

MSHA NSSGA Alliance

A Partnership To Improve Safety & Health in the Aggregates Industry

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Partnering Before Agreement

- **Jointly developed Noise & Dust Workshops; first one in 1997**
- **Instructors from Mine Academy**
- **Provides knowledge for operators to take own noise and dust samples**
- **3 workshops per year**
- **Trained over 800 students**
- **150 since 2004**



NSSGA-MSHA Alliance

- A partnership for injury prevention
- Goals
 - Promote safe working conditions
 - Develop effective miner training programs
 - Safety and health outreach
 - Communication
- First of its kind (2003)



Partnership agreements were signed with companies that included SLAM Risks in their safety and health program

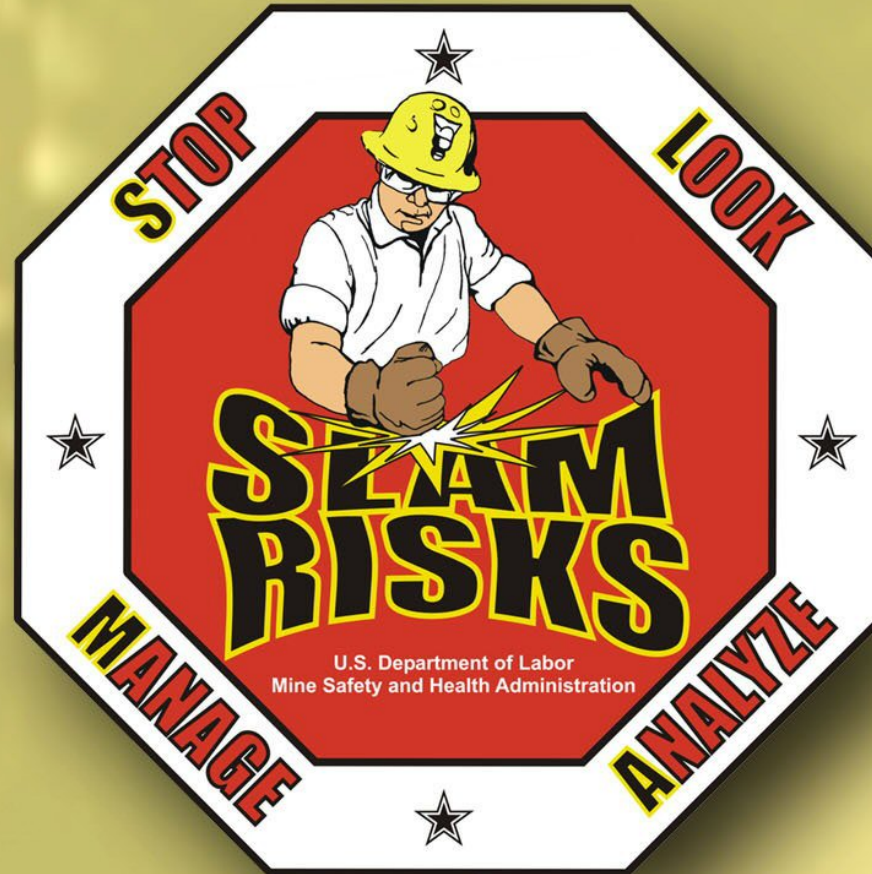


**MSHA and
CEMEX Mine**



SLAM Risks !

Stop
Look
Analyze
Manage



Determine Areas of Focus

- Data Analysis Team
- Use MSHA injury data (2000-2002)
- Identify where intervention will have impact
 - Classification
 - Type
 - Activity



Code Definitions

- **Accident classification**
 - Circumstances that contributed most directly to accident
 - e.g., handling material or slip/fall of person
- **Accident type**
 - Event which directly resulted in the injury; e.g., overexertion
- **Activity**
 - What the injured was doing at the time of the injury
 - e.g., machine maintenance/repair

