See Inside:
Why We Perform Pre-Shift Equipment Inspections
The Joseph A. Holmes Safety Association Bulletin contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters, and other health and safety-related topics. This information is provided free of charge and is designed to assist in presentations of groups of mine and plant workers during on-the-job safety meetings. For more information, visit the MSHA Home Page at www.msha.gov.

Please Note: The views and conclusions expressed in Bulletin articles are those of the authors and should not be interpreted as representing official policy or, in the case of a product, represent endorsement by the Mine Safety and Health Administration.

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Hi! My name is Joe. I run a front-end loader. Every morning before getting into my loader, I perform a pre-shift equipment inspection of my loader. I do this because the company has said it is something I have to do; but more importantly I do the inspection for myself: I’m concerned about my safety.

Some of the guys I work with think it’s a waste of time to do this every day. They fill out the paper and never take a look at the equipment. I guess they figure that’s all they have to do to make their supervisor and the safety department folks happy. I used to think that way myself, until about a year ago.

One Monday afternoon my brakes failed for just a few minutes while I was loading a truck. I really didn’t think anything about it at the time and just kept going.

Well, the next morning I came to work and there were 20 trucks waiting to be loaded. I got into my loader, just like normal, whipped through the pre-shift inspection and got to work; I had to get those trucks loaded and on their way.

While I was loading the 12th truck, the brakes failed completely, and I ran into the side of a 2002 tri-axle Freightliner. With my bucket loaded and my speed, I demolished the cab. Fortunately, no one was hurt. The impact caused $25 thousand damage to the cab of the Freightliner, and the driver fell getting out of his truck and hurt his back. Now I’ve been named in a lawsuit as being responsible for the driver’s injuries.

It’s Just a Waste of Time and Paper? WRONG!

Think about it for a minute. Would you get into your personal car or truck and take a trip from Alabama to Washington State without checking your car or truck before you took off? Of course you wouldn’t.

Not only are we concerned as to whether our personal vehicles can make a trip, but...
we’re also concerned about the cost of a major repair while away from home. What would you do if you left home and were halfway across the country in your own vehicle, and the engine blew because it didn’t have enough oil in it when you left home? Or what if the transmission let go, and you had to replace or repair it on the road?

Well, the equipment you operate every day is just like your own car or truck. Yes, the equipment belongs to the company. But, while it is in our possession, we are the professional who operates it every day. Part of being a professional is taking pride in what we do and how we do it. Performing a thorough pre-shift inspection is part of being a professional equipment operator.

**How Do I Conduct a Pre-shift Inspection?**

Conducting an equipment inspection is simple and only takes a few minutes to complete. You need to pay attention to

**Warning Devices and Gauges**
- Air pressure
- Brake pressure
- Oil pressure
- Transmission oil pressure
- Transmission temperature
- Brake oil pressure
- Hydraulic oil temperature
- Water temperature
- Raised-bed warning

**Buckets, Blades and Beds**
- Liners
- Teeth
- Wear plates
- Cutting edges
- Adapters
- Pins and locks
- Structure
- Boom

**Brakes**
- Service
- Emergency
- Dump brakes
- Parking brake
- Retarder
- Declutch
Steering and emergency steering

Undercarriage
- Track adjustment
- Links and pins
- Idlers
- Rollers
- Guards
- Pads

Suspension

Oil/Fluid Levels
- Check to see that they meet the manufacturer’s specifications.
- Look for oil and fluid leaks under, on and around your machine.

Tires
- Visually check tires – Look for bulges, cuts, excessive wear conditions.

Other Items
- Steps
- Ladders
- Handholds
- Doors
- Windshield

- Other glass
- Mirrors
- Floor mats
- Operator’s seat
- Unsecured material inside cab
- Cab insulation
- Radio
- Heat/air conditioning
- Pins and locks

Safety Appliances
- Mirrors
- Wipers
- Seat belt
- Horn
- Backup alarm
- Lights
- Fire extinguisher

What if I Find a Problem?

