which it was made. Certifications of hydrostatic testing shall be retained until the fire extinguisher is retested or permanently removed from service. Other certifications shall be retained for one year.

Table C-1 Hydrostatic Test Intervals for Fire Extinguishers

Extinguisher type	**Test interval (years)**

Soda Acid	5
Cartridge-Operated Water and/or Antifreeze	5
Stored-Pressure Water and/or Antifreeze	5
Wetting Agent	5
Foam	5
AFFF (Aqueous Film Forming Foam)	5
Loaded Stream	5
Dry-Chemical with Stainless Steel Shells	5
Carbon Dioxide	5
Dry-Chemical, Stored Pressure, with Mild Steel Shells, Brazed Brass Shells, Or Aluminum Shells	12
Dry-Chemical, Cartridge or Cylinder Operated, with Mild Steel Shells	12
Bromotrifluoromethane Halon 1301	12
Bromochlorodifluoromethane Halon 1211	12
Dry-Powder, Cartridge or Cylinder-Operated, with Mild Steel Shells[1]	12

[1]Except for stainless steel and steel used for compressed gas cylinders, all other steel shells are defined as "mild steel" shells.

Independent Contractors
30 CFR § 45.4
Independent contractor register.

(a) Each independent contractor shall provide the production-operator in writing the following information:

(1) The independent contractor's trade name, business address and business telephone number;

(2) A description of the nature of the work to be performed by the independent contractor and where at the mine the work is to be performed;

(3) The independent contractor's MSHA identification number, if any; and

(4) The independent contractor's address of record for service of citations, or other documents involving the independent contractor.

(b) Each production-operator shall maintain in writing at the mine the information required by paragraph (a) of this section for each independent contractor at the mine. The production-operator shall make this information available to any authorized representative of the Secretary upon request.
First Aid Training
30 CFR § 56.18010

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.

Hazard Communication (HazCom)
30 CFR § 47

- Management will inventory and record hazardous materials
- Management will ensure that a written program is kept up-to-date
- Management will secure MSDS for all materials listed and make them available to all miners at locations that are assessable on any working shift
- Management will provide and insure all hazardous materials containers are labeled for identification
- Management will ensure all miners and contractors receive training with regards to the hazardous materials they may be exposed to while on mine property
- Management will make available a copy of an MSDS sheet to miners and/or contractors

New Miner and Annual Refresher Training
30 CFR § 46

Management will ensure that quality training is provided that will comply with the Part 46 Training requirements for all miners, supervisors, and contractors who perform work activities on mine property. An example of a Part 46 Training Program is provided in Attachment 4.

Personal Protective Requirements

- *Management* will provide all personal protective equipment indicated as "Supplied by Company" on the following table; and *Employees* will provide any required items not supplied by management.
- Employees are responsible for wearing and using personal protective equipment at all times when required.

Protective Gear	Required or recommended	For Whom	When	Supplied by Company	
				Yes	No
Safety Shoes	Required	All Workers	All Times		
Safety Glasses	Required	All Workers	All Times		
Hard Hat	Required	All Workers	All Times		
Snug-fitting clothing	Required	All Workers	All Times		
Protective Gloves	Required	All Workers	When needed		
Electrician's gloves	Required	All Workers	When handling electrical cables		
Hearing Protection	Required	All Workers	When noise levels exceed 85dBA		
Respirators	Required	All Workers	When dust, gas, or fumes exceed allowable limits		

Immediate Notification.
30 CFR § 50.10

- Employees are required to report all accidents or illness to management as soon as possible after the occurrence.
- Management will contact MSHA of accidents requiring immediate notification.
- Management will investigate all accidents and complete accident reports required by this policy and Part 50, CFR.
- Management with the assistance of the employees will, after review of the findings, initiate policies and procedures to prevent recurrence.

Emergency Procedures

- Management is responsible for providing and maintaining fire protection equipment
- Employees are responsible for checking fire protection in their work areas and equipment and reporting to management when corrective actions are needed.
- The emergency phone number to call for fires is 911.

Safety and Health Audit

Attachment 5 contains a safety and health audit for aggregate operators, which is focused on the twenty most cited MSHA standards. These standards account for approximately 60% of the citations issued at aggregate mining operations.

✓ **Operational Safety Best Practices**

Many times your employees may have developed a safer or more efficient way to do their job, while at the same time other companies or operations may struggle to find a better way. Many companies routinely encourage their operations to share *Best Practices* as a means of identifying the safest *or* best way to perform a task. This often requires "thinking outside the box". More than ever before, we are under great pressure to produce more, in a shorter period of time, and at a lower cost. Sharing of best practices allows us to meet these pressures SAFELY. Examples of best practices used in identifying safe operating procedures for chute hazards, manual cleaning of conveyor pulleys, and conveyor startups are provided in Attachment 6.

A recent publication identified the following six best safety and health management practices:

- *Operational integration* – safety is integrated into all facility operations and processes.

- *Motivational programs* – programs are in place to encourage employees to recommend safety improvements and implement them. Companies employ various types of recognition and rewards in such programs, ranging from management commendation to financial rewards.

- *Behavioral observation/feedback* – a specific program is in place for employees to provide constructive/supportive feedback to co-workers on their safety behavior and opportunities for improvement.

- *Safety committee* – an effective safety committee with broad-based participation has been established and meets regularly to discuss goals/performance/progress on initiatives.

- *Case management* – company works closely with medical professionals to evaluate occupational injuries and illnesses, to ensure that prompt medical treatment is provided, and to coordinate efforts to return recovering employees to their own jobs or alternative assignments as soon as practicable.

- *Safety survey* – periodic employee surveys or focus group safety discussions are conducted to assess opportunities for improvement and corrective/preventive action to address needs.

Driving Toward "0": Best Practices in Corporate Safety and Health

[1]

✓ **Recognition Program**

[1] Meredith Armstrong Whiting and Charles J. Bennett, PhD, *Driving Toward "0": Best Practices in Corporate Safety and Health,* The Conference Board, www.conference-board.org, 2003

Recognition programs should be considered when building a safety program and culture. People like to be recognized for doing things the right way or better than expected, and sometimes either one-on-one or public recognition means more to an employee than a financial reward.

There are two schools of thought regarding incentives or rewards for working safely. One side might argue that employees should not be paid extra or rewarded for performing their job safely; after all that is what they are expected to do. The other approach is that sometimes an incentive might be needed to get employees more focused on safety or to raise awareness.

Which view is best? It depends on your culture and your corporate philosophy, but the value of recognition should not be undervalued, and sometimes it is as easy as saying "thank you".

Not everyone is motivated in the same way; constant criticism or a negative approach may wear thin after a while. Positive reinforcement and coaching can be better alternatives and should be tried first, especially with new and inexperienced employees.

- ✓ **Accountability System**

Accountability is a key component in building a safety program, and part of setting clear expectations regarding safety and health, includes consequences for not following the rules. Safety rules, policies, and procedures must be clearly communicated to all employees and expectations must be set for each level of management, as well as the production employees.

When a rule is violated, even if no harm results, it must be addressed in a serious fashion; violations cannot be ignored. If ignored, it sends the message to the employee that it's acceptable to violate rules as long as there was not an accident or injury. This is precisely the reason why it is important not only to discipline, but also to reinforce positive behavior and safe acts. Employees must understand and believe that accidents and injuries are unacceptable, and the old cliché of "accidents just happen" does not have a place within your culture.

When issuing discipline, often a progressive program is best:

- Verbal warning
- Written warning
- Time off without pay
- Termination

If the violation is serious enough, you might consider termination immediately. Again, many factors play into discipline, including your culture and philosophy, union issues, etc.

- ✓ **Substance Abuse Prevention Program**

A healthy workforce is a safe one; employees under the influence of drugs or alcohol are not safe and could injure themselves or others around them. *Substance Abuse* testing should be considered. Most corporate programs include some or all of the following:

- Pre-employment
- Random
- Post Accident
- Reasonable Suspicion

Some states do not allow random testing, although most experts agree that random testing is the most effective means of detecting problems.

So what happens when an employee tests positive for drugs and/or alcohol? There are two options, immediate dismissal or second chance based on mandatory counseling and future testing. Most companies that have substance abuse testing programs do not allow anything more than a second chance.

If you decide that a second chance opportunity will be offered to employees, then an employee assistance program (EAP) should be considered. EAPs usually offer counseling for substance abuse and help employees deal with other issues that could preoccupy people to the point they are not able to concentrate on their jobs. For instance, marital problems or issues with a child or parent.

An example of a Substance Abuse Policy and Program is provided in Attachment 7. Because workforce substance laws vary among states, you should consult the laws in your respective state to ensure that your program is in compliance.

In our industry, a mental lapse can be deadly, and again, a healthy employee is a safe employee – mind and body.

CORE SAFETY PRINCIPLES OF A SAFETY PROGRAM

This product was developed as part of the MSHA Alliance Program. It does not necessarily reflect the official views of MSHA. Use of the Alliance Program logo is reserved for MSHA and its active Alliance partners. The MSHA Alliance Program is to promote miner safety and health through voluntary partnerships, which provide training and education, outreach, technical assistance, and a national dialog on mine safety and health. For more information, contact MSHA at (202) 693-9899 or http://www.msha.gov/alliances/alliances.htm.

The National Stone, Sand and Gravel Association ("NSSGA") is a nonprofit trade association, tax exempt under Section 501(c)(6) of the Internal Revenue Code, and dedicated to meeting the needs of the aggregates industry. NSSGA conducts education and training, and publishes related materials, in a variety of areas including worker safety and communications. This document entitled *Core Safety Principles of a Safety Program* was developed in conjunction with MSHA and is intended to provide information about the subject to those in the industry and other interested parties.

In the stone, sand, and gravel industry, safety and health are governed primarily by the Mine Safety and Health Act and related state and federal laws and regulations. While the Core Safety Principles highlight some of those safety laws and regulations, it is not intended to serve as a comprehensive guide to regulatory compliance. Nothing in the document is intended as an interpretation of any law or regulation. Laws and regulations may change over time.

