
BULLETIN



September 1990



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KEEP US IN CIRCULATION

The Holmes Safety Bulletin contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters and other safety-related topics. This information is provided free of charge and is designed to assist in presentations to groups of mine and plant workers during on-the-job safety meetings.

To report monthly chapter meetings, please use the postage-paid report form located in the back of this Bulletin and return to the Holmes Safety Association.

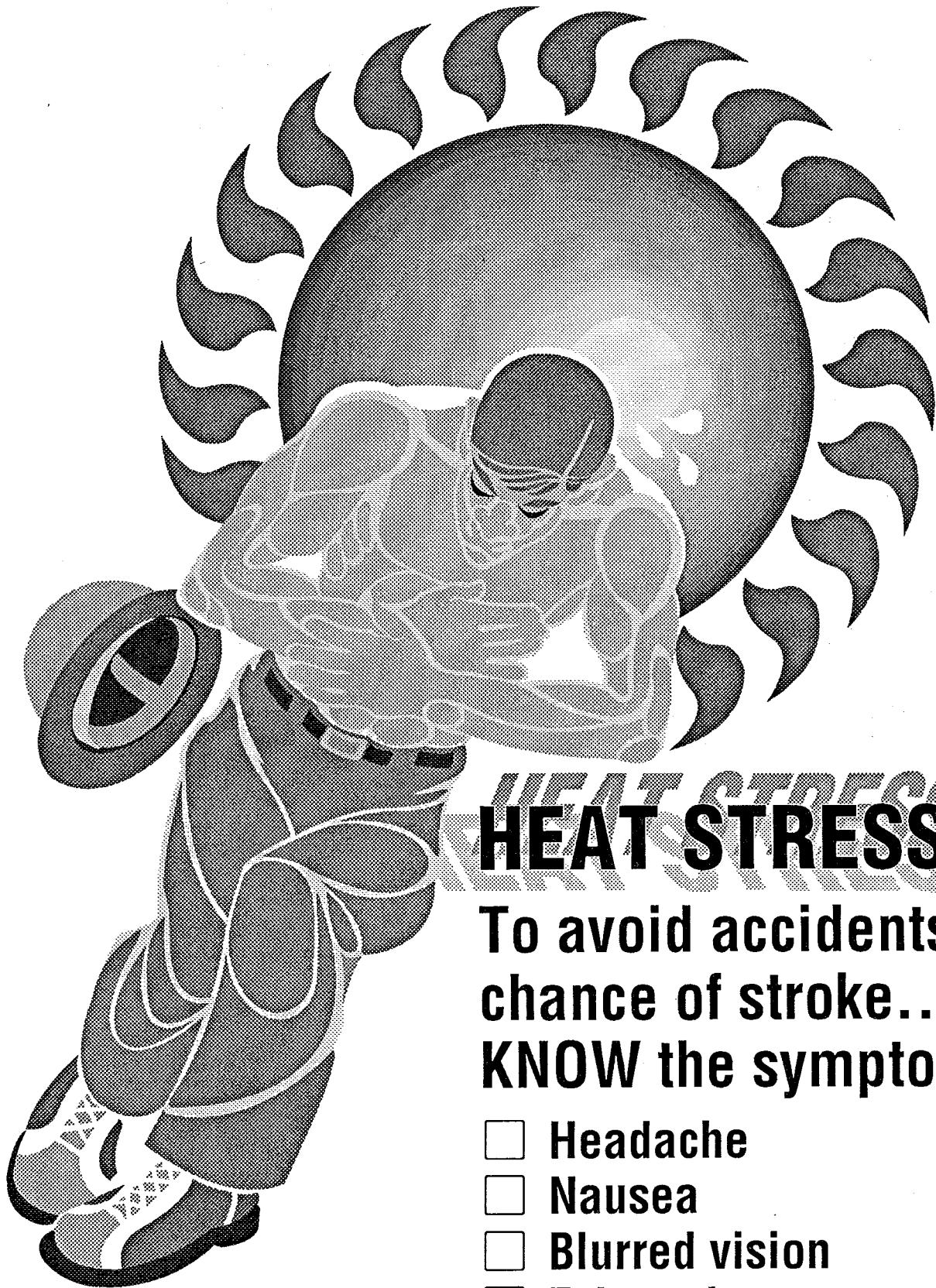
Welcome New Members

NAME	CHAPTER NO.	LOCATION
Worldwide Equipment, Inc.	8891	Clarksburg, WV
B M H Inc. (Williams #2 Mine)	8892	Shinnston, WV
Manning Coal Corporation	8893	Jenkins, KY
Bearpen Collieries Inc. No. 2	8894	Partridge, KY
New Jersey Pulverizing Co.	8895	Bayville, NJ
Fisher Bros. Sand & Gravel	8896	Bayville, NJ
Coffee Cup Coal Company	8897	Letcher, KY
Kentucky Criterion	8898	Dean, KY
Morning Coal Corporation	8899	Jenkins, KY
Trojan Mining, (No. 2 Mine)	8900	Shelby Gap, KY
Indian Creek Mining Inc. (No. 1 Mine)	8901	Elkhorn City, KY
Hadley Inc., (No. 1 Surface)	8902	Jackhorn, KY
Redbud Coals Inc. H-8	8903	Elkhorn City, KY
Cobra, Inc., (No. 1 Surface)	8904	Whitesburgh, KY
Kinney Branch Coal Co., Inc.	8905	Dorton, KY
Traveller Coal Corporation (No. 1 Surface)	8906	Ety, KY
M A & S Inc.	8907	Cornettsville, KY
Federal Mining Co. Inc. (No. 1 Prep. Plant)	8908	Elkhorn City, KY
Kentucky Criterion	8909	Dean, KY

NAME	CHAPTER NO.	LOCATION
W & R Fleming Construction	8910	Chapmanville, WV
Cooper Heavy Hauler	8911	Orgas, WV
Jo-Lee Trucking	8912	Orgas, WV
C & C Haulway, Inc.	8913	Orgas, WV
Bryant Trucking	8914	Orgas, WV
Harvey Securities, Inc.	8915	Danville, KY
Rosholt Gravel & Excavating	8916	Burton, ND
Blake Trucking	8917	Orgas, WV
Jo-Wayne Trucking	8918	Orgas, WV
Harley J. Camperud Gravel Supply	8919	Northwood, ND
Ashcamp Construction, Inc.	8920	Virgie, KY
J & R Coal Co., Inc.	8921	Virgie, KY
Kilowatt Coal Co., Inc.	8922	Greasey Creek, KY
Osage County District 1	8923	Pawhuska, OK
Cotton County	8924	Walters, OK
Mt. Holly Concrete Company, Inc. (Pineland Plant)	8925	Warren Groove, NJ
Francis M. Moon, Inc.	8926	Barnegat, NJ
Brick-wall Corporation (Plant #2)	8927	Bamber Lake, NJ
Clayton Sand Co. (Jackson Plant)	8928	Jackson, NJ
Clayton Sand Co. (Lakewood Plant)	8929	Lakewood, NJ

NAME	CHAPTER NO.	LOCATION
Clayton Sand Co. (Woodland)	8930	Woodland, NJ
Kohler Pit	8931	New Berlin, WI
Broad & Vogt & Conant (Razerback)	8932	Bauxity, AR
Jack Burchum	8933	Sweet Home, AR
Blue Mt. Mime (Blue Mine)	8934	Hot Springs, AR
Can-Am Absorbents Co. (Open Eye)	8935	Bryant, AR
Acme Brick Company	8936	Malvern, AR
B & K Electrical	8937	Bauxite, AR
T. J. Graves	8938	Hot Springs, AR
Highland Gypsum	8939	Mutreeboro, AR
C Q Inc.	8940	Homer City, PA
Penn Line Service Inc.	8941	MineralSprings, PA
Tri County	8942	Millcreek, WV
Genstar South Mine and Mill	8943	Cockeysville, MD
Yaroch Asphalt	8944	Bad Axe, MI
Appalachian Mining Inc. (Big Creek No. 1)	8945	Gauley Bridge, WV
Belle Enterprises Inc.	8946	Springfork, WV
Trojan Mining	8947	Ashcamp, KY
Manns Lumber Company Inc.	8948	Madison, KY
Ames Construction, Inc.	8949	Kearny, AZ

NAME	CHAPTER NO.	LOCATION
Dewey County Safety	8950	Taloga, OK
Power Safety International	8951	Homer City, PA
Mid State Coal Company (Central Illinois Open Pit)	8952	Canton, IL
Carbo Mining Company	8953	Grundy, VA
American Tripoli	8954	Seneca, MO
Big Fist Coal Company Inc. (No. 1 Portal)	8955	Grapevine, KY
Big Fist Coal Company Inc. (No. 2 Portal)	8956	Grapevine, KY
Kyber Coal Company	8957	Biggs, KY
Penn Line Service Inc.	8958	Scottsdale, PA
Blue Ridge Storne Corporation (Lawyers Road Plant)	8959	Lynchburg, VA
Schmidt Construction Company	8960	Colorado Sprs, CO



HEAT STRESS

To avoid accidents,
chance of stroke...,
KNOW the symptoms

- Headache
- Nausea
- Blurred vision
- Exhaustion

Heat stress in mining

(Adapted from MSHA Safety Manual No. 6, Heat Stress in Mining)

In mining, as in other industries, the exposure of workers to very hot conditions is unhealthy and unproductive. The lowest accident rates have been related to temperatures below 70° F, and the highest to temperatures above 80° F.