Your company doesn’t want you to operate equipment that needs repairs or may be unsafe.

After you finish your inspection, tell your supervisor right away if you find a problem. Your supervisor will discuss your concerns with you and ensure that the equipment is repaired.
If you’re like most of us you have a never-ending list of things that need to be done to keep your house and property in good repair. Summer, with its longer daylight hours, is the time when we try to shorten this list as much as we can. Let’s take a look at how we can do some of these tasks safely around electricity and power lines.

**DID YOU KNOW?**

- Electricity is fast; it travels at the speed of light (186 thousand miles per second).
- Electricity moves easily through the ground, metal, the air, and through objects that are moist and wet.
- Your body is an excellent conductor of electricity.

Power tools are a big help in doing work around the house or yard. They make jobs a lot easier, but they can be dangerous if not used properly. Here are some questions and safety reminders.
Did you size up the job and check the equipment before you started?

✓ **ALWAYS** size up the job before you start; get help if you need it.
✓ **NEVER** use equipment for other than its intended purpose.
✓ **ALWAYS** read and follow your owner’s manual and manufacturer’s safety tips.
✓ **ALWAYS** check cords and tools for frayed or cracked insulation, broken or exposed wires, broken casings, etc.
✓ **NEVER** remove guards from electrically-operated lawn equipment or tools.
✓ **NEVER** use a piece of equipment that is defective.
✓ **NEVER** try to repair defective equipment yourself; it’s a job for professionals.
✓ **ALWAYS** use cords marked for outside use when you are working outdoors.
✓ **ALWAYS** use cords that are rated for the power needs of your equipment.
✓ **NEVER** work with electrically-powered equipment during an electrical storm or when an electrical storm is approaching.

Did you check yourself before you started?

✓ **NEVER** use electrically-powered equipment or tools if you are tired, taking medications, or have been drinking.
✓ **NEVER** use electrically-powered equipment or tools if you are stressed or in a hurry.
✓ **NEVER** wear jewelry or loose clothing.
✓ **ALWAYS** wear appropriate personal protective equipment such as safety glasses, hearing protection, etc.

Did you check the worksite and conditions where you’ll be working?

✓ **NEVER** use electrically-powered equipment in wet or damp conditions.
✓ **NEVER** use an electric mower or weed eater on wet or damp grass.
✓ **ALWAYS** pay attention to weather conditions; they can change very quickly.

Are you using ladders or scaffolding?

✓ **ALWAYS** watch for overhead power lines and wires.
✓ **ALWAYS** check, before moving the ladder or scaffold, to make sure that they are clear of power lines and wires.
✓ **NEVER** carry ladders or pipes vertically near power lines.

Will you be working on an antenna or a satellite dish that’s on the roof?

✓ **ALWAYS** pay attention to where power lines are connected to the house.
✓ **NEVER** install or work on an antenna or satellite dish where it could fall on a power line.
NEVER install or work on an antenna or satellite dish in wet or damp conditions.

Are you going to clean gutters or pressure wash siding?

✔ ALWAYS pay attention to where power lines are connected to the house.
✔ ALWAYS be sure to keep ladders clear of power lines.
✔ ALWAYS check to make sure ladders are clear of power lines when you move from one section of the job to another.
✔ ALWAYS pay attention to how you use cleaning equipment. Many tools used to flush gutters or clean siding are metal and have long handles which can become electrically charged if they contact wires.

Are you planning to do some tree work?

✔ ALWAYS check for power lines that are in or near trees before pruning.
✔ ALWAYS get professionals to prune branches and limbs that are near (or lying across) power lines.
✔ NEVER use ladders or pruning tools near power lines.
✔ NEVER dig without checking the location of buried power lines, gas lines or communication cables.
✔ NEVER plant trees that will grow to be more than 25 feet tall near power lines.

Do you know what to do about fallen or sagging wires?