The information contained in this document is based on currently available data and is intended to be factually accurate, but further research or developments may change the current state of knowledge or best practices in the industry. The information in this document does not represent the official policy or position of NSSGA, MSHA, or any other organization or governmental entity, but simply provides information to users to enable them to enhance their safety program. This document is not intended to be an industry standard of care or to represent an NSSGA or MSHA endorsement. It is merely one approach that NSSGA members and others in the industry might want to consider when formulating and developing an effective and appropriate safety program. Only each company and its safety managers are in a position to establish an appropriate program for the company or for any particular property. Each company should determine the laws and regulations applicable to its operations, and develop appropriate compliance measures. The Core Safety Principles may serve as one component of those compliance measures.

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NATIONAL STONE, SAND & GRAVEL ASSOCIATION

Natural building blocks for quality of life

Alliance

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NSSGA-MSHA Alliance

Core Principles of a Safety Program

Attachment 1

SAND, GRAVEL, AND CRUSHED STONE ON-THE-JOB TRAINING MODULES

Module 8 – "Equipment Lockout Procedures"

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ON-THE-JOB TRAINING
FOR THE
SAND, GRAVEL, AND CRUSHED STONE INDUSTRY

EQUIPMENT LOCKOUT PROCEDURES

This module describes the basic job steps, potential hazards and accidents, and the recommended safe job procedures to follow prior to performing equipment repair or maintenance.

Numerous injuries and deaths result from someone starting machinery which another worker has stopped in order to make repairs or adjustments. The assigned worker may be in a dangerous position when the equipment starts unexpectedly. The precaution of switching off power and locking out the electrical switch control handle will prevent someone from starting the equipment. A good rule is to always cut off, lockout, and tag power whenever guards or covers must be removed from electrically powered equipment, or when work must be done on,

or near, moving parts or bare conductors.

If the electrical controls that supply power to the equipment are not properly designed or maintained, a worker can be burned or shocked while locking out the equipment. It is, therefore, necessary to wear gloves and rubber soled boots, and/or to stand on a rubber mat or dry board when operating disconnect switches. It is also wise to stand to the side - not directly in front - of the switch box, in case the cover comes off because of a loose fastener, or in case it flies off because of a short circuit.

Loaded equipment, or equipment with unbalanced drives, may have a tendency to turn without power. This danger may not become apparent until the worker has begun working within, or under, the moving parts of the equipment. The worker may be caught in the moving parts and injured when the equipment moves to a balanced position. Blocking of moving parts is required when any possibility exists of non-powered movement. To block equipment against motion, a block of wood, an iron bar, or other appropriate item is placed in a manner that prevents parts from moving far enough to cause injury. Some equipment is manufactured with provisions for blocking equipment motion. Manufacturer's recommendations must be followed. Workers must be alert to always remove the block before removing the lock-out, in order to prevent damaging the machine at start-up.

Personnel may occasionally have to perform tests that require energized circuits and machinery motion. Such work must be done only when absolutely necessary, and then only by properly trained and qualified persons, using appropriate tools and protective equipment.

The following safe job procedures will help to minimize incidents which adversely affect production and cause injuries:

REQUIRED AND/OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:

HARD HAT, STEEL-TOED BOOTS WITH RUBBER SOLES, GLOVES, SAFETY GLASSES OR GOGGLES

SEQUENCE OF BASIC JOB STEPS	POTENTIAL ACCIDENTS OR HAZARDS	RECOMMENDED SAFE JOB PROCEDURES
1. Lock out equipment that is electrically powered.	1. A) Someone may start equipment during repairs or adjustments.	1. A) Tell supervisor that repair has begun.
	B) Arcing at disconnect may cause burns on hands or face if equipment is “on” when disconnected.	B) Move control to stop the equipment.
	C) Electrocution by contact with interior of box, or any part which may have become “hot” because of wear, damage, or poor maintenance.	C) Stand on non-conductive mat. Move disconnect.
	D) Someone may find key, if it is lying around, and start equipment during repairs or adjustments.	D) Place key to lock in your pocket, or on key ring on your belt. Do not give your key to another worker.
	E) Someone may decide to remove (cut) the lock if reason is not given.	E) Fill out the maintenance tag, which should include date and time of attachment, description

SEQUENCE OF BASIC JOB STEPS	POTENTIAL ACCIDENTS OR HAZARDS	RECOMMENDED SAFE JOB PROCEDURES
		of work, and signature.
	F) Wrong disconnect locked out.	F) Return to equipment and engage the start control to be sure there is no power to equipment.
	G) During repairs and adjustments, workers may contact energized wires with auxiliary equipment.	G) Determine whether there are other sources of electrical power supplying lights, motors, ventilation fans, etc.
2. Physically block equipment against motion.	2. A) Mechanical hazard if movement due to gravity load, or faulty disconnect or circuit breaker.	2. A) Follow manufacturer's recommendations for blocking equipment.
3. Restore power after repairs are completed.	3. A) Equipment damaged if restarted without restoring auxiliary services.	A) Remove locks and tags from auxiliary power and restore auxiliary services.
	B) Equipment damage if equipment is started without removing blocks.	B) Remove blocks.
	C) Mechanical hazard.	C) Notify supervisor that repairs are complete. After making sure no one is in hazardous position, and sounding alarm, if applicable, remove locks and tags, and restore main power.

GENERAL INFORMATION

This module is part of an Instruction Guide that was developed to assist the sand, gravel, and crushed stone industry in conducting effective on-the-job training (OJT) of new employees, or employees reassigned to different jobs. The use of training materials, such as this module, is an important part of an effective, systematic, OJT program.

This Instruction Guide uses a generic Job Safety Analysis (JSA) of jobs common to the industry. The JSA format facilitates uniform basic training in safe job procedures, while requiring only a minimum of time and effort on the part of the trainer. This material is generic to the industry; therefore, each company using this guide will need to tailor the material somewhat to fit their particular requirements. In some cases, the material must be general in nature, and will not include specific details of procedures or equipment that must be taught by the trainer.

Recommendations for an overall OJT program are contained in the Mine Safety and Health Administration (MSHA) guide: “Structuring Effective On-The-Job Training Programs”

TRAINING RECOMMENDATIONS

On-the-job training is usually best done by the employee’s immediate supervisor. If the supervisor relies on another employee to do certain parts of the training, the supervisor should be present to monitor the training. OJT is conducted at the actual job site, where the work will be done.

The supervisor/trainer should use the training materials (this module, or other materials) while the training is being done, to help ensure that all job steps are covered, and that no important safety precautions are omitted. Effective OJT should begin with an explanation (lecture and/or discussion) of the safe job procedure. The explanation should be followed by a hands-on demonstration of the proper job procedure. A good demonstration is, perhaps, the most important part of OJT. The demonstration is followed by supervised practice, during which the supervisor/trainer coaches (corrects and encourages) the employee, and evaluates when the employee is ready to do the job without direct supervision.

The first step - explaining the job to the employee - can be done in different ways. The supervisor/trainer and the employee can sit down and go through the training materials together. It may be advantageous to provide the employee with a copy of the training modules that are applicable to his/her job. The fact that most of the training is conducted at the job site does not preclude the use of a classroom, or a quiet office, for the first part of the training. Any general theory, or knowledge training, as well as the initial explanation of the job procedure, may be best done in an office/classroom setting; especially when noise levels, or other conditions at the job site, make communication difficult. A complete series of job steps could be presented through the use of slides developed at the mining operation.

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Attachment 2

NEAR-MISS INCIDENT INVESTIGATION REPORT
(1:10:30:600)

- 10 minor injuries take place for every single major injury;
- for every major injury, there are 30 incidents in which there is eqt./property damage;
- and 600 incidents that nearly produced a loss

DATE	TIME	JOB # or PLANT #	LOCATION
2/13/04	11.20am	Bridgeville Secondary	Bridgeville

NAME OF EMPLOYEE(S) WHO REPORTED THE NEAR-MISS

[Name]

WHAT HAPPENED?

DESCRIPTION OF INCIDENT: (attach additional sheet if necessary)

Cutting piece of 5/8 steel on the sawhorse, piece came off landing on steel toe boots, ripped the rawhide off the side of boot and put a hole in it

WHY DID THE INCIDENT OCCUR/ WHAT CAUSED THE INCIDENT

Sawhorse was resting on snow and ice; heat and sparks melted the snow and ice, causing the sawhorse to shift

ANY CONTRIBUTING FACTORS?

Ice and snow build-up

WHAT CORRECTIVE ACTIONS WERE TAKEN RIGHT AFTER NEAR-MISS?

Placed sawhorse on clean ground

HOW DO WE PREVENT THIS INCIDENT FROM OCCURRING AGAIN?

Better maintenance of the work place

Attachment 2 - A

SAFETY ALERT – NEAR MISS REPORT

On Wednesday, October 6th, at approximately 3:45 PM, an employee at our [Name] quarry narrowly avoided a severe or fatal injury. [Employee names] were all working on replacing a screen on the top level of the tower, the old screen was removed, and XXXX left the deck and began descending the stairs.

