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# BULLETIN

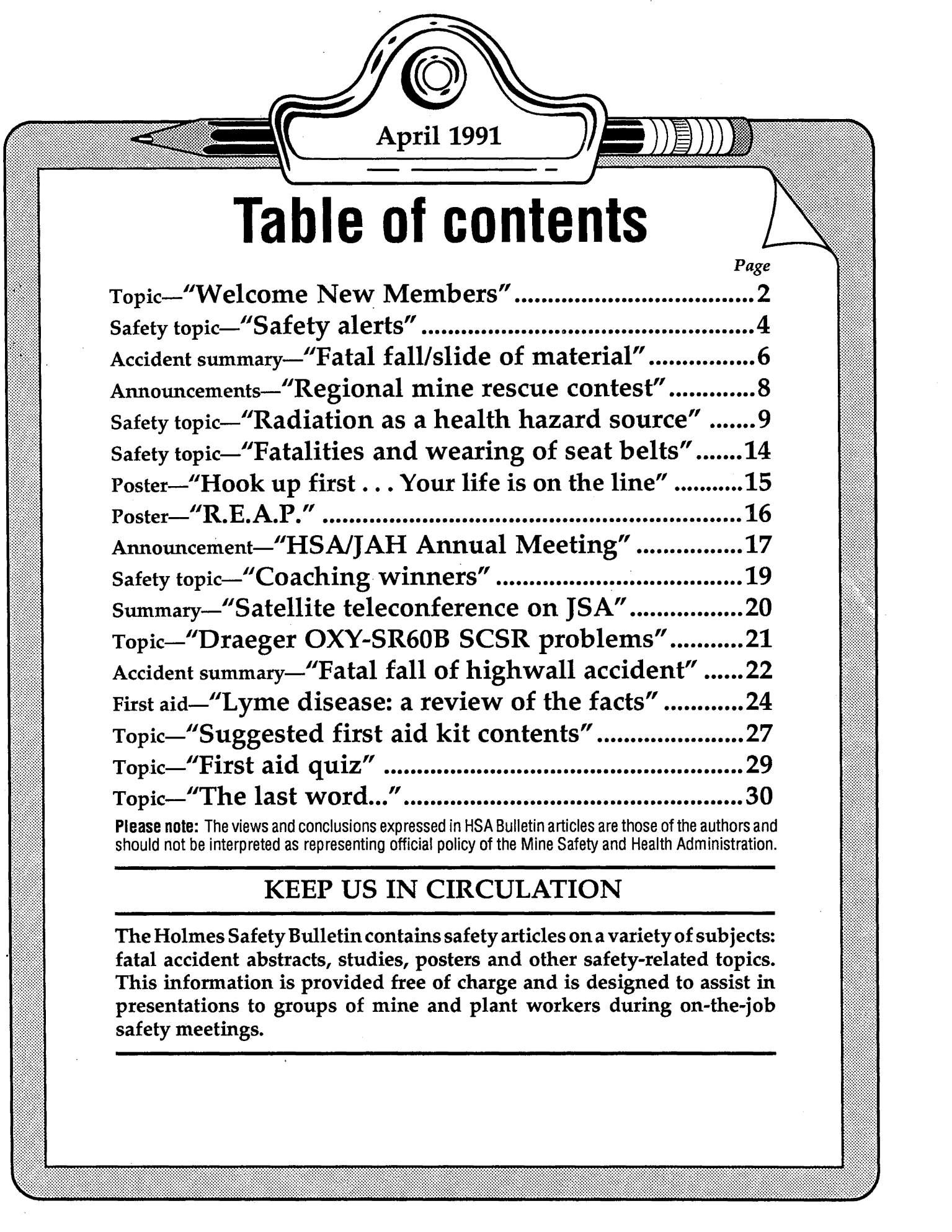
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April 1991





April 1991

# Table of contents

	<i>Page</i>
Topic—"Welcome New Members" .....	2
Safety topic—"Safety alerts" .....	4
Accident summary—"Fatal fall/slide of material" .....	6
Announcements—"Regional mine rescue contest" .....	8
Safety topic—"Radiation as a health hazard source" .....	9
Safety topic—"Fatalities and wearing of seat belts" .....	14
Poster—"Hook up first . . . Your life is on the line" .....	15
Poster—"R.E.A.P." .....	16
Announcement—"HSA/JAH Annual Meeting" .....	17
Safety topic—"Coaching winners" .....	19
Summary—"Satellite teleconference on JSA" .....	20
Topic—"Draeger OXY-SR60B SCSR problems" .....	21
Accident summary—"Fatal fall of highwall accident" .....	22
First aid—"Lyme disease: a review of the facts" .....	24
Topic—"Suggested first aid kit contents" .....	27
Topic—"First aid quiz" .....	29
Topic—"The last word..." .....	30

**Please note:** The views and conclusions expressed in HSA Bulletin articles are those of the authors and should not be interpreted as representing official policy of the Mine Safety and Health Administration.