✔ ALWAYS assume wires are “hot” (energized).
✔ NEVER pick up, kick, push or drag fallen or sagging wires.
✔ ALWAYS notify your electrical utility if there’s a problem and keep others far away until the power company’s personnel get there.

Have you talked to your children about electrical safety?

Kids are curious. They love to climb and to explore, and curiosity and electricity are a dangerous mixture. Now is the time to remind them about electrical safety. Tell them they should:

✔ ALWAYS stay away from electrical transmission towers and poles. You can get burned, shocked or killed without even touching wires as electricity can jump from high voltage cables. Poles can be dangerous, too, because they can
become electrically charged if they have faulty insulators.

✔ **NEVER** play in or near electrical substations. They can be irresistible to kids. However, substations are packed with high voltage gear – they’re no place to play or to go exploring.

✔ **NEVER** climb trees near power lines and wires. Even the weight of a small child can bend a tree branch and cause it to touch a wire.

✔ **NEVER** fly kites or model airplanes near power lines, wires or trees.

✔ **NEVER** fly kites or model airplanes in electrical storms or when an electrical storm is approaching.

Summer is a great time to be outdoors and we all want to enjoy our time outside as much as possible. We don’t want to have our summer turn tragic, so always respect electricity.

**Here are some websites with more information.**

“Danger: High Voltage.”
http://www.tva.gov/power/safety.htm

“Home Electrical Safety Tips.”
http://www.naturalhandyman.com/iip/infelectrical/home_electrical_safety_tips_a.shtm

“Outdoor Safety.”

“Power Line Safety.”
http://www.rge.com/PowLinMain.html

“Summer Electrical Safety.”

“Trees and Power Lines: A Dangerous Duo.”
http://www.esfi.org/hs/columns/naps22.html
Highwall Hazards

Last August a mobile equipment operator was injured while working at a surface coal mine. The miner was operating a hydraulic shovel when a 35-foot high section of the highwall toppled onto the operator’s cab, pinning him inside. The front of the operator’s cab was missing completely and the roof was caved in over the operator’s seat. The victim was removed from the shovel, transported to a hospital, treated and released.

Here are some things you can do to help avoid accidents around highwalls.

✓ Train all employees in highwall hazard recognition.

✓ Conduct examinations prior to beginning work around highwalls, and as frequently as necessary to ensure safety; especially during periods of changing weather conditions. Inspect the top and bottom of the highwall for cracking, spalling, sloughage, loose ground, and large rocks that could be hazardous.

✓ Communicate changes in mining methods or blasting issues to oncoming shifts.

✓ Ensure loose material is scaled prior to performing work. To scale safely using the shovel, maintain the highwall height within the reach of the bucket.

✓ Position the shovel and trucks so that the shovel cab swings away from the highwall when loading.
Noise Reduction in the Cab

What you don’t hear matters. Hearing loss can be prevented by installing and maintaining effective engineering controls. Don’t let poor equipment maintenance and/or the lack of engineering controls lead to the need for ear plugs, ear muffs, and eventually hearing aids.

Here are some things you can do to reduce noise in operator cabs.

✓ Ensure noise levels in cabs are acceptable before purchasing equipment. Noise reduction is better if built in rather than added later.

✓ Upgrade older equipment with new technology and materials if necessary and feasible. The use of noise reducing floor mats, additional flame retardant insulation, special glass, and other methods can significantly reduce noise.

✓ Frequently inspect cabs for adequate window and door seals. Identify and
control excessive vibration as well as engine, transmission, hydraulic and other sources of noise.
✓ Replace or relocate mufflers and exhaust pipes to best reduce cab noise.
✓ Maintain air conditioning systems to allow operation of equipment without the need for opening doors and windows.
✓ Conduct noise monitoring to ensure that noise levels have not increased.
✓ Train operators to identify and report changes that adversely affect cab noise levels.
✓ Inform drivers of the potential hazards associated with radios being played too loudly.

This article is part of the Stakeholders Best Practices Tailgate Safety Meeting Series.