Air temperature, humidity, and wind speed can combine to produce a hot work site. In addition, workers who perform moderate to high levels of work produce a great deal of heat in their bodies. These two sources of heat can cause a person's core body temperature to become elevated. **Heat stress** refers to the total heat-related load on an individual both from environmental and metabolic sources.

Heat strain refers to the adjustments made by an individual in response to heat stress. The human body, when exposed to a wide range of increasing heat loads, mobilizes to restore a balance between heat gain and heat loss. These adjustments include biochemical, physiological, and psychological processes.

Healthy and physically fit persons can work under heat strain as long as they perspire freely. By contrast, persons with health problems have a limited capacity for coping with heat strain.

Symptoms and effects of heat strain: Increased sweating is the first sign of heat strain. The steady rise of the sweat rate causes an excessive wetting of the skin. Extended exposure to heat will cause a decline in sweat rate. Sweat gland fatigue and consequent reduction in sweat gland production indicates a very high level of heat strain.

Heat strain adversely affects dexterity and coordination, ability to remain alert during lengthy and monotonous tasks, ability to observe, and the ability to make quick decisions. Heat strain can also result in irritation, anger, and other emotions leading to rash acts by persons performing hazardous jobs.

Persons working in hot, humid work sites tend to be inefficient; quite often workers prefer to stay away from work or ignore unsafe working conditions.

Heat disorders: The types of heat disorders are varied:

- Prickly Heat
- Water Deficiency Heat Exhaustion
- Heat Exhaustion and Heat Cramps
- Heat Fainting
- Heat Stroke

Symptoms of these disorders may only be mildly irritating or they may be disabling and lead to death. It is important that miners and supervisors recognize the symptoms and take action before the condition worsens.

Prickly heat: or heat rash consists of tiny red blisters in the affected skin area. It is caused by the continuous presence of unevaporated sweat. It can be treated by applying mild drying lotions to the affected areas of the skin, and sleeping in a cool area to allow the skin to dry between heat exposures.

Water-deficiency heat exhaustion. The victim of water-deficiency heat exhaustion is thirsty, and may be in danger of dehydration. The risk of dehydration is greater if the major part of the daily meals are dry or dehydrated.

Some individuals feel that by restricting their water intake in hot jobs they reduce the amount of sweat dripping from their faces and into their eyes. They are trading safety for comfort, and should be convinced that a voluntary restriction of water intake may lead to water deficiency heat exhaustion and even heat stroke. In mild cases of water deficiency heat exhaustion, the worker can recover by resting in a cool area and drinking water.

Heat exhaustion and heat cramps. The signs of heat exhaustion include weakness, lowered blood pressure, signs of fainting, tiredness, nausea and headache. Clammy and moist skin and a pale, muddy, or flushed look are also present. If sitting, the victim may faint on getting up. The victim may experience painful muscle cramps in the arms, legs, or abdomen.

Heat exhaustion and heat cramps are the result of salt deficiency in the body. The loss of salt through sweating and urine may exceed the salt intake. Drinking large amounts of water without replacing the salt will allow the water to enter the muscles and cause spasms. Workers, not on a medically restricted salt diet, should use more salt at meal times to make up for the loss of salt. Salt tablets irritate the stomach and should not be used. Intravenous infusion of salted liquid will relieve painful spasms of muscles. In cases of high salt deficiency, it may take several days to restore the body's salt balance.

Heat fainting: is the most common form of heat disability. It happens when the individual is in a standing position. It occurs when the brain suffers from a temporary shortage of blood supply. The victim should be moved to a cooler area and laid down to restore normal blood circulation. A prompt and complete re-

covery usually occurs.

Heat stroke: has three major signs:

- hot, dry skin of red, spotted, bluish, or purplish coloration
- rising, high body temperature
- brain disorders mental confusion, delirium, fainting, convulsions, and coma

Heat stroke results from the failure of the heat regulatory system in the body. When sweating stops, the body is no longer cooled by the evaporation of water from the skin, and the body temperature rises rapidly. In milder cases of heat stroke, some sweating may still be evident.

Unless promptly and properly treated, heat stroke may be fatal. The victim may suffer permanent brain injury and complications such as kidney, liver, and blood circulation disorders. Survival and complete recovery after undergoing an initially high body temperature is possible if the victim is promptly and effectively cooled. The victim must be moved to a cool area, soaked with cool water and fanned.

Preventing heat disorders: Control of heat stress in mining involves following proper work practices, acclimatizing workers to a hot environment, educating supervisors and workers about the problem, and providing air conditioning or cool rest areas.

Following proper work practices: The objective of a good work practice in a hot work site is to prevent the body core temperature from rising above 100°F. The excessive heat gain must be offset by adequate periods of heat loss.

Desirable work practices include the following:

- implementing a work-rest regimen, involving frequent breaks and reasonably short work periods
- pacing tasks
- performing heavy tasks in cooler areas

or at cooler times

- rotating personnel on hot jobs
- providing readily accessible cooler areas
- providing readily accessible cool drinking water (50°-60°F), and encouraging workers to drink a cup of water every 15-20 minutes
- encouraging workers, not on a medically restricted salt diet, to use more salt at meals and to drink slightly salted water (about one tablespoon of salt to fifteen quarts of water)

There is evidence that older persons have a lower tolerance for heat. They do not sweat as easily as younger individuals. It also takes longer for body temperature to return to normal levels in older individuals exposed to heat stress.

Some people have no sweat glands at all; such a condition should disqualify them from working in hot environments.

Acclimatizing workers. Repeated exposure to heat stress may increase the body's tolerance to heat. Acclimatization is a long-term adjustment of an individual to the stress. An acclimatized person can perform many tasks in a hot and humid work site where a nonacclimatized worker cannot work.

A worker should be given enough time to adjust to a hot work site before being required to work there 100 percent of the shift. This process may take up to six days.

Educating workers and supervisors. Mine supervisors and workers who are knowledgeable about the symptoms of heat disorders can recognize heat stress and take corrective action when workers display heat-related symptoms. The worker who is subject to heat stress may not be able to recognize the strain symptoms. All miners working in hot areas should know:

- the signs of imminent heat illness
- first aid treatment for heat illness
- ways to reduce heat stress

New miners should be warned against trying to keep up with active acclimatized workers during the beginning stage of acclimatization.

Providing a cool environment. Proper mine planning calls for providing conveniently available cool rest areas for workers to use. When natural cool air is not available, air conditioning may be necessary.



School's have reopened
***PLEASE* drive carefully!**

September 1990

Holmes Safety Association Monthly Safety Topic



Fatal handling materials accident

GENERAL INFORMATION: An 18-year-old welder was killed when struck by falling material while working at a mill site.

DESCRIPTION OF ACCIDENT: The victim reported for work at his normal starting time of 7:00 a.m. He was assigned to help build tents over the autogenous mills secondary grinders used to reduce ore by tumbling it in a revolving cylinder.

At about 2:25 p.m. the victim left his work area to get supplies from a nearby pickup truck. He walked down a road that ran alongside a construction site where sheet metal was being hoisted to the mill's roof.

The crane operator was lifting his third bundle of sheet metal to the top of the mill, a height of 90 feet, where it was to be installed as roofing. The bundles, framed and protected by wood crating material at both ends and at three equally spaced locations along their length, were being lifted by nylon slings looped around the second and fourth wooden frame.

A spotter was located on the mill roof so he could guide the load once it was out of the operator's field of vision. He watched as this third load of roofing was being prepared to be lifted. According to the spotter, the straps were choked and the loops were "beat down tight." The load was then raised straight up and moved to the operator's left in a slow gradual swing. About half-way to its destination one of the straps slipped, the

load tilted, and the metal sheets slipped out of the crating and fell toward the ground. One of the protective crates, around which a strap was located, apparently had moved toward the center causing the load to become unbalanced.

At the time the material was falling, the victim was in the unguarded, un-barricaded area below the crane's boom. He was struck by the sheet metal.