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## KEEP US IN CIRCULATION

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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.

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# Welcome New Members

CHAPTER NAME	CHAPTER NO.	LOCATION
Big Mountain No. 2.....	9100 .....	Pineville, WV
Jamie Marcus Coal Co., Inc. #4.....	9102 .....	Richlands, VA
Oak Grove Energy .....	9103 .....	Bidwell, OH
RMC Lonestar .....	9104 .....	Davenport, CA
New Kensington .....	9105 .....	New Kensington, PA
Lower Burrell.....	9106 .....	New Kensington, PA
Baggaley .....	9107 .....	Latrobe, PA
Connellsville .....	9108 .....	Connellsville, PA
Whitney .....	9109 .....	Latrobe, PA
Torrance .....	9110 .....	Blairsville, PA
Tarrtown.....	9111 .....	Adrian, PA
Allegheny II Dredge .....	9112 .....	New Kensington, PA
Halliburton Services .....	9113 .....	Zanesville, PA
KBR Systems, Inc. ....	9114 .....	Sandy, UT
Reb Enterprises, Inc. ....	9115 .....	Springdale, AR
Cate Equipment Company .....	9116 .....	Salt Lake City, UT
Cate Carbon Equipment Company .....	9117 .....	Price, UT
Cate Idaho Equipment Company .....	9118 .....	Pocatello, ID
Coatings, Inc. ....	9119 .....	Salt Lake City, UT
Miller Drilling .....	9120 .....	Orem, UT

CHAPTER NAME	CHAPTER NO.	LOCATION
Holnam, Inc. ....	9121 .....	Ada, OK
Prairie Sand & Gravel.....	9122 .....	Beloit, WI
A & T Manufacturing, Inc.....	9123 .....	Viper, KY
Patton Construction Company, Inc. ....	9124 .....	Ashland, KY
Lake Herman Quarry .....	9125 .....	Napa, CA
William Hostutler.....	9126 .....	Fairmont, WV
Defender Industries .....	9127 .....	Grand Chain, IL
TXI Cement Company.....	9128.....	Midlothian, TX
Mining Services International .....	9129.....	Grove City, PA
Mining Services International .....	9130 .....	Salt Lake City, UT
Mining Services International .....	9131 .....	Point of Rocks, WY
Lowe Mining Of SW Virginia, Inc. ....	9132.....	Wise, VA
J and L Coal, Inc. ....	9133.....	Richlands, VA
Montana Talc Company Plant.....	9134 .....	Three Forks, MT
Johnny Gulch Mine .....	9135.....	Ennis, MT
100 Proof-Trucking .....	9136 .....	Thacker, WV
Tri-J Coal Company, Inc. ....	9137 .....	Robbins, TN
Myers .....	9138 .....	Clarksburg, WV
Elmhurst Fire Department.....	9139 .....	Elmhurst, IL
Morrison Knudsen Corporation .....	9140.....	Parker, AZ
Mule Train Coals, Inc.....	9141 .....	Fairmont, WV
Center Drilling, Inc. ....	9142.....	Philipsburg, PA

# Safety alerts

## Unexpected movement of roof drills

There have been several accidents nationally involving roof drills which have resulted in severe injuries to drill operators. In Virginia, one such accident resulted in a fatality. Injuries have resulted from the drill operator being caught between the mine roof and the drill boom or ATRS of the roof drill. The injuries have occurred during roof bolt installation, while retrieving drill steel from bolt holes, removing the dust hose from across the drill boom, and reaching across the drill boom to retrieve dropped steel.

### Safety precautions

- Roof drill operators should familiarize themselves with all pinch point hazards presented by their machines.
- Roof drill operators should not place themselves in hazardous locations.
- Roof drills should be maintained in safe operating condition.
- The machine should be in the "off" position when it is necessary for the operator to lean or reach over the drill boom.

## Unexpected movement of longwall shields

Several accidents occurred last year in the nation's coal fields involving longwall shields which have collapsed, resulting in fatal crushing injuries to the victims. In all cases, the shields were in the down pressure mode when they suddenly released from their lodged position. One of these fatal accidents occurred when the victim was caught between the stabilizer bar and the shield.

shields, determine what step must be taken to dislodge the shield and perform the task from a safe position.

- Longwall shield operators must leave the controls for a shield in the neutral position before proceeding to the controls of the adjacent shield.
- Longwall shield operators must avoid placing themselves in pinch points and hazardous positions.

### Safety precautions

- Prior to performing work on lodged

## Electrical hazards associated with trailing cable repairs

Guy wires are used to support utility poles at mine sites, along access roads and highways, through forests, across fields and in yards near our homes. Potential shock

hazards exist where guy wires can come in contact with an energized transmission line, resulting in electrocution.

A fatality occurred recently in Virginia

when a surface employee at an underground coal mine attempted to move a dislodged guy wire. An uninsulated portion of the guy wire came in contact with an energized transmission line and resulted in electrocution.