It was developed in cooperation with: Lee Creek Mine, PCS Phosphate Co., Inc., Beaufort County, North Carolina (Team Leader); North Quarry, Vulcan Construction Materials, L.P., Forsyth County, North Carolina; Surry Mine & Mill, Ararat Rock Products Company, Surry County, North Carolina; Wade Mine, American Materials Company, LLC., Cumberland County, North Carolina; North Carolina State Grants Office, Raleigh, North Carolina.

You can download a PDF version of this article at www.msha.gov
Keeping the Truck Driver in the Cab

While in loading or unloading areas on mine property, drivers for customers, contractors or vendors should stay within the safety of their trucks. A person inside the cab may be exposed to numerous hazards, including mobile equipment, stockpile sloughing, material falling from loader bucket or conveyors, etc.

Here are some things you can do to prevent accidents to truck drivers.

✔ Require drivers to prepare trucks for loading before entering the mine site. Examples of preparation include checking tires, truck safety inspection and tarp preparation.
✓ Tell drivers of general and site specific hazards they may encounter if exiting the vehicle is required.

✓ Avoid overloading trucks. Designate dump-off areas for drivers to remove excess product.
✓ After loading, require drivers to pull out of the loading area to tarp and trim the load.

✓ Instruct loader operators to halt loading activities if the driver is not in the vehicle.
This article is part of the Stakeholders Best Practices Tailgate Safety Meeting Series. It was developed in cooperation with: Lee Creek Mine, PCS Phosphate Co., Inc., Beaufort County, North Carolina (Team Leader); North Quarry, Vulcan Construction Materials, L.P., Forsyth County, North Carolina; Surry Mine & Mill, Ararat Rock Products Company, Surry County, North Carolina; Wade Mine, American Materials Company, LLC. Cumberland County, North Carolina; North Carolina State Grants Office, Raleigh, North Carolina.

You can download a PDF version of this article at www.msha.gov

☑ Require drivers to use proper ladders and/or fall protection if climbing is necessary.
VISIT TO LEEVILLE

By Ron Goldade

On March 17, 2004, Jeff Duncan, MSHA’s Director of Educational Policy and Development; Rod Breland, Regional Manager for MSHA’s Educational Field Services; Ron Goldade, Assistant District Manager of MSHA’s Western District; and Dave Thome, Field Office Supervisor, Elko Nevada, visited the Leeville shaft sinking project. While there, the MSHA group met with mine management and miners to discuss project operations and to tour the surface portion of the mine.

Leeville is the only major metal/nonmetal shaft sinking project ongoing in the western United States. Two concrete shafts are being excavated by Clark Construction Group, Inc. for the Newmont Mining Company. Earlier, Newmont representatives had attended the Shaft and Slope Training Seminar conducted in 2003 at the National Mine Health and Safety Academy.

The commitment of the miners and management to safety as a value is demonstrated by the mine’s accident/incident and violation histories which are far below the national averages.

All of the shaft miners at this project are trained in accordance with 30 CFR Part 48. Additionally, inspectors from the Elko, Nevada, field office conduct monthly mine site visits to the Leeville project. The mine employs 85, working three shifts, eight hours per day, seven days a week.
New Holmes Council Organized

By George M. Nadzadi

A new Holmes council, the Tri-State Bentonite Joseph A. Holmes Council, was organized at Casper, WY, on April 24, 2004. Council officers are John Strong, President; Ken Lisco, Vice President; and Tony Sixberry, Secretary/Treasurer. Their mailing address is P.O. Box 832, Greybull, WY 82426.
Michigan Safety Workshops

By Jon Montgomery

The Great Lakes District Council presented a series of workshops on January 20-21 and January 27 and 29, 2004, at various locations in Michigan. More than 170 people attended these sessions.