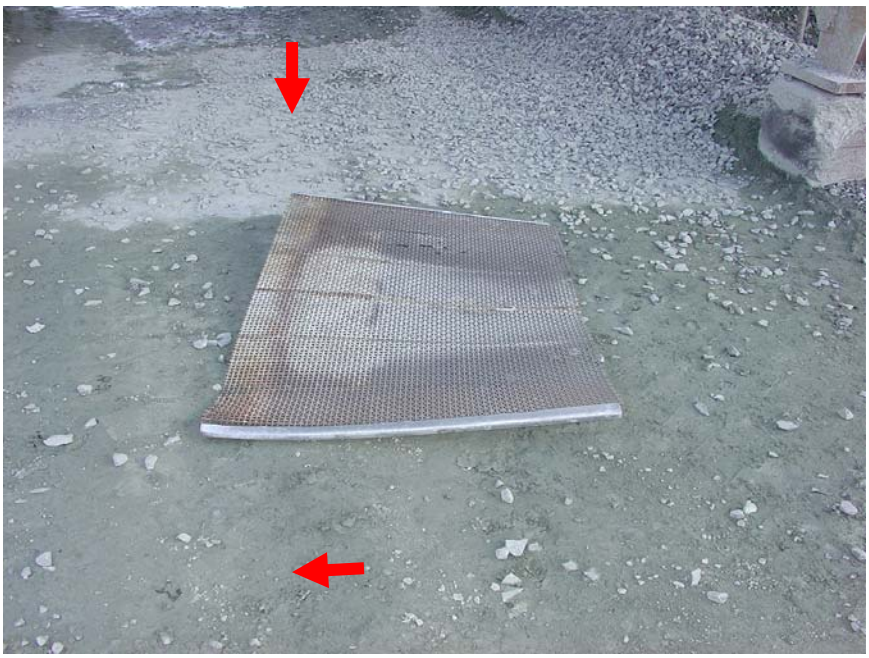
XXXX and XXXX yelled to clear the area and then both of them threw the screen over the railing to the ground below. They did not realize that XXXX was directly below them on the ground; the screen grazed his left shoulder, hit the ground and then kicked back at him, striking his neck & head.

XXXX was ambulanced to [Hospital name and location] and was released at approximately 6:00 PM with only contusions to his shoulder and neck. XXXX was released to full duty following an exam this morning at OHS.

The investigation revealed that typically this kind of maintenance is performed on a weekend while the plant is not in operation. Because the secondary crusher was down, the screen replacement took place as well, however the noise associated with the crusher repair, as well as the other tower, apparently prevented XXXX from hearing the warning to keep clear.

- If screens cannot be lowered to the ground mechanically, we must ensure that no one is on the ground near where the screen will be dropped. The area should be roped off and danger signs should be posted.

- A spotter will be used in this operation moving forward; radio communication is recommended.



Approximately 80 lbs.

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Attachment 3

SAFETY & HEALTH

[Name]
Director of Safety, Health, & Risk Management

[Name]
Health Services Coordinator

[Name]
Administrative Assistant

Volume 1, Issue 1

May 2004

Performance Leadership & Safety

Performance Leadership or PL for short, continues to be one of our main safety initiatives moving forward.

Again, the PL team, comprised of a cross section, representing all our operations, worked hard over the off-season to finalize last year's projects as well as identify new projects and opportunities.

The initial three-point contact project resulted in improved access on our ready mix trucks, as well as a greater awareness for drivers and operators while getting in and out of trucks and equipment.

We also have seen a reduction in slips and falls associated with trucks and equipment, which was the ultimate goal of the project.

Beginning in 2004, the team has formed into three distinct groups representing the three main businesses: quarry/asphalt, construction, & ready mixed concrete. Each group will focus on eliminating or minimizing the risks that are unique to their operations. The following projects have been identified:

- Quarry/Asphalt: Lockout/tagout
- Construction: Backing trucks w/ spotter
- Ready Mixed Concrete: Filling water tanks/spillage

One of the main PL goals for 2004 is to get more employees involved in the process. We encourage all our foremen and managers to incorporate PL into their weekly safety meetings.

It can be as easy as identifying a risk and then looking for ways to eliminate or mitigate the frequency the risk occurs, the likelihood, and/or the severity.

How do we eliminate or mitigate our risks? Ask those closest to the risk...our employees. Thank you for your efforts and cooperation.

Special points of interest:

- *In 2002, there were 1,181 work zone fatalities; 4 out of 5 were motorists.*
- *There have been 8 MSHA fatalities attributed to surface mining operations YTD.*
- *The XXXX Division is ranked XX out of XX divisions, for its safety performance YTD.*

Inside this issue:

President's Note	*2*
Camera Systems	*2*
Eye Protection	*2*
Sign Safety Pledge	*3*
AED's	*3*
Near Miss Reporting	*4*
Sun Protection	*4*

"Stay Out-Stay Alive"

Each year, dozens of children and adults are injured or killed in recreational accidents on mine property. Consequently, MSHA launched the "Stay Out–Stay Alive" (SOSA) national public awareness campaign.

Now in its sixth year, SOSA's primary goal is to warn people about the dangers of exploring active and abandoned mine sites. The campaign is a partnership of more than 70 federal and state agencies, private organizations, businesses and individuals. For its part, MSHA staff carries the safety message to thousands of schools and youth groups around the country.

Some of the existing hazards include:

- Hidden underground shafts that can be hundreds of feet deep
- Rotting timbers and unstable rock formations
- Lethal concentrations of deadly gases
- Unused or misfired explosions that can detonate
- Water-filled quarries with deceptively deep water and steep, slippery walls

A Note From the President...

With the 2004 construction year now upon us and many of you returning after seasonal layoff, I would like to take this opportunity to thank each and every one of you for your efforts this past year. We have a dedicated, committed and loyal workforce second to none in the industry. You are, without doubt, our most important asset. You decide whether the pavements we place, the products we produce and the services we provide meet or exceed our customers' expectations.

Respecting the fact that there is always room for improvement, we identified a need to equip our management team with a new skill set to promote a more productive and respectful work environment. During the spring months, all our key managers, myself inclusive, participated in an intensive training and development program. The program presented by XXXX, benefited us as participants by "1) reinforcing our knowledge of good supervision practices; 2) improving our listening and communication skills; 3) helping us deliver clear, motivational and corrective feedback; 4) teaching us to sustain performance through coaching; 5) improving our confidence when handling difficult situations and 6) assisting us to inspire employees in achieving their personal best". I hope, as a result of this training, you have already recognized a change in your manager's attitude and behavior. Change is always difficult so please be patient as your manager tries these newly acquired skills.

Another key focus for management this year is "scheduling". Poor planning and scheduling has repercussions across all our operations placing undue pressures on all of us. Excessive overtime and consecutive weeks worked without a day off comes at too high a cost to you and your families and it is my commitment and senior management's commitment to find another way! Night work, an ever increasing reality each season, is not going away either, so we need to explore new approaches that result in a fair and equitable outcome for everyone.

In the meantime, until I have an opportunity to communicate with you again, have a safe, productive, enjoyable and rewarding season.

No More Blind Spots

XXXX continues to add camera systems to its fleet of vehicles and mobile equipment. Nearly all the front end discharge ready mixed concrete trucks have cameras and those that do not will by the end of the year. The most recent installment, was on a XXXX triaxle dump truck #XXXX assigned to XXXX. So far so good, XXXX & XXXX report they are pleased with the field of vision and the installation process.

The cameras have dramatically reduced the backing incidents so commonly associated with the front discharge mixers used by XXXX. XXXX, President of XXXX, recently commented, "I believe the successful turn around in limiting backing incidents at XXXX can be attributed to driver training and the installation of the camera systems in our front discharge trucks. The cameras not only make the drivers aware of objects behind them when they are backing on job sites, but also help them have full view of what is behind them when traveling on the roads. Something that a front or rear discharge driver never had before."

> *"The cameras not only make the drivers aware of objects behind them when they are backing on job sites, but also help them have full view of what is behind them when traveling on the roads. Something that a front or rear discharge driver never had before." XXXX*

We will continue to equip vehicles & equipment where it makes sense to help eliminate backing accidents.

Protect Your Eyes With the Right PPE

In 2002, close to 100,000 people were treated in U.S. hospital emergency rooms for eye injuries related to the workplace.

According to the U.S. Bureau of Labor statistics, as many as 2,000 workers incur eye injuries related to their jobs.

In our industry, primary protection, including safety glasses or goggles, are sometimes not enough.

Welding, chipping, grinding and other similar tasks will require secondary protection, including welding helmets or face shields.

Eye injuries can be prevented, please take the time to select the most appropriate protection and wear it while performing your job.

We will do our best to accommodate special needs and requests. Our XXXX facility maintains a variety of PPE, including glasses and goggles and our plants do the same.

Your vision is precious, don't take the chance of losing it just because you did not bother to wear the best eye protection.

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Sign Safety Pledge

On February 11, 2003, Assistant Secretary of Labor, Dave Lauriski and Joy Wilson, President and CEO, of the National Stone, Sand & Gravel Association signed the first formal Alliance between MSHA and industry.

As a result, a Safety Pledge was outlined by both parties, encouraging NSSGA member companies and all industry companies to work toward reducing employee injuries.

The Pledge states, "Our first milestone in this process will be to reduce the MSHA injury incident rate 50 percent by the end of 2007, with continuous improvement thereafter."

XXXX was one of the first top materials producers to sign the pledge in 2003. At this point, a total of 171 NSSGA producer members have signed the safety pledge, representing more than 50% of its U.S. producer members, and all of the Association's top 15 producers.

In addition to the safety pledge, the Alliance has begun to look at ways to help producers, especially the smaller ones enhance their safety programs. A data mining task force reviewed over 12,000 injuries reported to MSHA, identified accident trends and made recommendations.

1. Analyze all maintenance jobs for potential hazards; plan and properly supervise them to identify the best safety practices.

2. Analyze the data for injuries involving the operation of mobile equipment. Why? To identify trends regarding operator experience, training, equipment age and condition, types of injury incidents and specific operator tasks involved.

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U.S. Department of Labor
Mine Safety and Health Administration

Alliance formed February 11, 2003

3. Other activities were identified as injury contributors, and should be looked at to identify trends and develop intervention strategies:
- handling supplies and materials
- climbing on/off equipment and machines
- walking/running.

4. The MSHA/NSSGA Alliance should work together to identify the critical tasks, jobs and work activities that are involved in injury incidents and health risks.

The alliance will be establishing teams to analyze these jobs to identify the knowledge, skills, information, procedures and tools that are needed to perform them correctly. Teams should design effective training programs and intervention strategies.

5. . The Alliance should emphasize the importance of "*Preventing All injury incidents*".