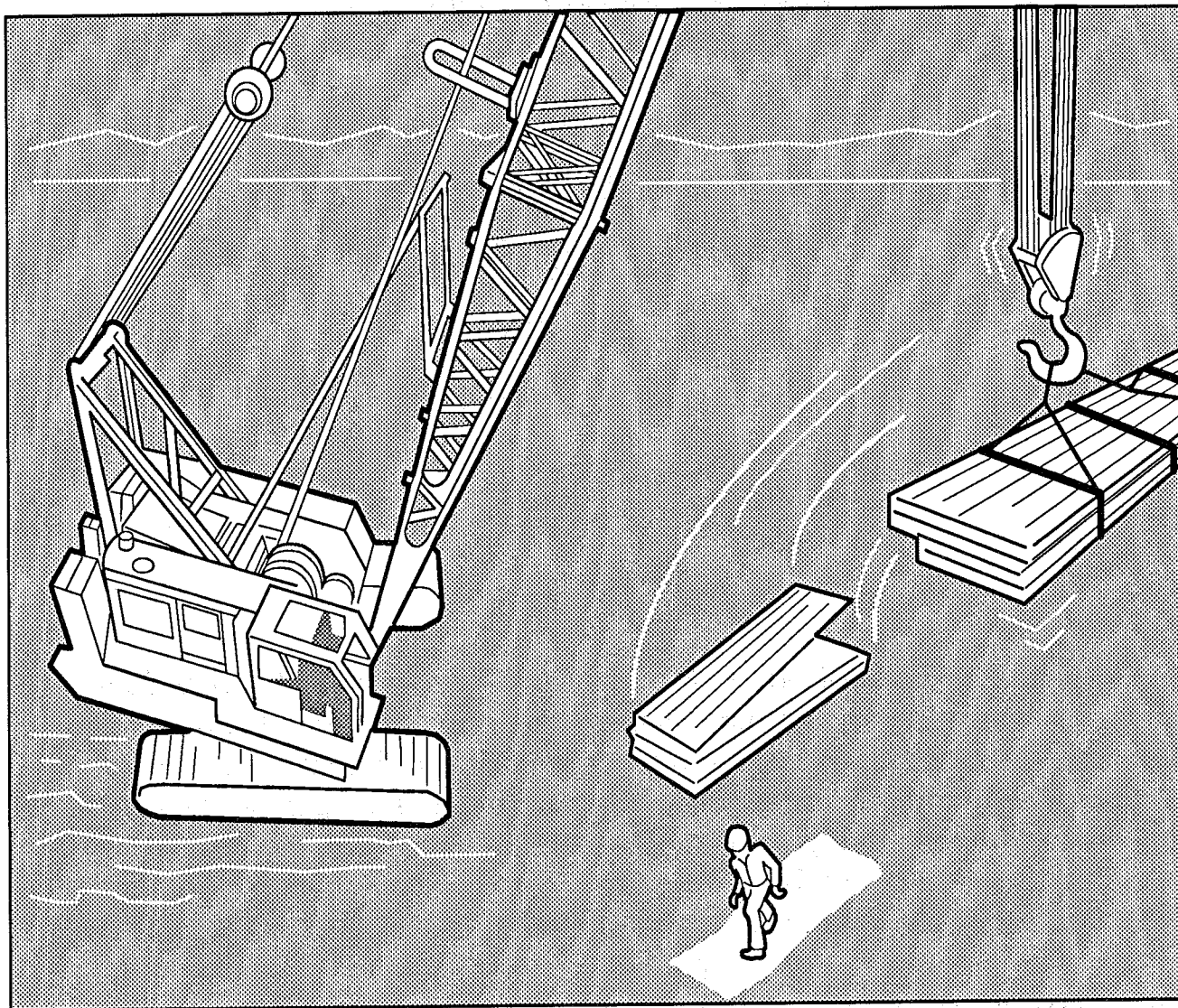
Workers in the area lifted the metal off the victim. An ambulance was called and he was transported for medical assistance. He was pronounced dead at 4:36 p.m.

CONCLUSION: The crane had a 180 foot boom and a 40 foot jib with a lifting capacity of 30,000 pounds and a basic load rating of 30 tons. The two slings were nylon, four inches wide and 20 feet long with a lifting capacity of 6,900 pounds using a choker hitch. The bundles of roofing were 33 inches wide, 20 feet long, and 8 inches high. They contained 45 sheets of roofing weighing 1,800 pounds. The bundles were protected by crating, in the form of wood frames made up of two-by-sixes held together by metal bands. There were five of these approximately equally spaced around each bundle.

Although the operation being performed had been done on other job sites without a single hitch, the cause of the accident was the rigging not being properly installed on the bundle of sheet metal. The slings may not have been properly choked around the bundle and the

wooden frames on which they were located were not stabilized so they would not slide along the sheeting material.

The severity of the accident was affected by the area beneath the suspended load not being barricaded or posted to prevent injury.



Announcement

from the
**Virginia Department of Mines,
Minerals and Energy**
concerning
Diesel Safety Regulations

Summary

The Department of Mines, Minerals and Energy plans to amend its diesel mine-safety regulations in order to decrease the likelihood of detrimental health effects among underground coal miners who work with diesel-powered mining equipment. The agency proposes to accomplish this purpose by placing an upper limit on the sulfur content of diesel fuels in underground coal mines, and by updating its air-quality standards for sulfur dioxide and formaldehyde to conform to currently accepted levels of exposure. The proposed maximum sulfur content for diesel fuel is 0.25 percent by weight. The proposed standard for sulfur dioxide is a threshold limit value (TLV) of two parts per million. The current sulfur dioxide TLV is five parts per million. The proposed standard for formaldehyde is a TLV of one part per million. The current formaldehyde TLV is two parts per million.

Holmes Safety Association Monthly Safety Topic



Roof fall fatality

GENERAL INFORMATION: A roof bolt machine operator/helper with 16 years of mining experience was fatally injured by a fall of roof while in the process of barring down rock.

DESCRIPTION OF ACCIDENT: The victim reported to work at his normal starting time of 7:00 a.m. He and his fellow crew members were instructed where to start mining and, in a safety meeting, discussed conditions to be encountered. Special emphasis was placed on thickness of the draw rock and roof conditions on the section. Additionally, members of the roof bolting team were instructed to use metal straps where needed and were instructed not to go inby roof support.

About 7:15 a.m. routine production activities were initiated. The continuous mining machine started mining in the No. 2 entry crosscut left and continued on cycle in the No. 2 entry heading, No. 1 entry heading (accident scene), No. 5 entry heading and No. 4 entry heading. The victim and a helper who comprised the No. 1 left side roof bolting crew started roof bolting in the No. 3 entry and continued on cycle to No. 2 entry crosscut left working place, No. 2 entry heading and had just trammed the roof bolter to No. 1 entry heading prior to the accident.

The continuous miner operator and helper mined the face inby the last row of bolts in the No. 1 entry working place to a depth of approximately 18 to 20 feet. The

place was mined 18.5 to 20 feet in width.

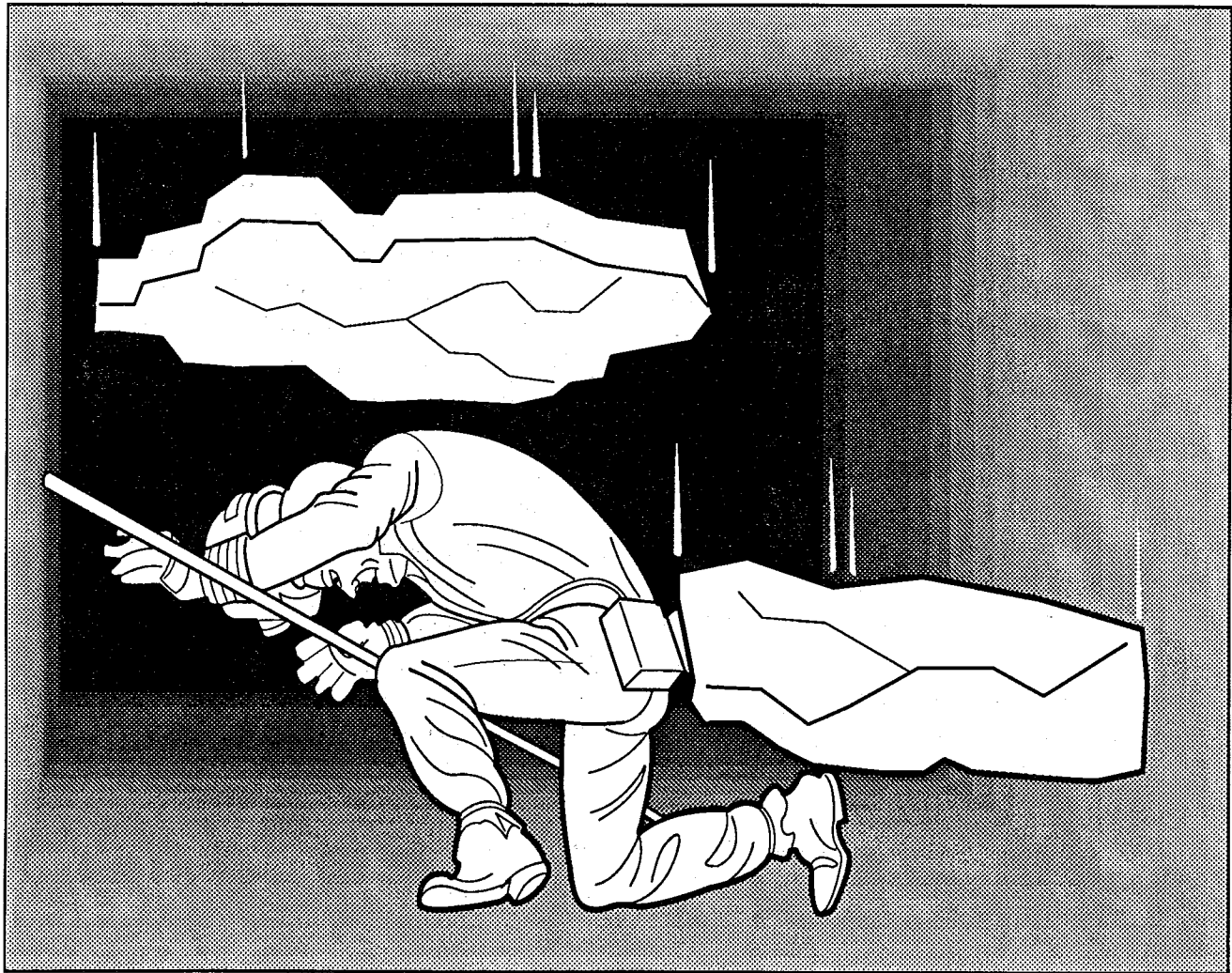
During the mining, adverse roof conditions were encountered. The continuous miner operator was able to cut down 5 to 6 inches of the roof on the right side. However, due to the undulations of the roof and mine floor, the roof in the middle and left side could not be cut down. An attempt was made to roll the miner head over the roof to get the draw rock to fall. A roof crack developed immediately inby the last row of bolts and when the small pieces of draw rock vibrated loose and started to drip, the miner operator discontinued his attempt to cut it down.