Presentations covered subjects such as High Voltage Safety, Conveyor Safety, Safe Crane Operation, Histoplasmosis, Highwall and Slope Stability, Mine Maintenance and Welding Safety, and an MSHA Update.
2004 TRAM/National Mine Instructors Seminar

October 12-14, 2004

National Mine Health and Safety Academy
Beaver, West Virginia

Plan now to attend this annual event at the National Mine Health and Safety Academy, Beaver, West Virginia.

This tuition-free seminar provides opportunities for health and safety trainers from all parts of the mining community to improve their training programs with new ideas, new instructional methods, and new training materials.

The 2004 TRAM Seminar features 60 to 70 workshops covering a wide variety of topics including:

- Underground and surface mine safety
- General safety
- Health
- Ergonomics
- Innovative instructional techniques
- Instructional technology and computer applications
- Regulatory issues related to training
- Supervisory issues

You select the workshops you wish to attend. The small group format encourages interaction between you and the workshop leader.

TRAM 2004 also features exhibits and a training materials competition. The exhibits highlight training products and materials developed by MSHA, State grants recipients and the mining industry. Although a few items may be for sale, most are free to seminar participants. The materials competition has fostered a new level of professionalism in the development of training materials. In addition to a grand prize, nine other awards are given in these categories:

- Academia – Coal, Metal/Nonmetal, General
- States – Coal, Metal/Nonmetal, General
- Industry – Coal, Metal/Nonmetal, General

Continued next page
The seminar begins at 1:00 p.m. on Tuesday, October 12, 2004, and ends at 4:00 p.m. on October 14. All events will be at the National Mine Health and Safety Academy. For more information about TRAM 2004, please contact Sharon Casto, Seminar Coordinator by e-mail at casto.sharon@dol.gov or by telephone at (304) 256-3320.

2004 TRAM/National Mine Instructors Seminar
October 12-14, 2004 (Please return by September 30, 2004)

Complete this form and mail to address below OR FAX to (304) 256-3251

Name: ____________________________ Position: _____________________________

Organization_________________________________ Last 4 digits of SS# ______________

Address: ___________________________________________________________________

City: ____________________________ State: _____ ZIP: __________________________

Telephone (include area code) ________________________________________________

FAX (include area code) _____________________________________________________

Do you desire housing at the Academy? Yes ___ No ___

Arrival date _________________ Departure Date __________________

Roommate preference: _________________________________________________________

Confirmation will be mailed or faxed to you.

Confirmed by:_____________________________________ Date: _____________________

MAIL FORM TO:
U.S. Department of Labor
MSHA
National Mine Health and Safety Academy
Att: Student Services
1301 Airport Rd.
Beaver, WV 25813-9426
Call for Entries
2004 TRAM/National Mine Instructors Conference
Mine Health and Safety Training Materials Competition

WHO CAN ENTER?

The contest is open to entrants from:
- Academia (Colleges, Universities, Vocational Programs, etc.)
- Public (State government)
- Industry (Mining companies, trade associations, labor organizations, and contract trainers)

WHAT KIND OF MATERIAL IS ELIGIBLE?

The contest is open for original health and safety training material you have developed since the 2003 TRAM/National Instructors Conference. Entries cannot include the use of copyrighted materials, and you must also be willing to share your entry with the mining community.

Entry categories include:
- Coal mining (surface and underground)
- Metal/nonmetal mining (surface and underground)
- General mining

HOW WILL ENTRIES BE JUDGED?

Contest judges will evaluate each entry by asking the following questions:

- Purpose/Objectives/Audience
  - Does the entry have a clearly stated purpose or objective?
  - Does the entry clearly state who it is intended for?

- Delivery System
  - Where appropriate, does the delivery system used reflect current educational technology?
  - Is the delivery system used to present the material suitable for the material’s intended audience?
• Content

- Is the content up-to-date and technically accurate?
- If used, do visuals help the material meet its objective?
- If used, are visuals appropriate for the intended audience?
- Where appropriate, does the material examine or discuss safety hazards and suggest practical ways to recognize, reduce, or eliminate these hazards?