•While fatals are never acceptable, more focus must be placed on preventing injuries.

•The Alliance should identify and focus on what causes the most serious injury incidents.

•But, also recognize that dramatic improvements can be made in injury prevention by paying more attention to proper use of hand tools (knives, hammers and wrenches) and the proper use of PPE (gloves, safety glasses, etc.).

6. Conduct further analysis of occupational illness data for trends and prevention strategies.

Introducing AED's

XXXX is putting into place a Heart Safe Workplace program. The aim of the program is to make early defibrillation immediately available in cardiac emergencies.

Sudden cardiac arrest can happen anywhere, anytime. It is usually caused by an electrical malfunction that makes the heart quiver ineffectively. CPR is a temporary measure that helps maintain blood flow to the brain, but most times it is not enough. Defibrillation is a pulse of electricity and the only treatment to restore the heart's normal rhythm. It must be delivered quickly.

Because every minute counts when sudden cardiac arrest strikes,

AED located in the lobby of the main office

XXXX is placing AEDs (automated external defibrillators) in key locations around the workplace. We are also providing training to employees who are part of an emergency response team.

Every one of us at XXXX can make a lifesaving difference in a medical emergency by immediately calling for help when a co-worker needs it. This vital step will quickly send trained responders to the scene.

Our company feels that this is one of many ways to make our workplace safer and healthier for all of our XXXX *family*.

Near Miss Reporting: An Important Part of the Safety Process

How would you like to prevent employee injuries and accidents before they happen?

How? Not possible?

Just by communicating an incident, we might have the chance to prevent a similar occurrence that might hurt someone the next time it happens.

As part of our emphasis on safety & Performance Leadership, we are encouraging all of our employees and managers to begin documenting and reporting near miss incidents.

What is a near miss?

All Near Miss incidents are accidents waiting to happen, they could happen to **you or one of your co-workers !** A Near Miss is an event that would have resulted in an injury or accident if the circumstances were slightly different.

If we regularly report near misses, then it is more likely that we will avoid accidents. If the problem is not reported, it will not go away.

THERE IS NO BLAME ASSOCIATED WITH NEAR MISSES, YOU COULD BE DOING A FRIEND A FAVOR.

Who reports a near miss ?

You do, just see your supervisor, ask for a near miss form and fill it in. The report will be forwarded to the safety department and the PL team in order to review and identify a possible solution.

Near Misses are pure luck, we want to take luck out of the safety formula, and better control our exposures to risk and hazards in the work environment.

Near Misses occur all the time, let's start learning from them to make CII a safer place to work!

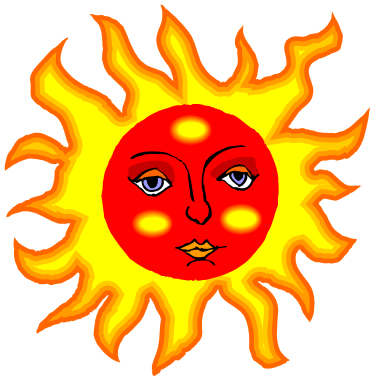
Thank you.

PREVENTING SKIN CANCER THIS SUMMER

The sun is tempting with its warm, lulling rays and energy that gives plants life. But the sun is anything but safe, it's the main cause of skin cancer, which in its worst forms can lead to death. According to the American Cancer Society, about 80% of skin cancer could be prevented by protecting your skin from the sun. Does this mean that we can never go outside again? Of course not, it means that we have to get sun smart!

Dos And Don'ts To Prevent Skin Cancer:
Do:

- Make sure to wear sunscreen every day with a SPF of 15 or higher. Reapply sunscreen every two hours, even on cloudy days. Cover up with hats and shirts.



- Examine skin regularly, scanning your entire body from head to toe. Keep babies under six months in the shade at all times.

Don't:

- Go to tanning booths or use sunlamps.
- Ignore moles that fit into the ABCD rule

Learning Your ABCDs

Often skin cancer occurs in moles. Study your moles for signs of:

- Asymmetry
- Border changes
- Color changes
- Diameter changes

Contact your physician if you notice any of these symptoms.

Are You At Risk For Getting Skin Cancer?

- Are you fair-skinned, with a tendency to freckle or burn?
- Do you have blonde or red hair; blue or gray eyes?
- Are you male?
- Do you have a family history of skin cancer?
- Do you work outdoors?
- Have you had excessive exposure to UV light without protection?
-

All of these factors contribute to the most common of cancers, skin cancer. Almost one million cases of skin cancer occur in this country every year, and it's most common in the groups mentioned above. Fair-skinned people have a 20 times greater risk; men are 2-3 times more likely; and Caucasians have greater risk than any other ethnic group. If you are at risk, you should get your skin screened by a dermatologist or your physician. Or contact the American Cancer Society at (800) ACS-2345 or visit www.cancer.org.

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Attachment 4

Part 46 Training Plan Guide

Mine Safety and Health Administration

The purpose of this document is to assist you (mine operator and independent contractor) in developing a Part 46 training plan. This document was also designed to help you determine if your plan contains the minimum information required by the rule to be considered an approved plan. This document should not be considered as the final word in what is required to be considered an approved plan. The rule allows for other acceptable formats which you could utilize to be in compliance. We have identified in this document the most frequently found variations that are considered acceptable.

Part 46 Requirements

Section 46.3 requires you to develop and implement a written training plan that includes programs for:

- new miners (§46.5),
- newly hired experienced miners (§46.6),
- new tasks (§46.7),
- annual refresher (§46.8), and
- site-specific hazard awareness training (§46.11) - - (Independent contractors do not need to include (§46.11) in their training plan).

Plans that include the minimum information specified in the rule, as outlined below, are considered approved and are not required to be submitted to us for formal review and approval. This document follows the five sections specified in the regulation that require information which must be included in a training plan if it is to be considered approved.

Part 46.3(b) provides that a training plan is considered approved by MSHA if it contains—

> (1) The name of the production-operator or independent contractor, mine name(s), and MSHA mine identification number(s) or independent contractor identification number(s);
>
> (2) The name and position of the person designated by the production-operator or independent contractor who is responsible for the health and safety training at the mine. This person may be the production-operator or independent contractor;
>
> (3) A general description of the teaching methods and the course materials that are to be used in each training program, including the subject areas to be covered and the approximate time to be spent on each subject area;
>
> (4) A list of the persons and/or organizations who will provide the training, and the subject areas in which each person and/or organization is competent to instruct; and
>
> (5) The evaluation procedures used to determine the effectiveness of training.

Plans that do not contain the minimum information required by the rule must be submitted to one of the Regional Managers for Educational Field Services for approval (*see page 10*).

Part 46 requires that you post or provide the training plan to the miners and allow them an opportunity to comment on your proposed plan. Make sure to review the specific requirements in Sections 46.3(c) through 46.3(h).

Also, remember that you must make available at the mine a copy of the current training plan for inspection by us and for examination by miners and their representatives. If the training plan is not kept at the mine, you must be able to provide the plan within one business day upon request.

Q. How long is "one business day"?

A. If we request that you produce a training plan for examination on Tuesday at 1:00 p.m., the deadline for producing the plan would be 1:00 p.m. on Wednesday. If we request that an operator produce a plan at 2:00 p.m. on Friday at a mine that does not operate over the weekend, the deadline for producing the plan would be 2:00 p.m. on Monday.

Minimum Requirements for Training Plans

1. The name of the production-operator or independent contractor, mine name(s), and MSHA mine identification number(s) or independent contractor identification number(s)

The name of the production-operator or independent contractor, mine name(s)

A plan must identify the name of the production-operator and mine name(s) or independent contractor. The name on the plan is acceptable as long as it can identify the actual name of the production-operator or independent contractor.

For example, if the Legal Identity names a company/mine as "Big Sand Incorporated," it is acceptable if the plan lists the name as:

Big Sand,
Big Sand No. 1, or
Big Sand No. 1 Mine.

Also, some production-operators use the same name for their company and mine name. Mine name only becomes important when there is more than one mine listed on a training plan. If there is only one mine, there is no need to identify the production-operator and mine name separately.

Mine ID number

The Mine ID number is always required to be listed on a production-operator's training plan.

A production-operator can list more than one Mine ID number on a training plan. For each mine identification number listed on a training plan, there needs to be a corresponding mine name.

Q. The regulation specifically says that an independent contractor must list the MSHA identification number on the training plan (46.3(b)(1). As an independent contractor, do I need to have an MSHA independent contractor number in order to have an approved training plan?

A. No. We do not require an independent contractor to get an MSHA identification number for purposes of Part 46. However, if you wish to obtain an MSHA identification number, please contact the MSHA district office in your area, or to file online go to the MSHA Internet Home Page WWW.MSHA.gov and click on the tab titled "Forms & On-line Filings."

2. The name and position of the person designated by the production-operator or independent contractor who is responsible for the health and safety training at the mine.

This does not need to be the same person listed on the Legal Identify Report in Block 12 (Person at Mine in Charge of Health and Safety) or Block 14 (Person with Overall Responsibility for Health and Safety program at All of the Operator's Mines).

The person responsible for health and safety training at the mine, for purposes of Part 46, is any person the production-operator or independent contractor chooses who has the responsibility and authority to verify and certify that the training was effective and done in accordance with the training plan and the regulations.

Q. Can more than one person be designated by the operator in the training plan as responsible for health and safety training at the mine?

A. Yes. We recognize that some operators, particularly those that operate large facilities, may want the flexibility of having more than one person who can certify that training has been given under § 46.3(b)(5). There is nothing in the Part 46 regulations that would prevent an operator from giving this responsibility to more than one person.

3. A general description of the teaching methods and the course materials that are to be used in each training program, including the subject areas to be covered and the approximate time to be spent on each subject area

Description of teaching methods and course materials

Description of teaching methods and course materials can be listed by individual subject, or for the entire plan. The rule requires that the plan include a general description of the teaching methods and the course materials that are to be used in each part or portion of the training plan. If you are using the same teaching methods and course materials for all programs, you do not need to describe each individually, but may state that these methods and materials will be used for all programs.