The victim and his helper trammed the roof bolting machine to within 15 feet of the last row of bolts and stopped. The victim took the slate bar and proceeded to the last row of bolts where he struck the outby piece of draw rock and it sounded drummy. He told his helper that he was going to try to pull the outby piece with the slate bar. When he placed the barring end of the slate bar over the place of loose rock and applied pressure, while on his knees (with his back toward the left rib), he lost his balance as the piece of draw rock came loose. As he fell forward inby the last row of bolts, he was struck by the falling piece of rock and knocking him further inby. The fallen draw rock landed on his right leg, pinning him, just as a second piece of rock fell on his upper body and head. The accident occurred at 10:30 a.m. and the victim was pronounced

arrival at the local hospital at 11:00 a.m.

CONCLUSION: The accident and resultant fatality occurred because work was being performed in by the last permanent

roof support and failure to install supplemental temporary roof supports to provide protection from falls of material when barring down draw slate.

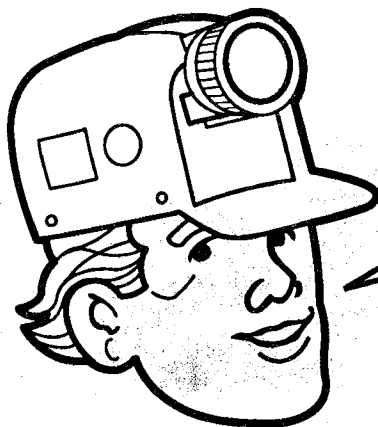


Roof Evaluation—Accident Prevention

REAP—a program developed to promote health and safety awareness in mining



Whenever you work or travel under unsupported roof, you are never alone. Their welfare depend on you working safely at **ALL** times!! Stay out of ... **the Death Zone**



If you don't want trouble, **"NEVER turn your back"** on unsupported roof!

MINERS: Credit for this month's safety slogan goes to: **Danny L. Trent** foreman of Donaldson Mine Co.—12A Mine, Drawer S, Cedar Grove, WV 25039. Please send your suggestions to: MSHA, Educational Policy & Development, 4015 Wilson Blvd., Graphics Room 533A, Arlington, VA 22203-1984. Phone: (703) 235-1400



September 1990

Form a Safety Partnership



use JSAs

Job Safety Analysis

September 1990

Please fold in thirds before mailing

5000-22
(Rev. 12-78)



Holmes Safety Association Meeting Report Form

(Please take the time to fill in the questionnaire at the bottom)

Fold here

For the month of

TOTAL meetings this month

TOTAL attendance this month

Chapter number (See address label, if incorrect, please indicate change)

NOTE: We must have your correct chapter number to give you credit for your HSA meetings

Signature

Telephone no.

Title

Fold here

1. Fill out 2. Fold and **TAPE!** 3. Free mail in

DO NOT USE STAPLES — The U.S. Postal Service says they jam the automatic sorters. Sharply creased folds will mail without tape

NOTE: Be sure our address shows on the other side

Fold here

Fold here

BULLETIN QUESTIONNAIRE:

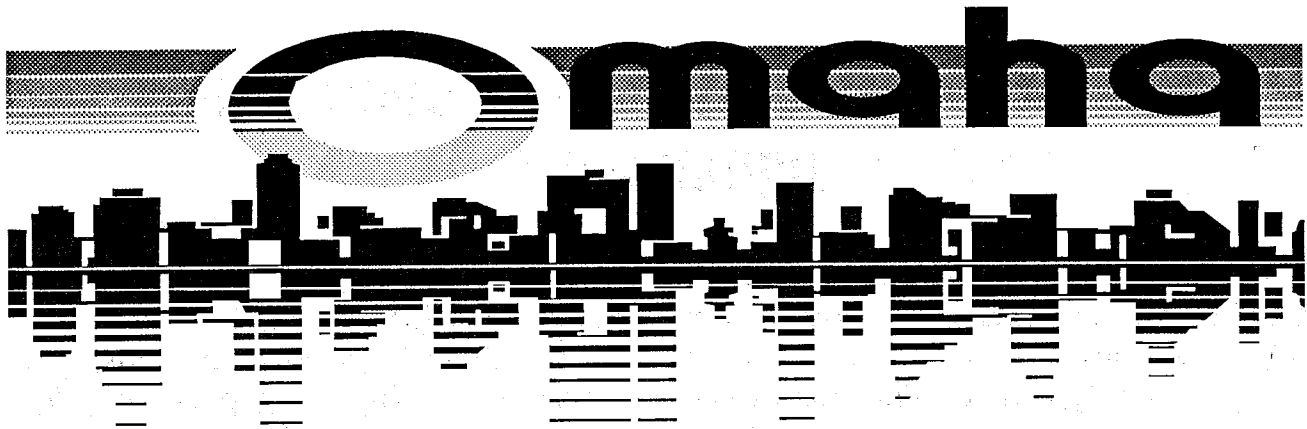
- How many people in your chapter see the HSA Bulletin each month? _____
- Would it be helpful if you could receive additional copies? If so, how many? _____
- Do you like the Bulletin in its present format? _____
- Would you like to hear more from other District Councils?

- What articles or features do you especially like? Please rank them 1-5 in order of appreciation with 1 being the highest.

<input type="checkbox"/> A. Safety topics	<input type="checkbox"/> B. Accident summaries
<input type="checkbox"/> C. Posters	<input type="checkbox"/> D. Announcements
<input type="checkbox"/> E. District Council reports	
- What articles would you like to see?

Postage and Fees PAID
U.S. Department of Labor
LAB 441

MSHA, Office of Holmes Safety Association
Educational Policy & Development
4015 Wilson Boulevard
Arlington, Virginia 22203-1984



1990 Mine Safety and Health Conference

The Nebraska Safety Center—Mine Safety Training invites you to update your knowledge to provide a safer workplace in the mining industry.

Mine operators, supervisors, inspectors, miner representatives, safety and health professionals will all benefit from this conference.

The conference will be held at the Holiday Inn, 3321 South 72nd Street Omaha, NE 68124. Phone (402) 393-3950 for reservations. A room is \$54.00, single or double occupancy, plus tax. To be assured this rate, motel reservations must be made by September 16, 1990. Reservations should be made under the Rocky Mountain Regional Mine Safety Conference.

The registration fee for the conference is \$35.00. That includes a noon meal on Wednesday.

Conference Agenda

Tuesday, October 16, 1990

- 8:00 Registration
- 1:00 MSHA Regulations Update Review and question and answer session on MSHA's new regulations and standards.
- 2:00 Job Safety Analysis
- 3:00 Supervisor Training concurrent with Electrical

Grounding & Testing

Wednesday, October 17, 1990

- 8:00 Registration
- 9:00 Opening Remarks
- 9:15 Rocky Mountain District Policies with question and answer session.
- 10:15 Commercial Drivers License and Defensive Driver Training concurrent with Hazard Communication
- 12:00 *Luncheon*
- 1:15 Risk Management
- 2:45 Workers Compensation—Company safety and how insurance rates are affected.

Thursday, October 18, 1990

- 8:00 State Grants Roundtable
- 9:00 Selecting A Drug Testing Laboratory Consideration for a valid testing program
- 10:30 First Aid/CPR An effective method of training large groups through the utilization of modern training equipment.

Registration Form

Rocky Mountain Mine Safety and Health Training Conference October 16-17-18, 1990

Mail To: Dick Ingerle
Nebraska Safety Center
West Center
Kearney State College
Kearney, NE 68849

Call Dick Ingerle or Darrel Jensen at (308) 234-8256



Make check payable to: Nebraska Safety Center Registration Fee: \$35.00

Name: _____ Position Title: _____

Organization: _____

Address: _____

City: _____ State: _____ Zip code: _____ Telephone: _____

September 1990

Why do we refuse to use personal safety equipment?