#### **Safety precautions**

- Guy wires supporting utility poles should be adequately insulated or properly protected from contacting live power conductors.
- Overhead power wires and support

lines such as guy wires should be located to prevent contact with passing equipment and vehicles.

- Sagging, broken, or dislodged guy wires should be moved only by qualified personnel.
- Work areas should be examined thoroughly for hazards and corrective measures taken prior to beginning work.
- The method of insulating guy wires from becoming energized should be examined for adequate protection at home as well as on job sites.

## **Hazards associated with remote controlled mining equipment**

Since the introduction of remote controlled continuous mining machinery in underground coal mining, the use of this technology has vastly increased. As a result of this increased use, the number of accidents associated with remote controlled machinery have also increased.

Virginia experienced two machinery accidents during 1990 that resulted in fatal injuries to the victims who were operating continuous mining machinery by remote control. The first accident involved a shift foreman who was tramping a continuous mining machine across the working section, while the second accident involved a continuous mining machine operator cleaning up a cut of coal. Both victims were crushed between the coal rib and the continuous miner, resulting in fatal injuries.

#### **Safety precautions**

- Machine operators should be familiar with the controls, safety features, and hazards associated with the machine.
- Continuous mining machines equipped with an operator's deck should be operated from the operator's deck, with the on board controls, when tramping the machine from one place to another.
- When the remote controls are used to operate mining machinery, the operator and all other persons should position themselves in a safe location away from the machine and pinch points created by either the mining machine and/or haulage equipment.

*Mine Safety Alert, Virginia Department of Mines, Minerals and Energy, December 1990-January 1991.*

# Holmes Safety Association Monthly Safety Topic



## Fatal fall/slide of material accident

**GENERAL INFORMATION:** A 34 year-old pipe welder, with one year of experience, was crushed against a 30-inch diameter steel pipe he was welding when the ditch he was working in collapsed.

The mine and mill, a surface phosphate mining and milling operation, was normally operated for three, 8-hour shifts a day, 7 days a week, and employed a total of 543 persons.

Phosphate was mined from a pit near the plant by draglines, and it was processed by passing through mills, dryers and calciners. It was then stored and shipped to a nearby chemical plant or transported to other plants where it was used to manufacture fertilizer.

**DESCRIPTION OF ACCIDENT:** On the day of the accident, the victim reported to work at 7:00 a.m., his normal starting time. His job classification was welder. He was to help the excavating crew, which included another welding crew, install a 30-inch diameter steel pipe in an excavated ditch.

The excavating foreman and his crew had started the pipe line project four days earlier. The job had been completed from the middle of the mine access road and the ditch was back-filled so that vehicles could start using the road. This left approximately 6 feet of 30-inch diameter pipe exposed on which to attach the next section. The bottom of the pipe at this juncture was approximately 12-1/2 feet below ground level. The open ditch extended west from this point for about 60

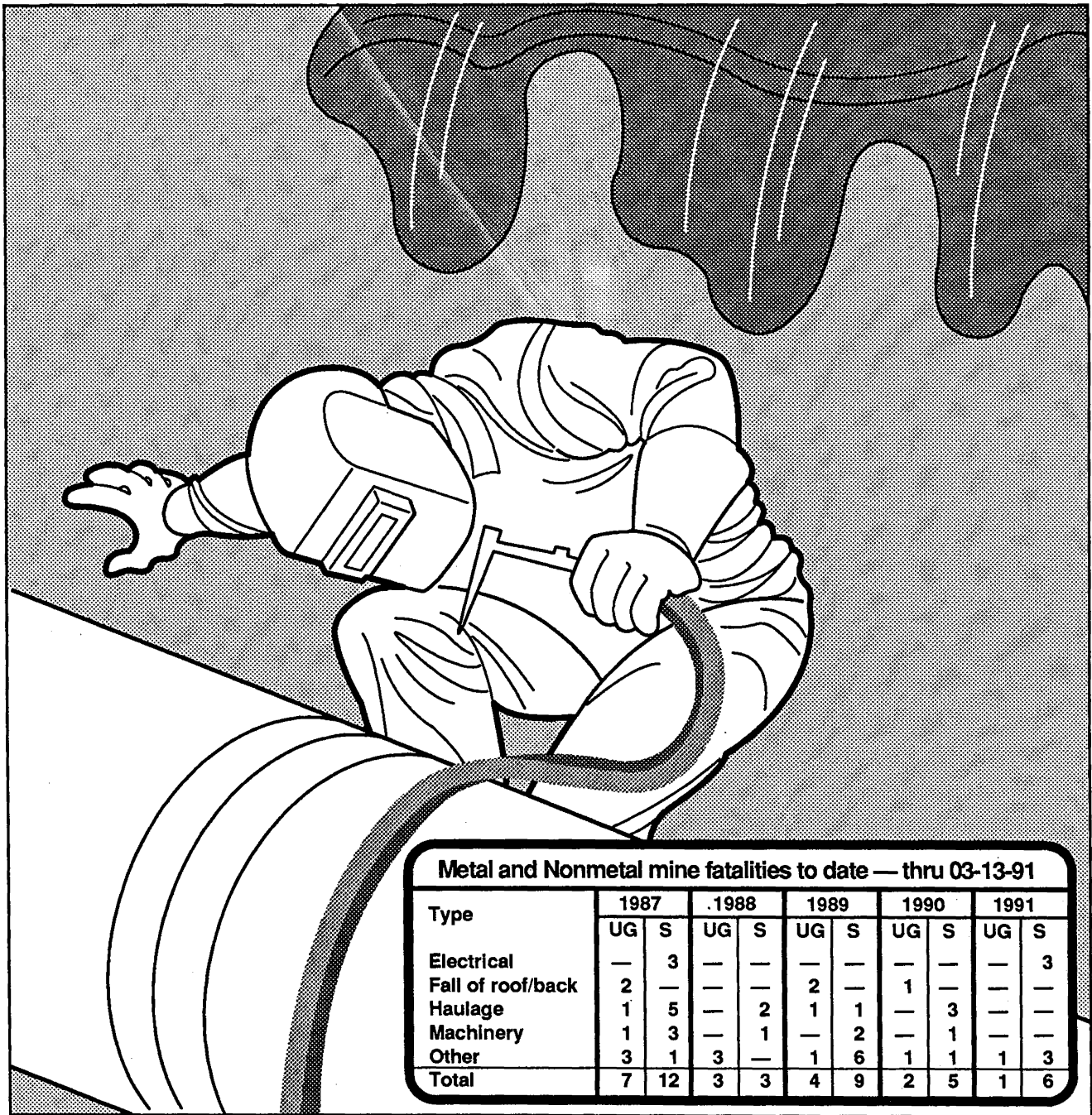
feet. A hydraulic backhoe had been used to dig a hole approximately 7 to 8 feet wide by 6 feet long and 3 to 4 feet deep at the end of the protruding pipe. This allowed the welders to get to the under side of the pipe to weld the joint.