At a minimum, one teaching method and course material must be listed for each subject, where teaching methods and course materials are listed for each subject in a plan.

A training plan can indicate by listing multiple teaching methods and course materials by using the word "may" before the list. As an example, teaching methods may include lecture and discussion, visual aids, equipment operator manuals and walk-around training.

New Miner

The training plan must include the nine mandatory subjects as listed in Sections 46.5(b) & (c). The seven subjects listed in Section 46.5(b) need to total at least four hours.

The total time spent on all the subjects listed under Section 46.5 must total at least 24 hours.

Newly Hired Experienced Miner

> There may be instances where two or more subjects have been developed as one training course. This is acceptable; however, the plan must identify approximate times for each of the combined subjects.
>
> **Example**: A training plan may combine into one course:
>
> **Section 46.5 (b)(5)**, *Instruction on the statutory rights of miners and their representatives under the Act*,
>
> and
>
> **Section 46.5 (b)(6)**, *A review and description of the line of authority of supervisors and miners' representatives and the responsibilities of such supervisors and miners' representatives.*
>
> The training plan must list approximate times for both (b)5 and (b)6.

The training plan must include the eight mandatory subjects as listed in Section 46.6 (b) & (c). While there is no minimum requirement of time for Newly Hired Experienced Miner Training, the training plan must list the approximate time or range of time to be spent on each of the mandatory subject areas.

New Task Training

The training plan must include:

- ➔ each task,
- ➔ teaching methods to be used,
- ➔ training materials, and
- ➔ evaluation procedures.

Plans may list each task with corresponding teaching methods, training materials and evaluation procedures. A plan may also group a number of tasks together with a general listing of teaching methods, training materials and evaluation procedures.

Remember, the plan must also identify the competent person(s) that will conduct the task training and the approximate time to be spent on each task (see discussion of competent persons on page 8).

Annual Refresher Training

Each training plan under annual refresher training must list as a subject: "Instruction on changes at the mine that could adversely affect the miner's health or safety." In addition, the plan must address other health and safety subjects that are relevant to the mining operations at the particular mine. To help you develop your training plan, in the rule under annual refresher training, we have listed a number of recommended health and safety subjects that you can choose from. You may also pick subjects that are not listed.

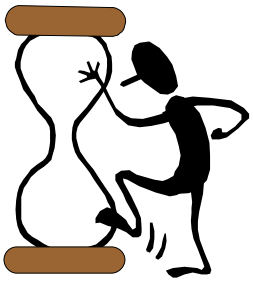
Site-Specific Hazard Awareness Training

Site-specific hazard awareness training addresses the needs of miners and other persons who are on mine property. The same site-specific hazard awareness training program can be used to train both miners and non-miners.

Q. What options do I have in delivering site-specific hazard awareness training?

A. Part 46 provides that site-specific hazard awareness training may be provided through the use of written hazard warnings, oral instruction, signs and posted warnings, walkaround training, or other appropriate means that alert affected persons to site-specific hazards at the mine. Part 46 allows you the flexibility to tailor your hazard awareness training to the specific conditions and practices at your mine. In many cases, an effective site-specific hazard awareness training program will include a combination of different types of training. The training must be sufficient to alert affected persons to site-specific hazards.

Approximate time to be spent on each subject (Time)



For each subject listed on the training plan, including task training, there must be a time listed. Time can be expressed in a number of ways including: approximate time, or range of time per each subject in the plan.

Time can be stated in various ways such as the following:

- ☑ 1 hour
- ☑ Approximately 2 hours
- ☑ 15 minutes to 2 hours

The following are not acceptable:

- ☒ 0 to 2 hours
- ☒ Until adequately trained
- ☒ As needed
- ☒ To be determined

Exact and **approximate** times for new miner and annual refresher must be equal to or exceed the number of hours required by the regulation.

Where a range of time is provided for each subject, the **maximum** time listed on the training plan must be equal to or exceed the required hours for new miner and annual refresher as required by the regulation.

Remember: In all cases a miner must receive no less than 24 hours of new miner training and 8 hours of annual refresher training annually.

Note: A training plan can list several tasks and state an approximate time or range of time for all tasks listed.

Q. Section 46.3(b)(3) requires that the training plan indicate the subject areas to be covered in the training and the approximate time to be spent on each subject area. What does "approximate time" mean?

A. "**Approximate time**" means the operator's reasonable estimate of the amount of time that will be spent on a particular subject.

For example, the training plan could indicate that the course will last over a specified range of time, such as from one to two hours. The plan could also indicate that training in a particular subject may last "approximately 3 hours," recognizing that when the training is actually given it may require more or less time than is indicated in the training plan. This flexibility allows for adjustments based on changing mine conditions or operations, including the needs and experience of the individuals who receive the training.

4. A list of the persons and/or organizations who will provide the training and the subject areas in which each person and/or organization is competent to instruct

Competent persons can be listed to conduct training for the entire training plan, each individual program, or for each subject. **As a reminder**, administrative codes, such as IS, AI and TD, that are used to code instructor approvals for Part 48 cannot be used for Part 46.

Example of all

Example of individual programs

Example of specific subjects

Examples of correct listings:

Mike Smith	All
Marsha Davis	New miner training Experienced miner training
Joe Marks	Instruction on the statutory rights of miners and their representatives under the Act An introduction to your rules and procedures for reporting hazards Front End Loader

Some operators utilize state grantees or contract trainers to provide mine training. If you list these trainers as providing training in <u>all subject</u> areas, check to make sure that these trainers are competent to provide all aspects of the training. Areas where these types of instructors may typically not be considered competent to provide training include subjects specific to your safety rules or mine site (mine specific) and task training portions of the training.

Examples of mine-specific could be part of the following types of training:

- ⇨ New miner training (§46.5(b))
- ⇨ Newly hired experienced miner training (§46.6(b))
- ⇨ Changes at the mine site in annual refresher training (§46.8(b))
- ⇨ Site-specific hazard awareness training (§46.11)
- ⇨ New task training (§46.7)

5. The evaluation procedures used to determine the effectiveness of training

The method of evaluating training may be identified in a general statement for the plan, for each individual program, or each subject.

Some examples of evaluation procedures are (but not limited to):

- on the job observation/performance/demonstration
- oral feedback
- written test
- discussion

A training plan can list multiple evaluation procedures by using the word "may" before the list. As an example:

Evaluation methods <u>may</u> include one or more of the following: oral response, written tests, or demonstration and observation.

Additional information including an online Part 46 training plan which can be completed interactively through our Web Page and the Part 46 Compliance Guide can be found at the MSHA homepage: WWW.MSHA.GOV.

Click on: TRAINING MAKES A DIFFERENCE PART 46 TRAINING just below the MSHA logo.

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Core Principles of a Safety Program

Attachment 5

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

Any effective safety plan has to include a method for checking safety and health precautions and compliance on a systematic basis. Audits are one way for accomplishing this goal. A good audit will establish a baseline from which you can begin to evaluate your operation and make changes to improve safety and health. Attached is an example of a safety audit for you to use to check safety and health conditions at your operation.

This safety audit is focused on the most common violations found at aggregate operations. Twenty condition/practices accounted for a majority of all violations cited at Sand and Gravel and Crushed Stone Mining Operations in 2004. Completing this self-audit package is an important part of a safety program, which will help you identify and correct unsafe conditions/practices at your mining operation. The 20 most frequently cited standards are listed on the charts on the next pages. These charts are broken down into the 20 most frequently cited standards for sand and gravel, surface stone and stone mill operations.

Remember this is a focused audit that only lists the most common violations occurring at aggregate operations.

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

SAND AND GRAVEL 01/01/2004 – 12/31/2004
(20 MOST FREQUENTLY CITED STANDARDS)

Standard Title	Number of Violations	Percent	Standard	Page Number in Audit
Guarding of Moving Machine Parts	2,988	13.3%	56.14107(a)	8
Horns and Backup Alarms	1,377	6.1%	56.14132(a)	8
Safety Defects	1,234	4.5%	56.14100(b)	8
Electrical Conductors	829	3.7%	56.12004	6
Preparation and Submission of MSHA Report Form 7000 – 2 Quarterly Employment and Coal Production Report	662	3.0%	50.30(a)	6
Parking Brakes	642	2.9%	56.14101(a)(2)	8
Berms or Guardrails	609	2.7%	56.9300(a)	6
Guard Construction	565	2.5%	56.14112(b)	8
Inspection and Cover Plates	515	2.3%	56.12032	7
Insulation and Fittings for Power Wires and Cables	514	2.3%	56.12008	7
Testing Grounding Systems	496	2.2%	56.12028	7
Safe Access	477	2.1%	56.11001	6
Housekeeping	407	1.8%	56.20003(a)	10
Handrails and Toe Boards	388	1.7%	56.11002	7
Warning Signs	336	1.5%	56.4101	6
Inspection	299	1.3%	56.4201(a)(2)	10
First Aid	283	1.3%	57.18010	9
Workplace Safety Records	282	1.3%	56.18002(b)	9
Correction of Dangerous Conditions	251	1.1%	56.12030	7
Requirement for container labels	246	1.1%	47.41(a)	5

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

SURFACE STONE 01/01/2004 – 12/31/2004
(20 MOST FREQUENTLY CITED STANDARDS)