Psychologists and safety specialists who deal in human behavior have known for quite some time why people don't wear safety restraint systems. **They don't believe they'll be involved in an accident.** When a person buckles up, he or she **must admit the possibility of a crash.**

To be conscious and mindful of a possible vehicle crash each time we start the engine is contrary to human nature.

Expecting all vehicle occupants to buckle up each time is unrealistic. Unfortunately, safety belt laws and education can't assure the high use of restraints. To reduce fatalities and injuries, it then becomes necessary to install passive devices, at an added cost, for our own safety.

Did you ever notice how people seem to remember to put on eye protection when using a grindstone, but forget to wear their life jacket when performing an activity where there is a possibility of falling into the water. Maybe it has to do with the gambling odds. You realize there is almost a 100% chance of getting a hot metal particle in your eye from the grindstone, while you may work on or around a gravel dredge for five years or more and not fall in the water once. Then when you do, chances are, if you are somewhat of a

swimmer, you will pull yourself out and getting wet will be your only consequence. But, still lingering there in the odds, is the chance of receiving an incapacitating blow to the head during the fall, which increases the odds for drowning to near 100% if you are not wearing a life jacket.

Some people get their kicks through gambling with their lives, be it sky diving, mountain climbing, motor racing,

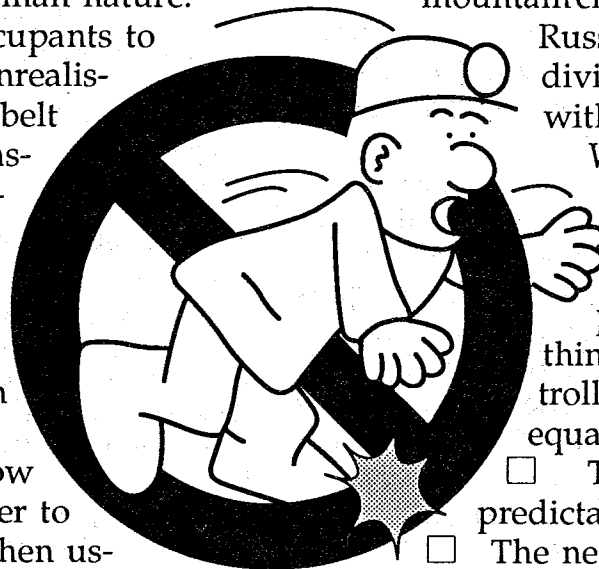
Russian roulette, bungee diving or playing around with safety rules.

Why is that? Freud thought sex was the most important human drive. But many psychologists today think we're really controlled by two very strong, equal and opposite drives:

- The need for structure, predictability and certainty.
- The need for freedom, risk-taking and uncertainty.

Everyone has one drive that's stronger than the other—that's what makes us all different. The knowledgeable **safety-conscious worker** and the **accident-prone worker**. **Think about it!!**

By permission: *Nebraska Mine Safety Training Newsletter*



Foot protection

When you least expect it.... accidents happen

It is estimated 110,000 injuries occurred on the job in 1988 that damaged workers feet or toes. That's more than 300 injuries every day that made it difficult if not impossible for workers to walk. The average compensation payment for a foot injury is about \$2,100.

Let's face It: No matter what sex you are, how old you are, or how your figure looks, your feet stick out and there is nothing you can do about it.

Probably the first thing that comes to mind when people hear the term "foot protection" is the classic steel-toed boot. And there's a good reason for that. Crippling injury to the feet and toes is virtually a constant possibility in most heavy industry. The feet are at risk not only from a heavy or sharp object falling on them, but also of being caught, wedged or crushed by a moving object such as a rolling cylinder, a sliding metal plate or the blades of a forklift.

The classic safety shoe: steel-cap safety shoes are available in a variety of styles for both men and women. Class 75 shoes or boots, which meet ANSI's highest rating, have been tested to withstand 75 footpounds of impact, or dead-weight drop, and 2,500 pounds of compression.

Foot protection: you may have heard the old rationale: "Why bother? If one of our units fall on my foot, nothing on earth will protect it." And it's true that there are some impacts no shoe can withstand. But the whole unit doesn't have to crash for your foot to be injured; a falling component piece or a tool can also break bones.

Other hazards to your feet: there are, of course, many ways to injure your foot that does not involve breaking any of the 26 bones. Your feet, or your shoes make contact with the environment in all kinds of conditions. Many common hazards can be protected against by wearing the right type of shoe.

Your whole body: clearly, foot protection can reduce foot injury. But foot protection against slippery surfaces or electric shock protects your whole body. Be sure your employees are not uncomfortable or in pain in their protective footgear. Make them believe that safety shoes do not have to be too hot, too cold, too heavy, too stiff or whatever. Otherwise there will be little enthusiasm for your foot protection program.

By permission: *Mine Safety \$en\$e*—State of Nevada



Announcement:



The Generic Mineral Technology Center for Respirable dust will host the Third Symposium on Respirable Dust in the Mineral Industries, October 16-19, 1990, at The Vista International Hotel, Pittsburgh, Pennsylvania. The purpose of this note is to provide you with an update of the Symposium events.

The Symposium is sponsored by the Generic Mineral Technology Center for Respirable dust (comprised of The Pennsylvania State University, West Virginia University, University of Minnesota, Massachusetts Institute of Technology and Michigan Technological University), the United States Bureau of Mines, the Mine Safety and Health Administration, the National Institute for Occupational Safety and Health, and the American Conference of Governmental Industrial Hygienists.

This Symposium on Respirable Dust in the Mineral Industries is designed to bring together those interested in the engineering, scientific, medical, and biological aspects of respirable dust in the min-

eral industries for discussion of new and potential developments in the control of respirable dust problems. The Symposium will be of particular interest to researchers in academia, government, and industry and will provide an opportunity to share information in this area of critical importance to the mineral industries.

The provisional program includes 46 papers, a poster session and a panel on research needs. The papers will be published by the Center in a bound volume.

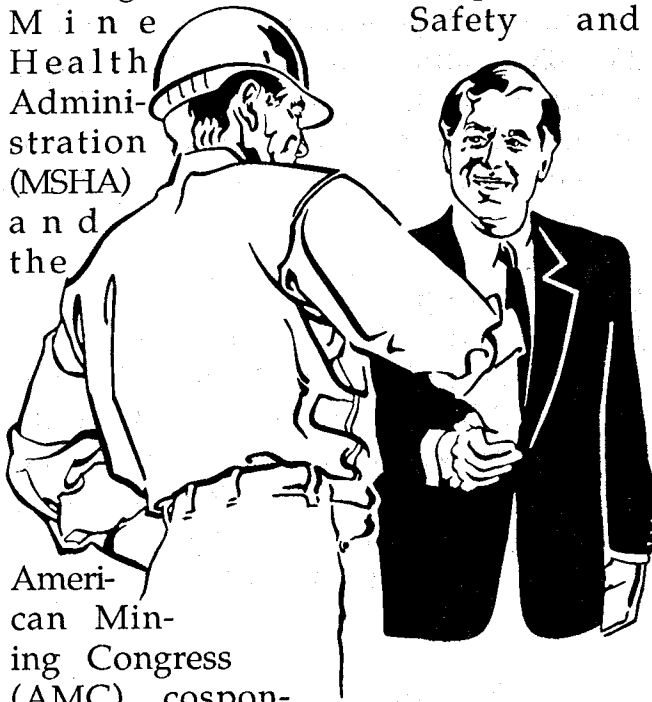
The registration fee for those who register before September 10, 1990, is \$225; after September 10, 1990, the fee will be \$275. The fee covers two luncheons, a banquet, six coffee breaks and a bound copy of the proceedings.

For further information please contact:

Mr. Norman Lathbury,
409 Keller Conference Building,
The Pennsylvania State University,
University Park, PA 16802.
Telephone: (814) 863-6106 or
FAX: (814) 865-3003

Mining operations cited for outstanding safety records

Sentinels of Safety trophies have been awarded to six mining operations for their outstanding safety records in 1989, according to the Labor Department's Mine Safety and Health Administration (MSHA) and the



American Mining Congress (AMC), cosponsors of the annual awards program.

Two sand and gravel operations also received awards for a similar achievement under a separate program sponsored by MSHA.

"The Sentinels of Safety awards annually remind all of us that working in mines can be a safe occupation," said William J. Tattersall, assistant secretary of labor for mine safety and health. "The fine safety records of the award winners show what can be accomplished by companies with a strong commitment to safety, well-trained, enthusiastic workforces and vigorous accident prevention programs. Their achievements point the way to a future in which there will be no mining fatalities." Mining companies in various operational

categories were honored for achieving the greatest number of employee-hours worked during 1989 without an injury that resulted in lost workdays. To qualify, a company had to compile at least 30,000 safe employee-hours without a lost-time injury or fatality in that year.