After this was accomplished, the crew attached slings to a 58 foot section of 30-inch pipe. Using the hydraulic backhoe, the crew set the pipe into the ditch area and aligned it against the collar of the pipe already in the ditch.

The piping foreman indicated to the victim and another welder that the pipe was ready to weld. The victim entered the ditch and started welding at the bottom of the pipe from the north side and the other welder started welding at the top of the pipe from the south side.

A helper was standing midway up the slope on the southeast end of the pipe in order to assist when needed. The excavating foreman and the piping foreman had moved to the west to measure for the next pipe section. The remaining crew were in other areas preparing equipment and material for the next setting.

The victim and the other welder had been welding approximately 15 minutes when a welder from the other team saw a crack developing along the north ditch wall. The crack was at ground level, next to the victim's side. He immediately called out to the helper and the welders that the ditch was falling in. The helper stated that the victim was starting to get out of the hole when a large chunk of earth, approximately 6 feet by 3 feet by 1 foot thick,



Metal and Nonmetal mine fatalities to date — thru 03-13-91										
Type	1987		1988		1989		1990		1991	
	UG	S	UG	S	UG	S	UG	S	UG	S
Electrical	—	3	—	—	—	—	—	—	—	3
Fall of roof/back	2	—	—	—	2	—	1	—	—	—
Haulage	1	5	—	2	1	1	—	3	—	—
Machinery	1	3	—	1	—	2	—	1	—	—
Other	3	1	3	—	1	6	1	1	1	3
<b>Total</b>	<b>7</b>	<b>12</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>9</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>6</b>

fell, covering him. The other welder, working on the opposite side of the pipe, was uninjured. He immediately went back in the area under the pipe to see if he could pull the victim out. Only the victim's legs were free and he could not see his upper body.

By this time, most of the crew was aware of what had happened and ran to the area and began digging to free the victim. The mine rescue team and safety de-

partment were also immediately notified. When the victim was uncovered, they found that he had been crushed against the steel pipe by large chunks of earth. He was transported by ambulance to a local hospital where he was pronounced dead.

**CONCLUSIONS:** The cause of the accident was the failure to slope or support the north wall of the ditch to prevent a fall of material.



# District Joint Mine Health and Safety Conference

The South Central District of the Mine Safety and Health Administration and the University of Texas at Austin will host the Ninth Joint Mine Health and Safety Conference, April 15-18, 1991, at the Hilltop Inn Hotel in Dallas, Texas. Representatives of mine management, labor, state government, trade associations, safety organizations, and academic institutions are invited to attend.

Among the many topics scheduled for workshop presentation are:

- Ergonomics in the mining industry
- Laser mapping for blast control
- JSAs for the 90s

There is a \$60 registration fee for the conference.

For further information and a conference brochure please call Mr. Dan Haupt at (214) 767-8401.

## Six operations receive HSA awards

### Coal River Council makes announcement

The Holmes Safety Association, Coal River Council, announced the winners of the Association's awards for mining safety during an awards banquet at the Madison Civic Center on January 12, 1991.