Standard Title	Number of Violations	Percent	Standard	Page Number in Audit
Guarding of Moving Machine Parts	1768	10.1%	56.14107(a)	8
Horns and Backup Alarms	1240	7.1%	56.14132(a)	8
Safety Defects	1015	5.8%	56.14100(b)	8
Housekeeping	567	3.2%	56.20003(a)	10
Electrical Conductors	540	3.1%	56.12004	6
Parking Brakes	538	3.1%	56.14101(a)(2)	8
Guard Construction	486	2.8%	56.14112(b)	8
Berms or Guardrails	450	2.6%	56.9300(a)	6
Safe Access	435	2.5%	56.11001	6
Inspection and Cover Plates	425	2.4%	56.12032	7
Insulation and Fittings for Power Wires and Cables	419	2.4%	56.12008	7
Testing Grounding Systems	290	1.6%	56.12028	7
Handrails and Toe Boards	282	1.6%	56.11002	7
Preparation and Submission of MSHA Report Form 7000 – 2 Quarterly Employment and Coal Production Report	271	1.5%	50.30(a)	6
Correction of Dangerous Conditions	243	1.4%	56.12030	7
Exposure limits for airborne contaminants	222	1.3%	56.5001(a) / 56.5005	11
Warning Signs	220	1.3%	56.4101	6
Requirement for container labels.	197	1.1%	47.41(a)	5
Permissible Exposure Level	175	1.0%	62.130(a)	11
First Aid	168	1.0%	56.18010	9

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

MILLS – STONE 01/01/2004 – 12/31/2004
(20 MOST FREQUENTLY CITED STANDARDS)

Standard Title	Number of Violations	Percent	Standard	Page Number in Audit
House Keeping	385	8.5%	56.20003(a)	10
Guarding of Moving Machine Parts	326	7.2%	56.14107(a)	8
Inspection and Cover Plates	309	6.9%	56.12032	7
Safety Defects	254	5.6%	56.14100(b)	8
Electrical Conductors	224	5.0%	56.12004	6
Guard Construction	204	4.5%	56.14112(b)	8
Safe Access	143	3.2%	56.11001	6
Horns and Backup Alarms	114	2.5%	56.14132(a)	8
Correction of Dangerous Conditions	103	2.3%	56.12030	7
Insulation and Fittings for Power Wires and Cables	84	1.9%	56.12008	7
Illumination of surface working areas	66	1.5%	56.17001	9
Protection for openings around travel ways	64	1.4%	56.11012	7
Handrails and Toe Boards	64	1.4%	56.11002	7
Housekeeping	63	1.4%	56.20003	10
High – Pressure Hose Connections	62	1.4%	56.13021	8
Parking Brakes	61	1.4%	56.14101(a)(2)	8
Construction and Maintenance of Guards	59	1.3%	56.14112(a)(1)	8
Grounding Circuit Enclosures	59	1.3%	56.12025	7
Identification of power switches	57	1.3%	56.12018	7
Securing Gas Cylinders	55	1.2%	56.16005	9

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

DIRECTIONS FOR USING THE SELF AUDIT

This safety audit consists of descriptions of safety and health standards for aggregated operations. The first column consists of the description of the regulation with questions (second column) that correspond to that regulation. In some cases only one question may be necessary, in others several questions may be necessary for the description.

Responses should fall into three categories, (YES) (NO) and (N/A). If you answer (YES) generally no further action is necessary.

A (**NO**) response generally will require further action and an explanation of the defective condition/location/practice. If you answer (**NO**) to any question, further action will be necessary and you should complete the column (Corrective Action) and indicate action taken or flag this area for corrective action. In order to make this audit a positive vehicle for improving safety at your mining operation, any (**NO**) answer should include a corrective date entry (the last column on the audit).

Check (**N/A**) if the description is not applicable to your operation.

DESCRIPTION		YES	NO	N/A	CORRECTIVE ACTION NEEDED	STANDARD	DATE RESOLVED
HAZARD COMMUNICATION (HAZCOM)							
Requirement for container labels	The operator must ensure that each container of a hazardous chemical has a label. If a container is tagged or marked with the appropriate information, it is labeled.					47.41(a)	
REPORTING OF ACCIDENTS, INJURIES, AND ILLNESSES							
Preparation and Submission of MSHA Report Form 7000-1	Is Form 7000-1 (Mine Accident, Injury, and Illness Report) completed and submitted to MSHA within ten working days after an accident or occupational injury occurs or an occupational illness is diagnosed?					50.20	

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

QUARTERLY EMPLOYMENT AND COAL PRODUCTION REPORT							
Preparation and Submission of MSHA Form 7000-2	Is Form 7000-2 (Quarterly Employment and Coal Production Report) completed and submitted to the Office of Injury and Employment Information in Denver, Colorado within 15 days after the end of each quarter?					50.30(a)	
PROCEDURES							
Notification of Commencement of Operations and Closing of Mines	Is MSHA and Metal/Nonmetal Mine Safety and Health District office notified before starting operations?					56.1000	
	Is MSHA and Metal/Nonmetal Mine Safety and Health District office notified when a mine is closed?						
PROHIBITIONS/PRECAUTIONS/HOUSEKEEPING							
Warning Signs	Are readily visible signs prohibiting smoking and open flames posted where a fire or explosion hazard exists?					56.4101	
SAFETY DEVICES, PROVISIONS, AND PROCEDURES FOR ROADWAYS, RAILROADS, LOADING, AND DUMPING SITES							
Berms or Guardrails	Are adequate berms or guardrails provided and maintained on the outer banks of elevated roadways?					56.9300(a)	
TRAVELWAYS							
Safe Access	Is safe means of access provided and maintained to all working places (includes access to service equipment)?					56.11001	

Protection for openings around travelways	Openings above, below, or near travelways through which persons or materials may fall shall be protected by railings, barriers, or covers. Where it is impractical to install such protective devices, adequate warning signals shall be installed.					56.11012	
Handrails and Toe Boards	Are substantially constructed handrails provided and maintained on crossovers, elevated walkways, elevated ramps, and stairways?					56.11002	
	Are toe boards provided where necessary?						
				ELECTRICITY			
Electrical Conductors	Are electrical conductors (power cables) protected from mechanical damage?					56.12004	
	Are the electrical conductors sufficient in size and current carrying capacity to prevent overheating or damage to the insulating cover?						
Insulation and Fittings for Power Wires and Cable Entrance	Are the power wires and cables adequately insulated where they pass into or out of electrical compartments?					56.12008	
	Are cables entering metal frames of motors, splice boxes, and electrical compartments, through proper fittings and bushings?						
Identification of power switches	Principal power switches shall be labeled to show which units they control, unless identification can be made readily by location					56.12018	
Circuit Enclosure Grounding	Are all metal enclosing or metal encased electrical circuits grounded or provided with equivalent protection?					56.12025	
Testing Grounding Systems	Are grounding systems tested immediately after installation, repair, or modification, and annually thereafter?					56.12028	
	Is a record of the most recent test available for inspection?						
Correction of Dangerous Conditions	Are potentially dangerous electrical conditions corrected before the equipment or wiring is energized?					56.12030	
Inspection and Cover Plates	Are inspection and cover plates on electrical equipment and junction boxes?					56.12032	
Guarding Around Lights	Are guards used where portable extension lights and other lights that by their location, present a shock or burn hazard?					56.12034	

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

COMPRESSED AIR AND BOILERS							
High Pressure Hose Connections	Are safety chains or other suitable locking devices used at connections to machines of high pressure hose lines of 3/4" inside diameter or larger where a connection failure would create a hazard?					56.13021	
MACHINERY AND EQUIPMENT							
Safety Defects, Examination, Correction, and Records	Are defects that affect safety corrected in a timely manner?					56.14100(b)	
Brakes	Is self propelled mobile equipment equipped with a service brake system capable of stopping and holding the equipment with its typical load on the maximum grade it travels? (Does not apply to rail equipment)					56.14101(a)(2)	
	Are parking brakes capable of holding self propelled mobile equipment with its typical load on the maximum grade?						
	Are all braking systems on self propelled mobile equipment installed and maintained in functional condition?						
Moving Machine Parts	Are adequate guards provided 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?					56.14107 56.14107(a)	
Construction and Maintenance of Guards	Are guards securely in place when equipment is operating?					56.14112(a)(1) (2), and (b)	
	Are guards constructed to withstand vibration, shock, and wear to which they will be subjected to during normal operation?						
Horns and Backup Alarms	Are manually operated horns or other audible warning devices provided on self propelled mobile equipment?					56.14132 56.14132(a)	
	Does self propelled mobile equipment have automatic reverse activated signal alarm?						

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

PERSONAL PROTECTION							
Safety Belts and Lines	Do persons wear safety belts and lines where there is a danger of falling?					56.15005	
	Are approved safety belts and safety lines readily available?						
	Does a second person tend a lifeline when bins, tank, or other dangerous areas are entered?						
MATERIALS STORAGE AND HANDLING							
Securing Gas Cylinders	Are compressed and liquid gas cylinders secured in a safe manner?					56.16005	
Protection of Gas Cylinder Valves	Are valves on compressed gas cylinders protected by covers when being transported or stored?					56.16006	
	Are cylinders placed in a safe location when in use?						
Examination of Working Places (Workplace Safety Record)	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					56.18002(b)	
ILLUMINATION							
Illumination of surface working areas.	Is illumination sufficient to provide safe working conditions in and on all surface structures, paths, walkways, stairways, switch panels, loading and dumping sites, and work areas.					56.17001	
SAFETY PROGRAMS							
First Aid	Is an individual capable of providing first aid available on all shifts?					56.18010	
	Is first aid training made available to all interested miners?						

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

Housekeeping	Are workplaces, passageways, storerooms, and service rooms kept clean and orderly?					56.20003(a) 56.20003(b)	
	Are floors of every workplace maintained in a clean and dry condition?						
	Is every floor, working place, and passageway kept free from protruding nails, splinters, holes, or loose boards?						
FIREFIGHTING EQUIPMENT							
Inspection	Firefighting equipment shall be inspected according to the following schedules:					56.4201(a) (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.						
	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.						