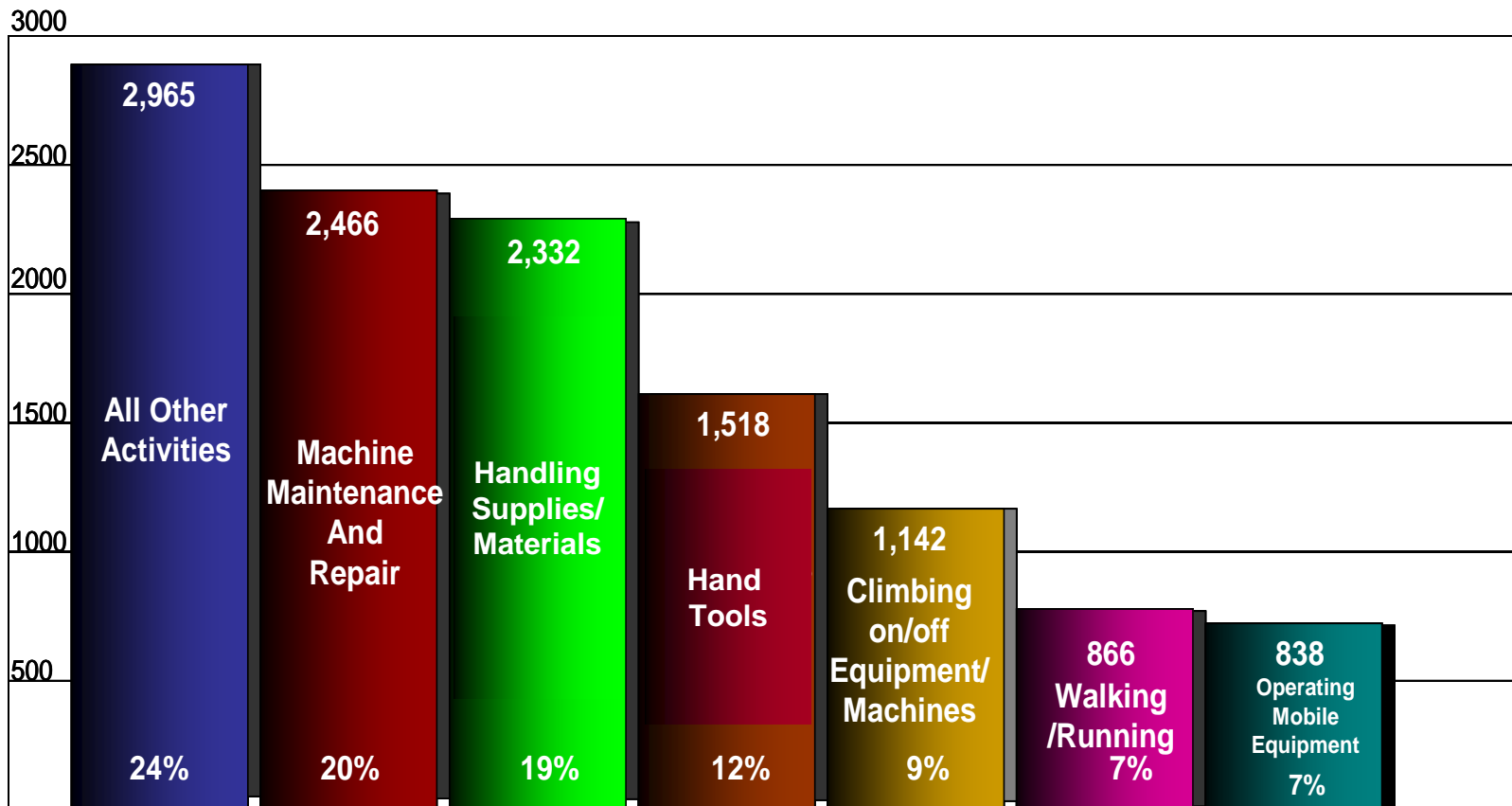


Injuries by Activity

- Machine Maintenance and Repair (20%)
- Handling Supplies/Materials (19%)
- Hand Tools (not powered) (12%)
- Climbing On/Off Equipment/Machines (9%)
- Walking/Running (7%)
- Operating Mobile Equipment (7%)



Total Injuries for CY 2000-2002 12,147



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Natural building blocks for quality of life

SLIPS, TRIPS, AND FALLS

Activities resulting in most injuries in classification:

- **Climbing on/off equipment or machines**
 - 880 injuries (32%)
- **Walking/running**
 - 664 injuries (25%)
- **Machine maintenance/repair**
 - 425 injuries (16%)
- **Handling supplies/materials**
 - 276 injuries (10%)

These activities accounted for 3 fatalities.