Awards for outstanding safety records in six categories were presented to:

- Battle Ridge Mining, Orgas Mine**—Surface Operation category—Zero incidence rate with 70,719 man-hours.
- Westmoreland Coal Company—Central Shop**—Surface facility category—Zero incidence rate, 18,521 man-hours.
- Swamp Fox Development**—Under-

ground mine with 0-49 employees—Zero incidence rate, 67,633 man-hours.

- Peabody Coal/Eastern Associated Coal, Lightfoot No. 1**—Underground mine, 50-99 employees—19.27 incidence rate with 518,936 man-hours.

- Birchfield Mining, Mine No. 1**—Underground mine with 100-149 employees—8.99 incidence rate, 355,706 man-hours.

- Peabody Coal/Eastern Associated Coal, Lightfoot No. 2**—Underground mine with 150 or more employees—19.40 incidence rate and 72,168 man-hours.

## The Kansas Shoot-out regional mine rescue contest

Mark your calendar for May 22-23, 1991; Kansas Small Mine Safety has set the date for the 3rd Annual Kansas Mine Rescue contest. *The Kansas Shoot-out* contest will be held at Gowans stadium, 1300 North Plum (on East 11th), Hutchinson, Kansas.

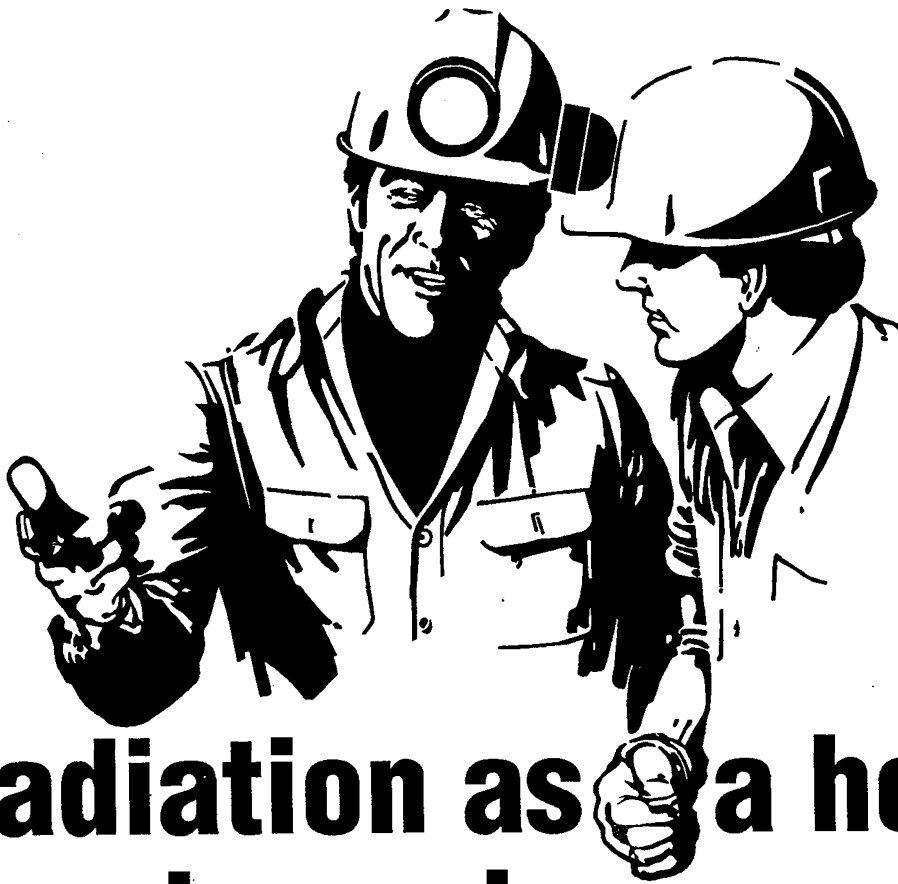
There is a \$100.00 entry fee to be paid by April 30, 1991. Checks may be made payable to *Kansas Small Mine Safety*.

Registration forms for both team registration and the benchman contest can be

obtained by writing to the address in the first paragraph or by calling (316) 665-3493. Registration will be limited to 12 teams.

The contest will be held outside on courses staged at Gowans Stadium in the 500 block on East 11th Street.

A barbecue will be held the evening of Wednesday, May 22. The banquet will be on Thursday, May 23, at the Gallery Theatre in the Fine Arts Center, 600 East 11th Street, Hutchinson, Kansas.



# Radiation as a health hazard source

All substances, cells, and organs which make up the human body are made of atoms and molecules of various elements. **Ionizing radiation** is a form of energy that can change the structure of atoms, molecules, and cells, and change the life cycle of the organisms. The human body can compensate for some of the damage caused by radiation. This explains how our bodies have learned to adapt to natural radioactivity without showing adverse effects.

In mining, the ionizing radiation occurs in many forms. Generally, it can be divided into two kinds, **particulate** and **electromagnetic radiation**. Alpha and beta particles are examples of particulate radiation, while gamma and X-rays represent electromagnetic radiation.