SAFETY AND HEALTH AUDIT FOR AGGREGATE OPERATORS SURFACE METAL/NONMETAL
2004 MOST FREQUENTLY CITED STANDARDS

AIR QUALITY AND PHYSICIAL AGENTS							
Exposure limits for airborne contaminants	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, which are hereby incorporated by reference and made a part hereof. 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. Excursions above the listed thresholds shall not be of a greater magnitude than is characterized as permissible by the Conference					56.5001(a)/ 56.5005	
OCCUPATIONAL NOISE EXPOSURE							
Action Level	If during any work shift a miner's noise exposure equals or exceeds the action level, is the miner enrolled in a hearing conservation program?0					62.120	
Permissible Exposure Level	If during any work shift a miner's noise exposure exceeds the permissible exposure level, are all feasible engineering and administrative controls to reduce the noise exposure used?					62.130(a)	

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Attachment 6

AGGREGATE OPERATIONS SAFETY BEST PRACTICES

RECOMMENDED SAFE OPERATING PROCEDURES

3. CHUTE HAZARDS (56.9310)

a) Persons attempting to free chute hang-ups shall be experienced and familiar with the task, know the hazards involved, and use the proper tools to free material.

The installation and use of a Hydraulic Rock Breaker eliminates the unsafe practice of employees entering down into the jaw crusher or onto the grizzly feeder to remove clogged or wedged material.

The old method of removing wedged rock was time consuming (one-hour or more) and at best, marginally safe. It required an employee to enter the jaw area in order to wrap a cable around the rock to facilitate removal by a loader or crane.

Utilizing the breaker eliminates the need for employees to enter the jaw or grizzly area and, therefore, eliminates the risk of serious injury when employees entered the jaw or grizzly area to work around unstable or bridged material.

Eliminates the need to "sledge-hammer" out material stuck in the grizzly feeder.

AGGREGATE OPERATIONS SAFETY BEST PRACTICES

RECOMMENDED SAFE OPERATING PROCEDURES

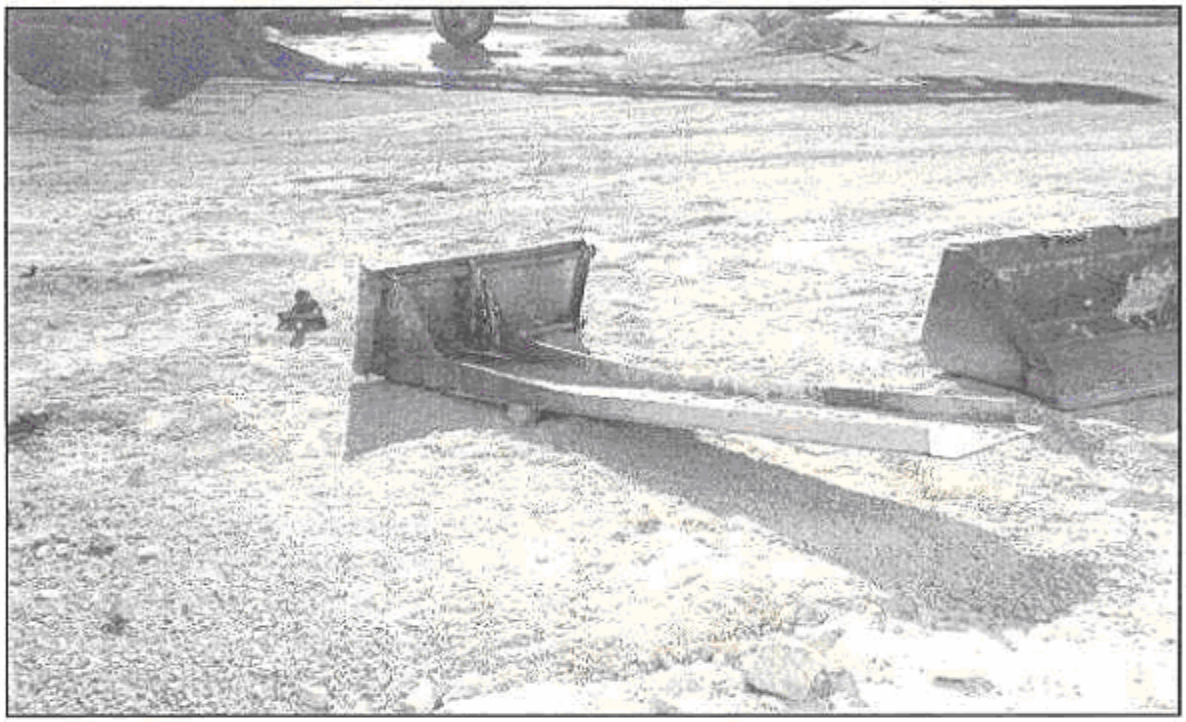
2. MANUAL CLEANING OF CONVEYOR PULLEYS (56.14202)

(a) Pulleys of conveyors shall not be cleaned manually while the conveyor is in motion.

At , over the years it has become apparent that the development of safer more efficient means to clean-up spillage under and around conveyors and tail-pulleys was desirable versus the old manual method (hand shoveling). Eliminating the hazards associated with manual clean-up, e.g., back injuries, possible contact with moving machine parts, slips and falls due to ground conditions, and exposure to noise, dust, and inclement weather, was paramount.

Research and development progressed to design a bucket type attachment for a Bobcat or Skid Steer. The modified bucket allows the operator to clean under and around all areas of a crushing spread in a matter of minutes rather than hours. There is no need for additional ground personnel and greater safety is provided.

The design allows for the bucket to be easily and quickly attached and removed with minimal effort or manpower.



The design permits the bucket to be set into various positions (left, middle, right) which enables greater accessibility to difficult to reach parts of the crushing spread.

AGGREGATE OPERATIONS SAFETY BEST PRACTICES

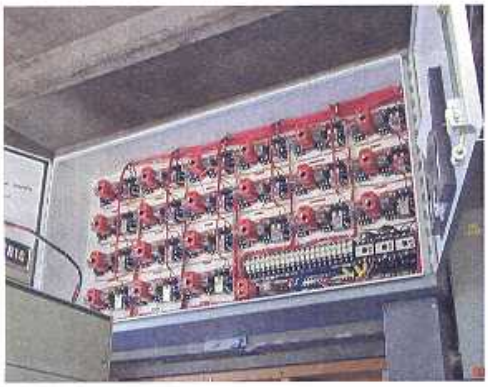
RECOMMENDED SAFE OPERATING PROCEDURES

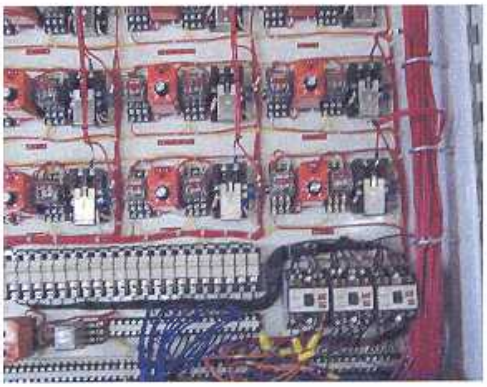
1. CONVEYOR START-UP WARNINGS (56.14201)

(a) When the entire length of a conveyor is visible from the starting switch, the operator shall visually check to make certain that all persons are in the clear before starting the conveyor.

(b) When the entire length of the conveyor is not visible from the starting switch, a system which provides visible or audible warning shall be installed and operated to warn persons that the conveyor will be started. Within 30 seconds after the warning is given, the conveyor shall be started or a second warning shall be given.

AUTOMATIC CONVEYOR START-UP WARNING SYSTEM:





An automatic conveyor start-up warning system was installed in , quarry and mill consists of the following equipment:

Crushers	Screens
4265 AC (primary)	8 x 24 double deck primary scalper (AC)
1084 AC	8 x 20 double deck scalper (AC)
5-1/2' Symons	2 – 8 x 24 triple deck re-crush screens (AC)
HP400 Nordberg	2 – 7 x 16 double deck dust screens (AC)
4' Symons	5 – 7 x 16 single deck final screens (AC)
2 – 460 AC	

25 conveyor belts ranging in width from 24 inches to 60 inches.

The cost of installing the automatic warning system in this plant was approximately $11,000.00. A total of approximately 340 man-hours were spent designing and installing the system. The majority of the equipment used in the installation was Cutler & Hammer or NCC electrical equipment. An Edwards audible siren model #5520 with a decibel rating of 114dba at 10 feet produces the audible warning. The difficulty level of this project was low considering that all electrical power and equipment in this quarry passes through one main building referred to as the switch-house.

The automatic conveyor start-up warning system was designed, fabricated and installed for three reasons:

1. The safety of employees.
2. To comply with MSHA regulation.
3. To eliminate human error.

HOW THE SYSTEM WORKS:

When the plant operator presses the starting switch of any conveyor it activates a small control relay that is tied into the overload heater blocks of the main motor starter. At this time the control relay closes which activates a timer and sounds the audible warning siren for approximately 20 to 25 seconds. Upon completion of the timed sequence a third relay pulls in the main motor starter and the conveyor starts within 30 seconds of the audible warning being given. If for any reason the conveyor does not start within that 30 seconds the system automatically shuts down and the operator has to manually restart that particular conveyor. A dedicated display panel tells the operator which units have been safely activated.

An added feature of this system is the "Timed Shutdown" which would be used in the event of a plugged chute or plant malfunction. It enables the plant operator to freeze vital conveyors, screens and feeds throughout the plant in a timed sequence. The timed sequence allows the chutes and crushers to clear before de-energization, thereby eliminating product contamination, ground spillage and belt overloading; all with the push of one button. Restart can be accomplished efficiently and safely after the problem is resolved.

The last feature of this system is the "Emergency Stop" which when activated with the push of one button instantaneously de-energizes all electrical equipment within the plant. The emergency stop feature provides the ability to shutdown immediately in the event of an emergency and also is beneficial when it comes to lockout/tagout.