First-place winners and safe employee-hours recorded in each of the sponsored categories are:

Underground Coal Group

Dominion Coal Corp., Youngs Branch Mine No. 15, Vansant, Va., 169,488 hours.

Surface Coal Group

Amax Coal Co., Belle Ayr Mine, Indianapolis, Ind., 385,321 hours.

Underground Metal Group

Magma Copper Co., Pinta Valley Operations, Miami, Ariz., 102,455 hours.

Underground Nonmetal Group

United States Gypsum Co., Shoals Mine, Shoals, Ind., 181,706 hours.

Open Pit Mine Group

E. I. Dupont De Nemours & Co., Inc., Dupont Florida Mine and Plant, Starke, Fla., 402,423 hours.

Quarry Group

Tarmac Florida, Inc., Pennsuco Aggregate Plant, Hialeah, Fla., 353,278 hours.

The sand and gravel mining operations in the categories sponsored by MSHA that received awards for similar achievements are:

Bank or Pit Group

C. L. Pharris Sand & Gravel Co., Mayhew Plant, Riverside, Calif., 144,086 hours.

Dredge Group

Ross Island Sand & Gravel, Ross Island Plant, Portland, Ore., 97,511 hours.

Other mining operations with exceptional safety records during 1989 included the following:

Underground Coal Group

Underground Coal, Inc., Apraw Underground Mine, Washington, Ind., 89,837 hours; Paramount Coal Corp., Deep Mine No. 16, Wise, Va., 87,117 hours; Leeco Inc., Leeco Inc. No. 62, London, Ky., 81,507 hours; Manalpan Mining Co., Mine No. 6, Brookside, Ky., 79,879 hours.

Surface Coal Group

Terry Coal Sales, Terry Strips, Distant, Pa., 296,844 hours; Atascosa Mining Co., San Miguel Lignite Mine, Jourdanton, Tex., 293,217 hours; Santa Fe Pacific Coal Corp., Lee Ranch Mine, Grants, N.M., 249,638 hours; Mobil Coal Producing, Inc., Cabello Rojo, Gillette, Wyo., 222,226 hours.

Underground Metal Group

The Doe Run Co., Viburnum No. 35 Casteel, Viburnum, Mo., 99,496 hours; American Copper & Nickel Co., Inc., Mineral Hill Mine, Gardiner, Mont., 98,089 hours; The Doe Run Co., Viburnum No. 29 Mine, Viburnum, Mo., 88,672 hours; Umetco Minerals Corp., Sunday Mine, Nucla, Colo., 81,382 hours.

Underground Nonmetal Group

United States Gypsum Co., Oakfield Mine, Oakfield, N.Y., 155,185 hours; United States Gypsum Co., Sperry Mine, Sperry,

Iowa, 154,644 hours; A. P. G. Lime Corp., Kimballton Mine, Ripplemead, Va., 129,829 hours; American Gilsonite Co., American Gilsonite Mine, Bonanza, Utah, 74,536 hours.

Open Pit Group

Mobil Mining & Minerals, Ft. Meade Mine, Nichols, Fla., 289,151 hours; B P Gold Co., Kennecot Alligator Ridge Mine, Ely, Nev., 257,985 hours; Manville Sales Corp., Lompoc Plant, Lompoc, Cal., 135,296 hours; Chevron Resources Co., Rhode Ranch Mine, Hobson, Texas, 124,475 hours.

Quarry Group

Lone Star Industries, Clinton Point Quarry, West Nyack, N.Y., 208,544 hours; Pfizer, Inc., M. P. M. Division Canaan, Canaan, Conn., 127,290 hours; F. C. S. Mining Co., Centerhill Limerock Mine, Centerhill, Fla., 124,209 hours; Keystone Cement Co., Keystone Cement Co., Bath, Pa., 112,430 hours.

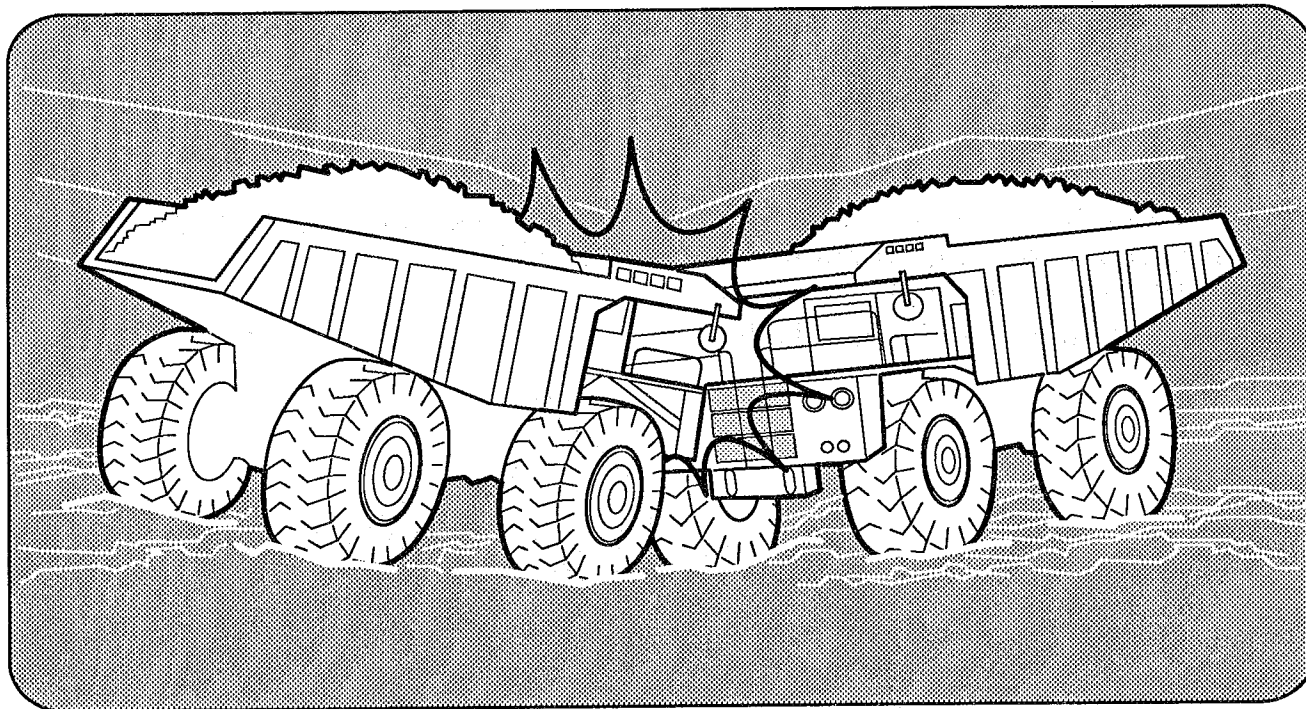
Bank or Pit Group

Thorstenberg Materials Co., Arena, Garwood, Texas, 134,418 hours; W. R. Bonsal Co., Mining Division, Lilesville, N.C., 126,651 hours; The Tanner Companies, Plant-I United Metro, Phoenix, Ariz., 112,326 hours; Channel & Basin Reclamation, Inc., Hansen Dam, Tujunga, Cal., 96,516 hours.

Dredge Group

U.S. Silica Co., Millville Plant, Newport, N.J., 89,624 hours; Vulcan Materials Co., River Street Plant, Chattanooga, Tenn., 78,711 hours; Unimin Corp., Dividing Creek Plant, Millville, N.J., 64,773 hours; Wibco Inc., Port Elizabeth Plant, Port Elizabeth, N.J., 63,175 hours.

Program initiated to reduce metal and nonmetal mining haulage deaths



To reduce the upsurge in deaths from powered haulage accidents in the nation's metal and nonmetal mines, MSHA recently announced implementation of a program of enforcement action on seat belt use.

"In the first half of this year, there have been 10 more surface powered haulage deaths and half of these fatalities could have been prevented if equipment operators had been wearing seat belts," said Assistant Secretary Tattersall. "MSHA continues to urge the mining industry to reemphasize the proper use of seat belts, but the rash of haulage fatalities this year in metal and nonmetal mines calls for a stronger enforcement approach to prevent further deaths."

A recent agency study of 167 surface powered haulage fatalities in metal and nonmetal mines during the 1979-89 period found that 88, or 52 percent of those deaths might have been avoided by proper

seat belt use.

MSHA's regulations require that mining companies provide that operators wear seat belts in equipment where there is a danger of overturning and where rollover protection is required.

Under the new enforcement program, MSHA's district managers will focus on the gravity and negligence of citations issued for failure to use seat belts properly. Under the gravity evaluation, failure to provide, maintain or wear seat belts is considered a serious safety hazard and under most circumstances a significant and substantial violation.