The type of radiation and a number of other conditions determine the type of injury a person can receive from radiation. Mine workers exposed to high levels of

airborne radiation over a long period of time may become affected by a dreadful disease—lung cancer.

Extensive scientific and technical investigations, and years of experience with the practical problems of radiation protection, have shown that limited amounts of occupational exposure to radiation can be allowed. Such values were adopted by regulatory agencies as **maximum allowable doses**. These doses are believed to carry only a negligible risk of injury from radiation.

Concentrations of radioactive substances are generally higher in uranium mines than in other underground operations. High levels of airborne radiation can be reduced to acceptable levels through proper mine planning and efficient ventilation.

With few exceptions, there are no high levels of radiation in U.S. coal mines. However, some mineral processing plants

use special types of equipment which contain radioactive sources.

## Sources of radiation in mines and mills

Regardless of the kind of mineral extracted from the earth's crust, the airborne radiation in underground mining can always be traced to the same source—uranium and thorium minerals. Traces of uranium and thorium minerals can be found in almost any kind of soil and rock.

**Radon and thoron** are radioactive gases released by minerals of uranium and thorium. Shortly after their release into the mine air, radon and thoron gases disintegrate. As a result of disintegration, new elements are formed. These newly formed particles of atomic size are known as **radon and thoron daughters**. A few seconds after formation, they become attached to the airborne dust in the mine air and can be inhaled by those who work in the area. Thus, **airborne radiation** is a mixture of radon and/or thoron gas and their daughters.

Nuclear gauges are used in mines and mineral processing plants and mills. These gauges are designed to generate electromagnetic radiation (rays) that are used in monitoring industrial processes.

Ionizing radiation was discovered at the turn of this century. However, a high rate of deaths from lung cancer is known to have occurred among the hard rock miners of central Europe in the middle of the sixteenth century as a result of exposure to radiation.

In the 1940s, about 50 percent of deaths among fluor spar miners in Newfoundland was caused by lung cancer. Radiation in these mines is released by groundwater.

The unusually high incidence of lung cancer among the employees of non-ura-

nium underground mines of Sweden in the 1960s was related to the airborne radiation in those mines.

A study of uranium miners' deaths between 1950 and 1968 in Colorado, New Mexico, Utah, and Wyoming has shown that airborne radiation was the major cause of increased lung cancer in that group.

Recent studies of lung cancer among Czechoslovak uranium miners show that long-term exposures to high radiation have produced results similar to those observed in the United States.

A recent report on health and safety of miners in Ontario, Canada, shows that lung cancer deaths among uranium miners were higher than that of the general population.

By contrast, the enforcement of control measures in French uranium mines over a period of many years has produced favorable results. Lung cancer among French uranium miners is reported as no greater than that of the general population in France.

## Causes of lung cancer

Not all causes of lung cancer are known. Here are some of the agents which may cause lung cancer:

- airborne ionizing radiation
- cigarette smoke
- asbestos fibers
- nickel and arsenic compounds

Two separate causes of lung cancer, such as cigarette smoking and radiation, when combined serve as a greater source of cancer. Thus, people who smoke cigarettes (on or off the job) and are exposed to hazardous levels of radiation are about 10 times more likely to get lung cancer. Moreover, lung cancer related to radiation in mining shows up six or seven years earlier among smokers.

# Evaluation of the radiation hazard

Human senses are not capable of detecting the presence of ionizing radiation—we cannot see, smell, hear, taste, or feel it. Special equipment and procedures are needed for this purpose.

Mine health and safety personnel and Federal and state mine inspectors are trained and equipped for detecting the presence of radiation and evaluating the hazard it creates. In mines where radiation exists, the stagnant air contains the highest concentration of airborne radioactivity and offers the best opportunity for detecting the airborne radiation. The sampler's most important task is to determine the levels of radiation in work sites, lunchrooms and other places where people spend more time during their workday.

Mine management concerned with employee health and safety post warning signs in areas where high ionizing radiation is known to be present. Work areas are ventilated to keep the employee exposures well below the maximum allowable levels.

## How much exposure to radiation is hazardous

Most uranium miners with lung cancer have worked in areas where the levels of airborne radiation were high, and their exposure to high radiation levels continued for many years. Most lung cancer deaths among miners have occurred 10 years or more after they started working in uranium mines.

A special unit, called working level month (WLM), is used to measure workers' exposure to airborne radiation. Exposure to radiation involves two measurements, the level of radiation and the length

of exposure in terms of time:

$$(\text{radiation level}) \times (\text{time}) = \text{exposure}$$

The unit for measuring the levels of airborne radiation is known as working level (WL). Now, using the above formula we can show the exposure in proper units:

$$(\text{Working Level}) \times (\text{Months}) = \text{Working Level Months} \\ \text{WL} \times \text{M} = \text{WLM}$$

This indicates the exposure level. A person should not spend too much time in areas where high levels of radiation are known to exist. By the same token, if the radiation levels are low, a person may be able to work safely without worrying about the time.