RESOURCES:

1.
2. www.msha.gov, Conveyor related Fatalities, Numerous instances where the operator was cited for failure to provide an audible start-up warning (5/16/96,2/7/97(underground))

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Attachment 7

AN EXAMPLE OF A SUBSTANCE ABUSE POLICY AND PROGRAM

I. CORPORATE STATEMENT AND OBJECTIVES

***INSERT COMPANY NAME* has instituted the following *Substance Abuse Policy* in an effort to create a drug-free workplace and provide a safe working environment for all employees, other contractors, customers, vendors, invitees, and the general public. Further, it is our intent to provide delivery of a quality product to all customers and clients, both public and private, and to protect the well being of our employees, company property, the property of others, as well as the reputation of *INSERT COMPANY NAME*. This will be achieved by complying with the legal or contractual obligations of our clients, customers, and/or individual State or Federal substance abuse legislation.**

***INSERRT COMPANY NAME* will provide a confidential and comprehensive Employee Assistance Program (EAP) for those employees that seek assistance as a result of alcohol/substance dependency or abuse problems. For those employees that take the initiative to help themselves, through the Employee Assistance Program, *INSERT COMPANY NAME* will provide the opportunity for continued employment. Strict observance of all rules and guidelines of the following program is mandatory for all employees of *INSERT COMPANY NAME*.**

Employees of all customers, vendors, suppliers, subcontractors and regulatory agents will be required to observe all sections of this policy. Those found in violation will be removed from the job-site and notification will be given to the individual's employer. These individuals will not be allowed access to *INSERT COMPANY NAME* projects until proof of fitness is presented by his/her employer.

Annual receipt and acknowledgment of the *Policy* is a condition of employment with *INSERT COMPANY NAME*. The *Policy* is to be accepted and observed by all employees of each of the *INSERT COMPANY NAME* companies.

COMPANY NAME urges you to keep yourself and the work place free of any excesses and abuses that may and would render the work place an unsafe place in which to work.

Read this *Policy* thoroughly and carefully in order to become familiar with all its aspects and intended meanings.

II. SCOPE OF POLICY

This proactive policy shall be in effect and enforced at all times as follows:

1. **In all buildings owned, rented or leased by *INSERT COMPANY NAME*;**
2. **On all property, including work areas and sites owned, rented, leased or under the care of *INSERT COMPANY NAME*;**
3. **On all property owned by customers or clients of *INSERT COMPANY NAME* where employees are required to work;**
4. **In all areas designated for parking and falling within contract limits;**
5. **For all vehicles owned, rented or leased by *INSERT COMPANY NAME*;**
6. **In all desks, lockers, tool boxes, and on all company property as previously defined;**
7. **Under any circumstances in the course and scope of *INSERT COMPANY NAME* employment.**

III. POLICY

The sale, possession, transfer, purchase, use or working under the influence of the following is strictly prohibited within the *Scope of Policy* and shall constitute a violation of policy for:

1. **<u>ALL</u> illegal drugs defined as, but not limited to, marijuana, hashish, cocaine, amphetamines, etc. including synthetic and designer drugs, as well as all substances defined by Federal Law 21 USC Section 812, Schedules I through V as published at 21 CFR 1308;**
2. **Use or working under the influence of illegal drugs will be confirmed by test results demonstrating amounts in any urine or blood samples, which are in excess of levels established by Federal Regulations;**

3. **<u>All</u> alcoholic beverages defined as, but not limited to, beer, wine or whiskey.**

4. **Working under the influence of a confirmed *blood alcohol* level of *.02* or higher, with testing conducted under a recognized method of testing and tested by a competent individual or testing facility;**

5. **<u>ALL</u> *prescription drugs* without medical authorization. Prescription drugs must be in the possession of the individual to whom the prescription was written, taken in the dosage prescribed and in their original container;**

6. **<u>ALL</u> drug paraphernalia such as pipes, needles or similar items, except those needed for authorized medication.**

IV. ENFORCEMENT

It is the policy and intention of *INSERT COMPANY NAME* to enforce all aspects of this policy in the following manner:

1. **To inspect all areas within the Scope of Policy as defined in Section II when there is reasonable suspicion that a violation of policy has or is occurring;**

2. ***INSERT COMPANY NAME* may conduct random, periodic searches of all areas within the Scope of Policy defined in Section II.**

3. **The inspection or search of an employee's clothing, non-company vehicle or personal effects will not be authorized, except when conducted by law enforcement officials;**

4. **At Company discretion, drug and/or alcohol testing shall be conducted:**
   - ***a) On a randon basis;***
   - ***b) Upon return to work after absence or in conjunction with company physicals;***
   - ***c) When there is reasonable suspicion that an employee is under the influence of drugs and/or alcohol use;***
   - ***d) To comply with contractual obligations of clients or government agencies; or***
   - ***e) If there is an accident.***

5. **Those employees refusing to submit to search or testing, as required by this policy will be terminated for cause.**

6. **Supervisors will be trained in the recognition of signs and symptoms of substance use/abuse.**

V. DISCIPLINARY ACTION

Those employees found in violation of this policy will be subject to disciplinary action in the following manner:

1. **<u>ANY</u> employee found selling, using, possessing or transferring illegal drugs during the scope of employment or where restricted, will be terminated and the matter will then be turned over to the proper authorities.**

2. **<u>ANY</u> employee found using alcoholic beverages during the scope of employment or where restricted, will be terminated and if appropriate, the matter will then be turned over to the proper authorities**

3. **An employee with confirmed positive as a result of a required test, will be contacted by the Medical Review Officer and/or Health Services Coordinator to review results. Confidentiality will be maintained between the employee, Health Services Coordinator, Medical Review Officer, Employee Assistance Program and Substance Abuse Professional. The employee must stop work upon notification of a positive test.**

4. **The Health Services Coordinator will contact the employee and review the test results and the opportunity for substance abuse assistance. In order to continue employment with *INSERT COMPANY NAME*, a Request for Substance Abuse Assistance agreement must be reviewed and signed by the employee, Health Services Coordinator, and Union Representative (unless declined by employee). If the employee fails to respond when contacted, a certified letter will be sent. The employee will have (10) business days from receipt of the letter to respond to the Health Services Coordinator. If there were no response from the employee, this would be considered a voluntary terminating their employment.**

5. **The employee will be given unpaid leave, and within (7) working days will be expected to contact *INSERT COMPANY NAME* EAP, and participate in the evaluation and any treatment deemed necessary by the EAP's Substance Abuse Professional.**

6. **Once enrolled in a designated treatment program, and it has determined that the employee is fit to return to work during his/her treatment, then our EAP Substance Abuse Professional will submit to *INSERT COMPANY NAME* a verification of such determination and the employee will be allowed to return-to-work under the terms of the Request for Substance Abuse Assistance agreement.**

7. **The employee will not be allowed to work from the time notified of the positive test results until he/she is cleared by the EAP substance Abuse Professional and the Health Services Coordinator.**

8. **An employee will be terminated for cause if they fail to complete the treatment program within a reasonable amount of time (as determined by the Substance Abuse Professional), stop attending the treatment program or test positive at any time subsequent to or following their return to work.**

9. **Should potential new hires begin work, for emergency reasons, before test results are confirmed, and they test confirmed positive when initial results are received, they will be terminated for cause.**

10. **Employees working with *INSERT COMPANY NAME* for less than one (1) year and testing positive will be terminated without the availability to return to work after treatment, unless approved by the president of the company.**

ALL visitors found in violation of any applicable aspect of this policy will be requested to leave *INSERT COMPANY NAME* property and notification will be given to the proper authorities.

ANY employee who is convicted of a work place related criminal drug statute violation must notify their supervisor within five (5) days of such conviction.

ALL CDL Drivers must notify *INSERT COMPANY NAME* by the end of the next business day or prior to reporting to duty, if their license is suspended, revoked, canceled or if disqualified from driving.

***INSERT COMPANY NAME* Employee Assistance Program referral is at no cost to the employee. Any treatment programs recommended by the EAP will be the financial responsibility of the employee or the employee's personal health insurance coverage, subject to their requirements. Those employees wishing referral or having further questions should contact, in confidence, the *INSERT COMPANY NAME* Health Services Coordinator, at [telephone #].**

This *Policy* shall be amended, as necessary, to meet the requirements of all federal, state, county or municipal law, contractual obligation with a customer, or any other change, as needed.

Those enforcement and disciplinary options outlined in this policy that are prohibited by existing laws or agreements will not be utilized at those particular *INSERT COMPANY NAME* work areas or locations. Any additions or deletions to this policy shall be communicated in writing to all affected employees as necessary. Amendments and exceptions to the policy must have prior approval of the *INSERT COMPANY NAME* President.

Attachment 7 – C

REQUEST FOR SUBSTANCE ABUSE ASSISTANCE

I, _____, request reinstatement or continued employment with COMPANY NAME. I understand that my reinstatement to employment is conditional, subject to the following terms:

1. **I will contact Human Resource Associates/Employee Assistance Programs ADDRESS AND PHONE MNUMBER within seven (7) business days, and will participate in a full and complete evaluation and shall follow all directions for treatment as prescribed by their substance abuse professional.**

2. **When cleared to return to work, I will complete a drug test at: PROVIDER NAME & TELEPHONE NUMBER. The results of this test must be negative in order to return to work.**

3. **I authorize the release of information between the COMPANY NAME Health Services Coordinator and the treatment provider regarding attendance and other compliance issues relating to this assistance.**

4. **I will comply with a random screening program, which includes a minimum of six tests within one year from this date, in addition to entry in the CDL random pool, if applicable.**

5. **I will abide by this agreement and the company's Substance Abuse Policy.**

6. **Any changes in appointments, missed appointments, or scheduling conflicts between treatment and work must be communicated to the Health Services Coordinator, who can assist with these conflicts.**

ACKNOWLEDGMENT

I understand and agree that my reinstatement and continued employment are conditioned upon my satisfactory compliance with the terms listed above. I have discussed these terms with the Health Services Coordinator and understand that I will be subject to further disciplinary action, up to and including termination of employment with COMPANY NAME if I fail to comply with the terms and intent of this agreement.

Employee's signature: _____ Date:_____

Health Services Coordinator: _____ Date:_____

Union Representative:_____ Date:_____
(If declined, state "declined)

Attachment 7 - D