Recommendations

- Analyze *all* maintenance jobs for potential hazards, then identify and implement best safety practices
- Analyze mobile equipment jobs
 - Operator experience and tasks
 - Training
 - Equipment age and condition
- Other activities
 - Handling materials and supplies
 - Climbing on/off mobile equipment
 - Walking, running
- Prevention Program
 - hand tools (knives, hammers wrenches)
 - Improved Proper use of use of PPE (gloves, safety glasses, etc.)



Future Efforts

- **Ongoing data evaluation**
 - Knowledge and skills identification
 - Information and tools
 - Improved training
- **Support MSHA SLAM, SMART programs**
 - Stop Look Analyze Manage (SLAM); miners
 - Stop Measure Act Review Train (SMART); operators
 - Human factors programs





Alliance Safety Pledge

As an aggregate producer or supplier to the industry, our company is committed to a culture that promotes our employees as our most valuable resource.

We believe that safety and health are important values. Our goal is to work with our miners to ensure they know how to prevent injuries and exposure to harmful substances in order to return home safely at the end of every shift.

To accomplish this, we will improve employee safety and health practices, ensure the amount and quality of formal employee training is appropriate, and enhance employee participation in the safety and health process.

We will continually enhance management's direct participation and commitment in all aspects of safety and health, specifically that of senior management, production and plant managers, field superintendents and supervisors.

By voluntarily signing this agreement, we demonstrate our commitment to a work environment designed to eliminate injury incidents, which will ultimately result in zero fatalities. 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.

Name _____

Company _____



Core Safety Principles

These principles were developed as part of the formal alliance between NSSGA and MSHA to communicate fundamental elements of a safety program that will help prevent and reduce workplace injuries.



Core Safety Principles

Elements include:

- Information about safety directors,
- Training and development,
- Employee involvement,
- Incident investigations and recognition programs.



Core Safety Principles

Other topics describe

- Auditing work practices,
- Safety communication
- Regulatory compliance programs.



Stone, Sand & Gravel Review Magazine Articles

- Sept/Oct 2005 Intro of Alliance
- Nov/Dec 2005 Make the Right Decision
- Jan/Feb 2006 Core Safety Principles
- Mar/Apr 2006 MSHA Spring Thaw Initiatives
- May/June 2006 Data Analysis Team Intro



Rip & Share

Come complete with tips and best practices reminders:

- Burns-major cause: SLAG
- Many slag burns were to the ears
- Illustrate the value of PPE

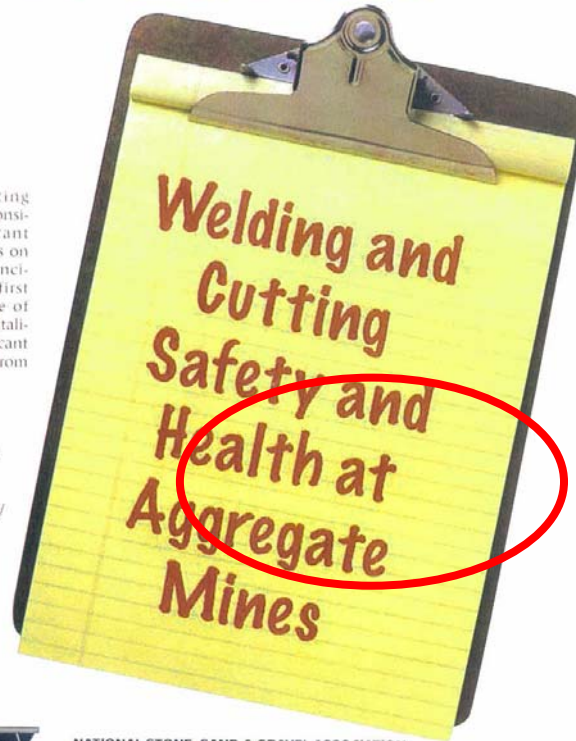


Safety and Health Professionals

You Need to Know!