• Format/Instructional Assistance

Is the material
- Logically formatted?
- Legible?
- Grammatically correct, checked for spelling, etc.?

Are illustrations and graphics
- Well-organized, clear, and suitable for the intended audience?

If provided, are student materials (texts, charts, diagrams, exercises, etc.)
- Well-organized, legible, and suitable for the intended audience?

If the program includes tests, progress checks, and evaluation materials, are they
- Suited to the program’s objectives?
- Understandable to the instructor and the student?
- Well-organized, clear and suitable for the intended audience?

Where appropriate, does the material include
- Instructions/suggestions to trainers to help them use it effectively; for example, directions on how to set up and test the program if it is computer-based?

**WHAT HAPPENS IF I WIN?**

Winning entries in coal mining, metal/nonmetal mining, and general (all types of mining) receive awards (plaques). A traveling trophy is presented to the participant judged to have submitted the best entry in the contest.
Every entrant who participates in the competition receives a Certificate of Appreciation.


Wall plaques maintained at the National Mine Health and Safety Academy are updated with the names of each year’s contest winners.

ARE ALL ENTRIES EXHIBITED AT THE CONFERENCE?

All entries will be displayed at the National Mine Health and Safety Academy from October 12-14 at the 2004 TRAM/National Mine Instructors Conference.

HOW DO I ENTER?

You can enter more than once.

Please include with each entry a brief written abstract telling us about your entry, its intended audience, the category in which you wish it to be judged, and ways that other trainers may use the material in their safety and health programs. Don’t forget your name and address and a telephone number or e-mail address in case we need to contact you.

Contest entries will be accepted through September 30, 2004.

Send your entry – via Federal Express or UPS, please – to:

   Melody E. Bragg  
   Technical Information Center and Library  
   National Mine Health and Safety Academy  
   1301 Airport Road  
   Beaver, WV 25813-9426

REMINDER

If you want, you can exhibit materials at the conference without entering the competition. Please tell us, by September 30, if you plan to do this.
Come Join Us

Apply for Membership...

Membership is free. Your organization can become a Joseph A. Holmes Safety Association Chapter by completing a membership application and submitting it to the Holmes Safety Association.

Contact Person: ____________________________  Phone No: __________________

Company Name: ____________________________________________________________

Street/P.O. Box: ____________________________  City: ____________________________

State: ________  Zip: ________  E-Mail Address: ________________________________

MSHA ID Number: __________________________________________________________

Type of Product: ____________________________________________________________

Type of Operation: Coal _____  Underground _____  Surface ____  Mill ____  Other ____

Name you would like to call the chapter being established: ______________________

Name and organization of person assisting in recruiting this application: ______________

____________________________________________________

Signature of Applicant: ____________________________  Date: ______________

Send to:
Joseph A. Holmes Safety Association
P.O. Box 9375
Arlington, VA 22219

or
Telephone: (202) 693-9574
Fax: (202) 693-9571
Contact:
Bob Rhea
Joseph A. Holmes Safety Association Bulletin
Mailing List
MSHA-US DOL
1100 Wilson Blvd. Rm. 2147
Arlington, VA 22209-3939
202/693-9574 Fax: 202/693-9571
E-mail: rhea.robert@dol.gov

Please address any comments to:
Steve Hoyle
Joseph A. Holmes Safety Association Bulletin
DOL-MSHA
National Mine Health and Safety Academy
1301 Airport Road
Beaver, WV 25813-9426
Please call us at 304/256-3264
or Fax us at 304/256-3461
E-mail: hoyle.stephen@dol.gov

Reminder: The District Council Safety Competition
for 2004 is underway - please remember that if you are
participating this year, you need to mail your quarterly
report to:

Mine Safety & Health Administration
Educational Policy and Development
Joseph A. Holmes Safety Association Bulletin
P.O. Box 9375
Arlington, Virginia 22219

Holmes web site: www.holmessafety.org
Come Grow With Us
Joseph A. Holmes Safety Association