The U.S. and Czechoslovak studies of uranium miners have shown that when the total exposure of a person exceeds 120 working level months, the person is more likely to get lung cancer. Assuming that individuals work 30 years, the maximum dose can be calculated:

$$(120 \text{ WLM}) \div (30 \text{ years}) = 4 \text{ WLM per year}$$

The present health standards state that individual exposures should be kept below the maximum allowable dose—that is below 4 WLM in any calendar year.

## Who keeps track of the exposures to radiation

Some state regulations require that uranium mine operators report employee's exposure to radiation when such doses are in excess of maximum doses specified by Federal or state regulations. To comply with such a requirement, the mine operators must monitor radiation levels in underground uranium workings and keep track of the time each employee spends in these workings. If the levels of radiation in a mine area are high enough to require recordkeeping, prohibition of an addi-

tional health hazard—smoking—becomes mandatory.

The Federal or state mine inspectors perform spot-check sampling to make sure that mandatory standards on radiation

are observed in mining operations. Mine operators who encounter special problems in controlling the airborne radiation can take advantage of the technical support available to them through MSHA.

## Control of radiation in mines

Uranium mines, and other mines where high levels of radiation are expected to be a problem, should be developed in such a way as to reduce the employee exposure to radiation. These mines should have a ventilation system capable of delivering uncontaminated air to the work areas.

Face masks and respirators offer a certain degree of personal protection against air contaminants in ordinary industrial settings. In mines, however, such personal protection devices are not used continuously. Face masks and respirators should be required only when inspecting abandoned mine workings, or when working in unventilated areas for a short period of time.

Ventilation of work areas is essential to provide a healthy work environment for mine employees. The efficiency of ventilation systems should be checked by frequent sampling and analysis of mine air.

A person unintentionally exposed to high levels of radiation may be assigned to work areas where the levels of radiation are such that the average exposure of that person stays below 4 working level months per year.

### Gamma and X-ray exposures

In most uranium mines, employee exposures to gamma rays released by uranium ore are not excessive. Some mineral enrichment mills use nuclear gauges with properly enclosed and shielded X-ray or gamma sources. Such gauges are safe as long as they remain intact and are used

and handled properly. By contrast, even short exposures to intense X-rays can cause skin burns.

In mines where high grade ores are handled, a radiation film badge worn during the shift is used to measure the worker's exposure to gamma radiation released by ore. Such exposure should be kept below 5 rems per year.

Women of childbearing age are subject to the same maximum dose. When a pregnancy has been diagnosed, the dose accumulated during the remaining period of the pregnancy should not exceed 0.5 rem.

Breathing a uranium dust concentration in excess of 0.2 milligrams per cubic meter in an 8-hour day may affect the kidneys. But, this is a toxic, and not a radiological hazard. The end product of uranium mills—the "yellowcake"—is only mildly radioactive. The weighing and packaging of the yellowcake into drums must be performed in enclosed areas with exhaust ventilation to protect the workers.

### Medical checkups

The Federal and state regulations do **not** require medical surveillance for mine and mill workers who handle radioactive ores. Individuals concerned with exposure to radiation may use the following guidelines:

persons with chronic respiratory disease should not seek employment at work sites where airborne radiation is known to exist

- if possible, at the time of employment, an estimate should be made and recorded of the previous exposure to ionizing radiation in mining or other work
- each employee should have chest X-rays at 5-year intervals except if prescribed more frequently for special examinations
- the employee's sputum should be examined every 6 months after working in uranium mines for 10 years or more.

- analysis for uranium in urine should be carried out for mill operators
- In view of the greater risk among heavy cigarette smokers, such individuals should not seek employment where airborne radiation is known to be present, unless the person intends to give up smoking.

*The Radiation Hazard in Mining, MSHA, Safety manual no. 7, 1986.*

## **JSA – an important topic**

Job Safety Analysis (JSA) continues to be an important topic at seminars and safety meetings in the Metal and Nonmetal (MNM) mining industries. On February 27, 1991, a safety seminar in Oklahoma City drew an attendance of 150 employees, safety professionals, and supervisors from the state of Oklahoma. Approximately 3 hours of the two-day session were devoted exclusively to JSA.

Mr. Chuck Taylor, MNM, opened the program then discussed the general relationship of JSA to the effectiveness of safety programs in industry and provided information on MSHA's promotion of this important program. Mr. Jimmy Shumate provided more detailed information on accidents and injuries prevalent in industries in the Southwest, and assisted the

participants in recognizing the value of JSA in the workplace. Mr. Shumate also familiarized the group with JSA materials available through the Mine Health and Safety Academy, and showed the group the JSA videotape and the taped JSA message from Assistant Secretary Tattersall.

The size of the group did not diminish the interest generated in the subject. A significant number of the participants requested additional information on JSA, and indicated an interest in emphasizing the program in the workplace.

Thanks go to Mr. Bob Packer of the Association of County Commissioners of Oklahoma for arranging our participation in this program.