Welding and cutting accidents are responsible for a significant number of injuries and illness on mine sites. There were 51 incidents reported during the first half of 2005. Though none of these incidents resulted in a fatality, 21 suffered injuries significant enough to cause days away from work. Here's how it looks:

- (25) Burns
- (09) Flash burn
- (08) Foreign body in eye
- (04) Pinch
- (03) Laceration
- (02) Difficulty breathing/nausea



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Natural building blocks for quality of life

Stone, Sand & Gravel Review, January/February 2006

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BURNS:

Major cause was slag. Burns were primarily to ears! Others were the result of slag reaching the skin through unsecured sleeves, gloves, and boots.

SLAG:

If it can reach your skin - IT WILL BURN YOU. Make sure skin is well covered- ESPECIALLY YOUR EARS!

FLASH/ARC BURNS:

Can be an accumulated injury. Damage can be done even if it doesn't hurt right away.

EYE INJURIES:

Most were wearing safety glasses. That is just not enough. If hot slag can find even the smallest opening around your eyes, you will likely suffer. Use safety glasses and a welding shield.

PINCH/LACERATIONS:

Prior to beginning work, generously secure pieces to be cut or welded.

What did these incidences have in common:

- Inadequate planning prior to beginning work
- Inadequate inspection of equipment prior to beginning work

Specific problems arose from use of inadequate PPE:

- Inconsistent use
- Inadequate protection level (lens color density, clothing type, fit)

Other tips: Prior to beginning work –

- Generously secure pieces to be welded
- If you set the stinger down, be sure it won't burn you
- Keep work area clean and clear of combustibles

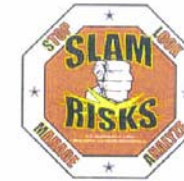
REMEMBER:

If slag can reach your skin it will burn...
How does your PPE fit?

Contributed by:

Anne Kelhart, Martin Stone Quarries, Inc.
Kenneth Chamberlain, MSHA Small Mines Office

What Does This Mean To You??



EQUIPMENT:

Inspect your equipment before you use it. Don't risk loose fittings that can lead to serious burns.

SLAG:

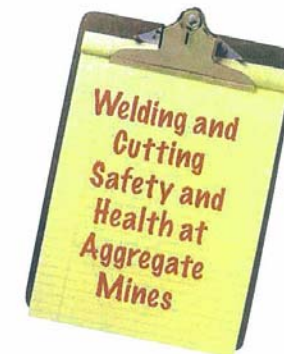
Make sure skin is well covered - ESPECIALLY YOUR EARS!

FLASH/ARC BURNS:

Working together? Use curtains or barrier shields to prevent double hazard exposure.

VENTILATION:

Fumes can make you sick *EVEN IF YOU ARE WELDING IN OPEN AIR.* Be sure you have a method to adequately remove welding fumes from your work area.



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Natural building blocks for quality of life

Rip & Share Topics

- **Welding & Cutting**
- **Seat Belts**
- **PPE**
- **Core Safety Principles**
- **Heat Stress**
- **Substance Abuse**



Spring Thaw Initiative

- MSHA and NSSGA co-sponsored Spring Thaw Meetings
- Initiated in 2003 with 31 nationwide sessions
- In 2006 there were 54 meetings
- Meetings coincide with winter's end
 - Many intermittent mining operations begin producing again
 - New employees who are also new to the mining environment
 - MSHA's statistics show increase in accidents during the startup
- Share information and experiences to address mining hazards
- No cost



Spring Thaw 2006

- **Participants**

- **Safety professionals from mining companies**
- **MSHA personnel**

- **2006 workshops theme-- “Take Time for Safety.”**

- **Topics suggested by various industry leaders**

- **Reflected trends in incidents observed over the last year including:**

- 1) **Seat Belts**
- 2) **Non Scheduled Maintenance**
- 3) **Equipment / Workplace Examinations**
- 4) **Risk Assessment, Task Analysis**
- 5) **Impact of Diversity on Safety**
- 6) **Guarding**
- 7) **Fall Hazards**
- 8) **Healthy Lifestyles for Miners**



The Future.....

- Continued data evaluation
- Communication to company executives
- Increased publication of awareness information
- Evaluate implementation of Core Safety Principles Program