All citations issued for seat belt use violations will be reviewed for special assessment. These will include violations cited (1) as contributing to a serious injury or fatality; (2) as an unwarranted failure to comply with the mine act; (3) as an imminent danger that could cause serious injury if not corrected; and (4) as having

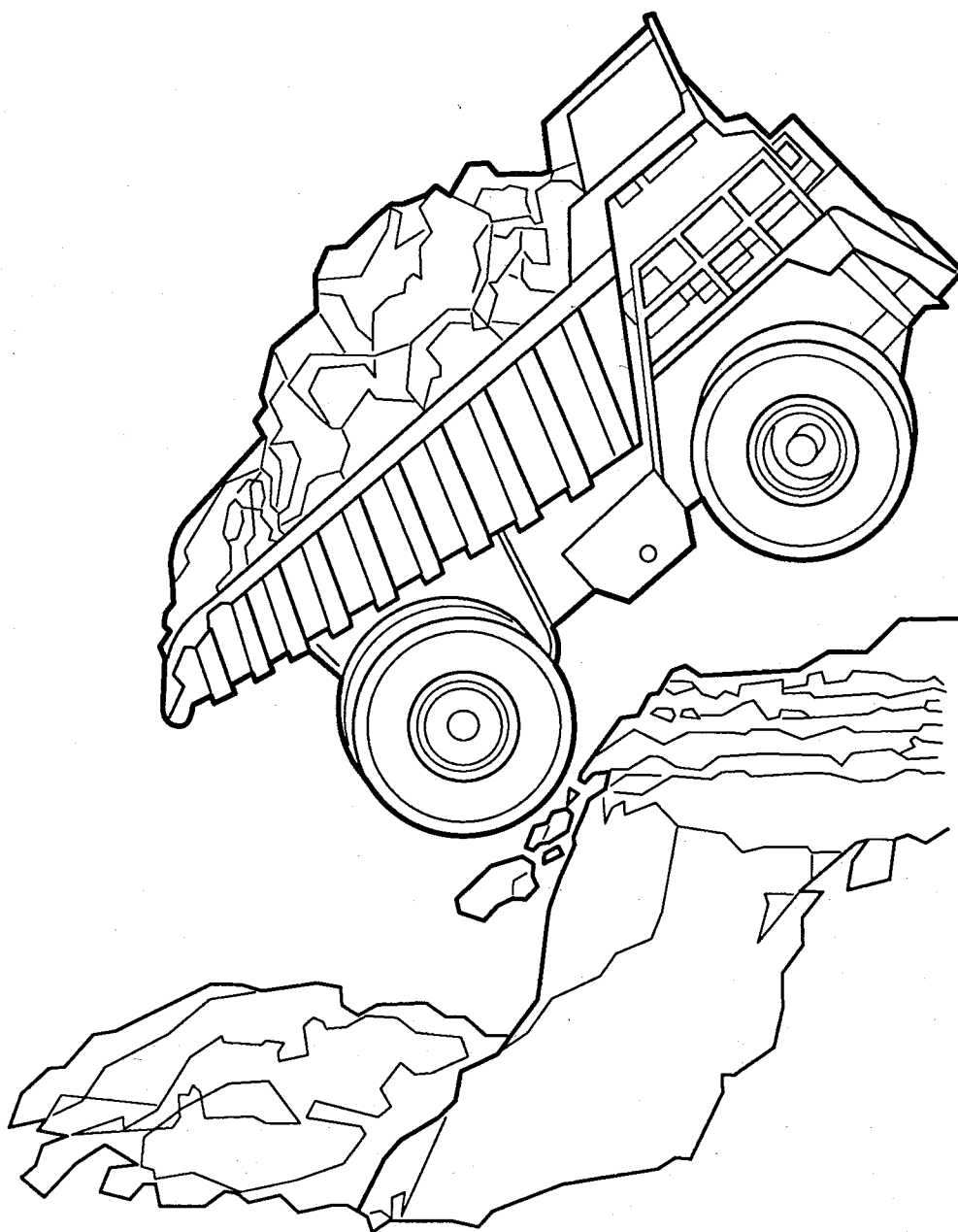
extraordinarily high gravity—usually resulting in serious injury or death.

In addition, MSHA has been asking surface mine operators to inform supervisors, miners and contractors who work at mine sites about deaths that could have been prevented by the wearing of seat belts. MSHA also has been urging the industry to renew its emphasis on the importance of following a comprehensive safety and inspection program.

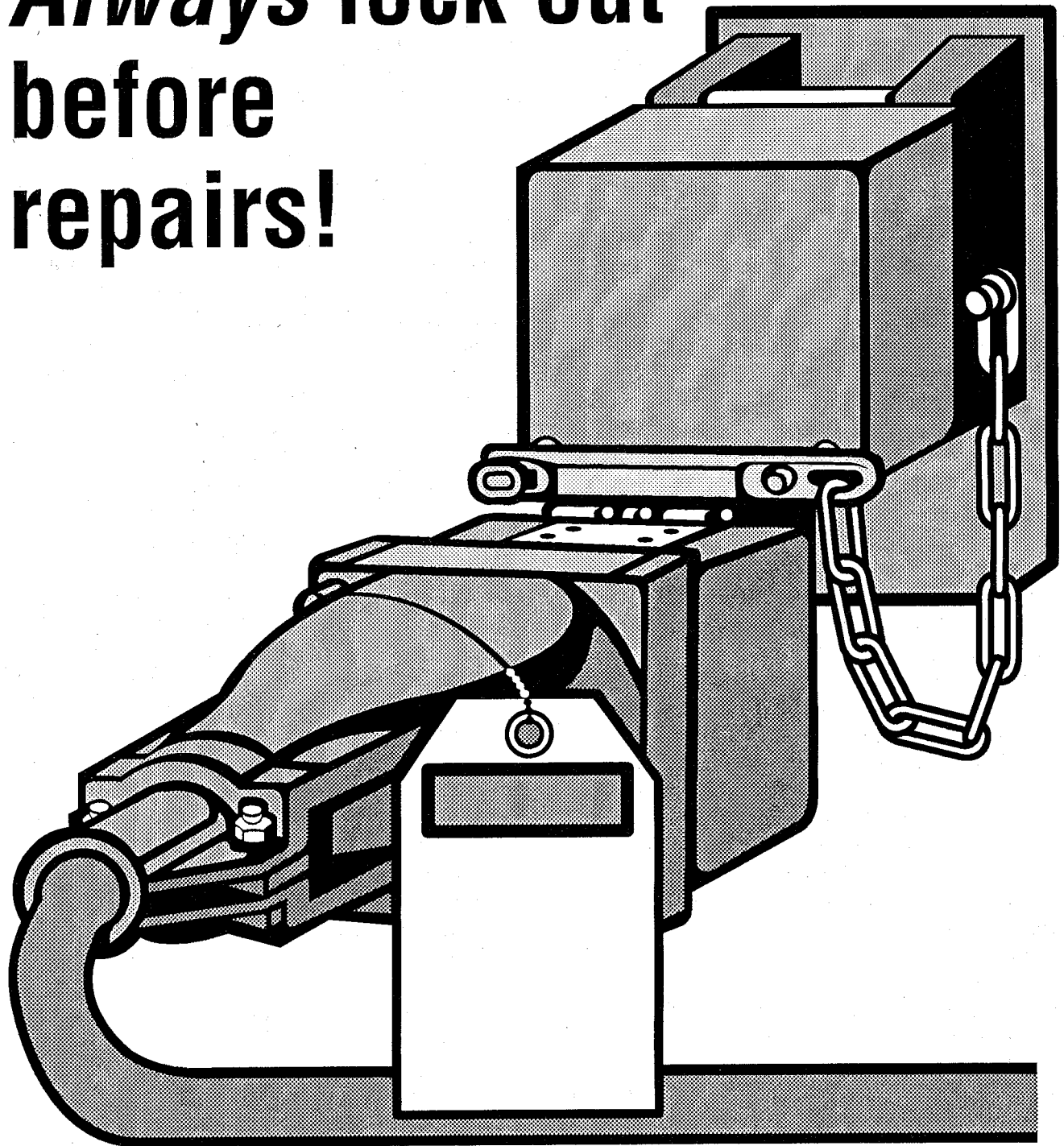
To assist mine operators in conveying this message to their employees, the Na-

tional Mine Health and Safety Academy has made the following materials available: a brochure entitled "Powered Haulage Fatalities in Coal and Metal and Nonmetal Mines"; a comprehensive training program entitled "Haulage Hazard Awareness"; and a slide presentation covering 1988 fatal accidents.

MSHA is encouraging the use of seat belts for all powered haulage equipment.



ELECTRICITY can turn
YOU off!
Always lock out
before
repairs!



Open your eyes and learn to listen

A listening problem caused the challenger disaster. "All the messages to stop the space shuttle mission were actually in the system," says Martin Stroller, Ph.D., a professor of organization behavior at Northwestern University's J.L. Kellogg Graduate school of Management. "Despite clear, unambiguous signals saying 'don't launch this thing,' they went ahead and did it anyway. The consequences of not listening flow down from death to injury to lost time to confusion."

By brushing up on the often neglected skill of listening, safety directors can save lives, avoid potential problems, improve employee morale and increase productivity.

Dr. Stroller blames the problem of not listening on the "televisionization" of Americans. "We have one, two, three, four electronic stimuli happening simultaneously and we believe we can process it all at the same time."

For instance, Stoller points to his mailman, who wears a walkman and often delivers his neighbor's mail to him. "The mailman is going to 50 different apartments in a single unit, listening to a walkman and obviously not getting it right," he explains. "He's tuned into something else and not concentrating on the task." Getting the neighbor's mail is one thing, safety is another; but the same listening principles apply.

Informal approaches work best Stroller recommends an informal approach to getting feedback from employees. By showing employees you're willing to listen, you can improve morale. "It takes initiative and incentive to listen, but do it. Don't just go down to the plant, and get out of the plant. Show up at the picnic."

When listening to employees, don't try to direct the conversation. "Obviously, people on the line have the data and you don't," says Stoller. "Or you don't have as much as they do and that's why they are at risk." By letting the employee talk without interruption, a safety director can get "real information."

Let your response to employees be guided by what you hear, not by your original plan. "Sometimes you'll shoot the breeze and there will be a lot of hot air, but you'll see that employees actually warm up to you and won't treat you like the enemy manager," adds Stroller. "They'll treat you like someone who's trying to be of some

benefit to them."

Because communication is two-way, encourage employees to listen to you by setting an example. Showing employees that you sincerely care about them, and not just an impressive safety record to report to the president, will make them want to listen to you.

Alex Kane, President, Alex Kane & Associates, a Prospect Heights, Ill.-based consulting firm, says, "tell them something they want to hear in a way they understand. Say 'I don't want anyone getting hurt, least of all you.'"

If you merely throw facts at them, such as the number of work hours without injury, they'll probably tune you out, but a more personal approach will open their ears to your message. Once you show them you want to listen you can find out if they understand your message by asking them to repeat what you've said.

Three steps to effective listening Clemm Kessler, President, Kessler & Associates, an Omaha, Neb.-based management consulting firm, suggests three steps you can take to show your employees you want to listen. First, invite employees to communicate. The invitation can be a walk through the plant, a suggestion system or even a survey, if done correctly. After inviting communication, work at listening. To be an active listener, you should be sincerely interested in the topic, create a comfortable atmosphere, avoid daydreaming, do not prejudge, take notes, summarize the conversation and ask questions when the employee is finished talking. The final step, which is vital, is to follow up on the employee's suggestion or complaint.

"You don't necessarily have to give the employee what he wants, but you have to follow through," says Kessler. If an employee suggests a new way of unloading steel, you can't promise the unloading process will change; but you can promise to work on it and keep him informed. If you reject the idea, explain why you did so.

Moreover, Kessler stresses the importance of delivering what you do promise. For example, a survey can imply promises of change in the workplace if you fail to describe it to employees as a data-gathering device. "You can get caught in a corner with a survey," he says. "The results increase employees' expectations." Kessler warns

safety directors to be clear about the message the survey conveys, to identify the problems the survey uncovers and to rectify them as soon as possible.

Employee teams solve problems At some companies, such as Dow Chemical Co., Freeport, Tex., the employees themselves solve problems on a daily basis. "It's part of our culture to listen to our employees because they're the experts," says Art Mudt, Director of Safety and Loss Prevention. Top managers gather feedback from employees in a variety of ways. Line employees meet with managers at all levels, form problem-solving teams and participate in games to offer feedback. For example, an employee who suggests an idea earns a spin in the company's "Wheel of Fortune" game, and may win a prize. The games help generate as much employee feedback as possible, and, at the same time, make safety fun.

Taking a proactive approach to safety, Dow also has a group of employees working on a behavior studies team to prevent accidents. The group, made up of line employees and the safety director, randomly checks the work of their peers, finding out what they are doing right and what needs improvement. If a worker performs a task correctly, the manager will congratulate the individual. If an employee is doing something in an unsafe manner, the manager identifies it, and helps the worker correct the behavior before an accident happens.

When an accident does occur, management again turns to employees for feedback. A group of employees investigates the accident and comes up with a solution to avoid the same accident in the future. "We use employees ideas all the time," Mundt says. "It's ingrained in us to listen to the employees. If you don't listen, then you should fold up your tent and go home."

Answering complaints in person Employees at Bridgestone, Inc., LaVergne, Tenn., also feel that management is listening to them. The safety department responds to each employee complaint with a personal visit by the safety director or another department representative. As a result, the company benefits from a lot of employee feedback.

"No one can run a safety program from an office, so we get our employees involved," says Bob McArthur, Manager of safety, security medical and environment. Employees Involve-

ment Groups (EIGs) bring workers together to make recommendations. The groups meet weekly or monthly to provide management with feedback on safety items and other work issues. Since the program began, safety awareness has increased and the number of back injuries and cases of carpal tunnel syndrome have declined.

It pays to listen Ted Reynolds, Division Safety Supervisor at Holly Farms Division of Tyson Foods, Wilkesboro, N.C., believes in the "round table concept." Employees bring their complaints and suggestions to monthly hour-long luncheons and dinners with local managers. Cash incentives encourage Holly Farms employees to give feedback; if the company implements the idea, the award is "substantial."

Reynolds also seeks employee feedback by being visible and spending as much time in the plant as possible. "I walk around, listen to them, talking about anything and everything," he explains.

At Wells Concrete Products Co., Wells, Minn., Larry Treptow, Personnel and Safety Director, is forming a safety committee. Five employees, the plant manager and Treptow will meet every two months to talk about problems and try to find solutions. In addition to the new safety committee, the employees attend a monthly meeting where they have solved some safety problems for the company. When certain fumes caused a ventilation problem, an employee suggested the solution. "It's this type of problem solving that make employees say, 'hey, they listen to us,'" Treptow says. "They know we're open for suggestions."

Employees at Nucor Corp. also know managers want their feedback. In fact, they want it so much that employees can call managers at home. "Do they call? You bet they do," says Jim Hicks, Health and Safety Director at Nucor's steel manufacturing plant in Plymouth, Utah. "Everyone is on a one-to-one basis. There's no chain of command. If they have a problem, they know they can come talk to us."

Reprinted from the National Safety Council's Safety and Health

The Last Word...

"Nothing is more conducive to peace of mind than not having any opinions at all."
(Georg Christoph Lichtenberg)

"Anyone can win, unless there happens to be a second entry." (George Ade)

"You can get more with a kind word and a gun than you can with a kind word alone."
(Johnny Carson)

"I smoke cigars because at my age if I don't have something to hang onto I might fall down." (George Burns)

"Originality is the art of concealing your sources." (Unknown)

"You can't depend on your eyes when your imagination is out of focus." (Mark Twain)

"One should forgive one's enemies, but not before they are hanged." (Heinrich Heine)

"Everything is in a state of flux, including the status quo." (Robert Byrne)

"Good judgement comes from experience, and experience comes from bad judgement." (Barry LePatner)

"The first human being who hurled an insult instead of a stone was the founder of civilization." (Sigmund Freud)

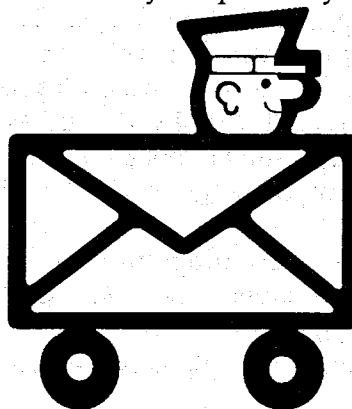
"Faith is believing what you know ain't so." (Mark Twain)

NOTICE: We will welcome any materials that you submit to the Holmes Safety Bulletin. We cannot guarantee that they will be published, but if they are, we will list the contributor(s). Please let us know what you would like to see more of, or less of in the Bulletin.

REMINDER: The District Council Safety Competition for 1990 is underway – please remember that if you are participating this year, you need to mail you quarterly report to:

Mine Safety & Health Administration
Educational Policy and Development
Holmes Safety Bulletin
4015 Wilson Boulevard, Room 531
Arlington, Virginia 22203-1984

Phone: (703) 235-1400



Holmes Safety Association

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1990-1991

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Joseph A. Holmes Safety Association Awards Criteria—Outline

Type "A" Awards - For Acts of Heroism

The awards are medals with Medal of Honor Certificate.

Type "A" - For Acts of Heroic Assistance

The awards are Certificates of Honor.

Type B-1 Awards - For Individual Workers

(40 years continuous work experience without injury that resulted in lost workdays)

The awards are Certificate of Honor, Gold Pins and Gold Decal.

Type B-2 Awards - For Individual Officials

(For record of group working under their supervision)

The awards are Certificate of Honor.

Type C Awards - For Safety Records

(For all segments of the mineral extractive industries, meeting adopted criteria)

The awards are Certificate of Honor.

Other Awards - For Individual Workers

(For 10, 20, or 30 years without injury resulting in lost workdays)

The awards are 30 years - Silver Pin and Decal, 20 years - Bronze Pin and Decal, 10 years - Decal bearing insignia.

Special Awards - For Small Operators

(Mine operators with 25 employees or less with outstanding safety records)

The awards are Certificate of Honor.

For information contact: Secretary-Treasurer, Joseph A. Holmes
Safety Association (304) 256-3245

Joseph A. Holmes Safety Association

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