# Fatalities and wearing of seat belts

*By Douglas K. Martin, Arizona State Mine Inspector*

Information supporting the mandatory use of seat belts has now been collected. The Arizona State Mine Inspector's office believes this information indicates that lives that can be saved if equipment operators at metal and non-metal mines are not required to wear seat belts.

Most fatalities involving surface powered haulage equipment could have been prevented, if the victims were wearing seat belts. The following information based on a study of fatal accidents from 1979 to 1989 in the metal and nonmetal industries reflects the total fatalities during this period:

Total fatalities during period: 773

Surface powered haulage fatalities: 167

Fatalities that could/might have been prevented with the use of seat belts: 88

Percent of surface powered haulage fatalities of total fatalities: 21.6

Percent of powered haulage fatalities that could/might have been prevented with seat belts: 52.7

The numbers certainly tell us that lives could have been saved. The following are actual examples and speak to why regulation is suggested:

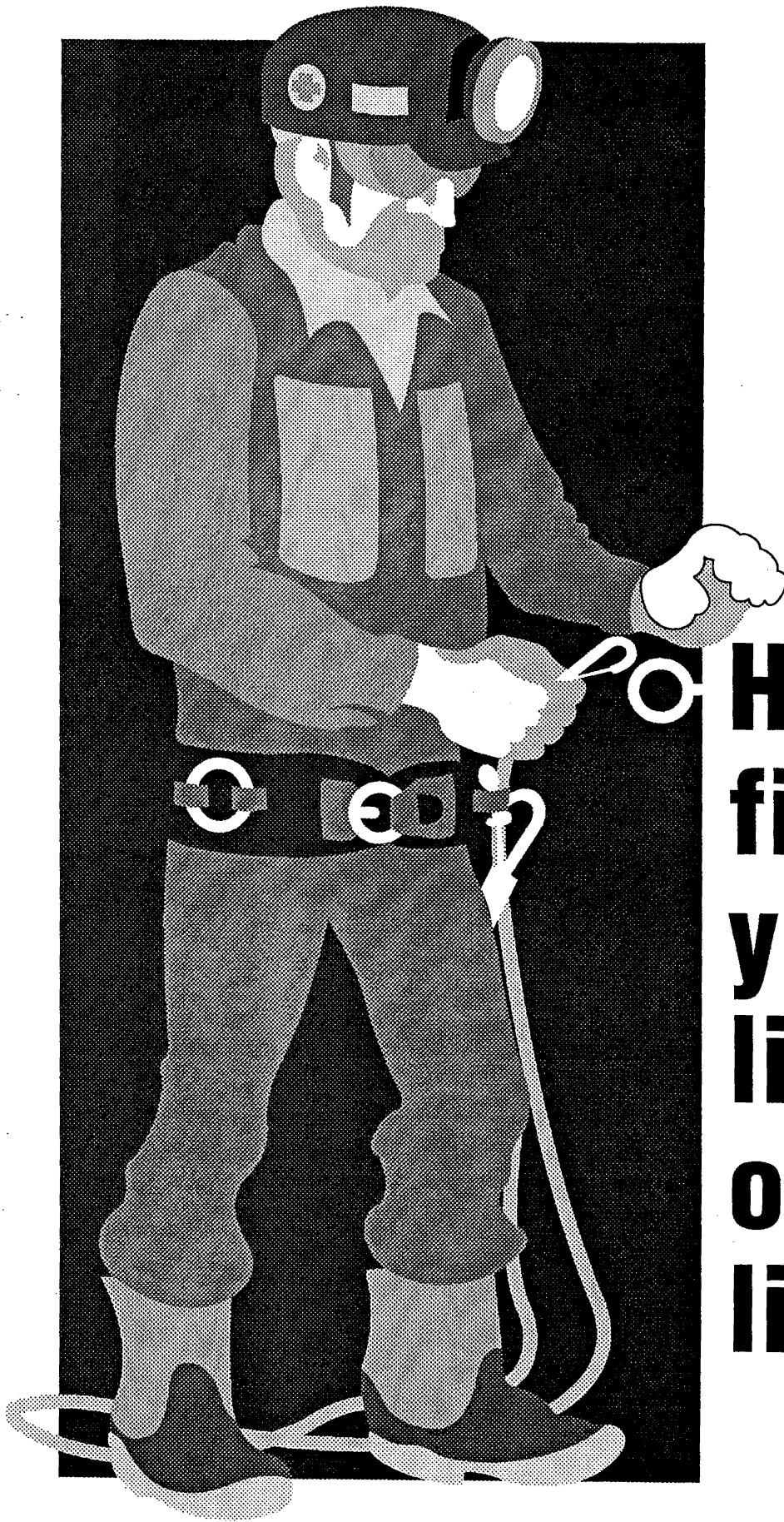
Two years ago, a truck driver was fatally injured as he was dumping into a pit. He backed up to the berm not knowing it was undercut. The bank gave way, allowing the truck to slide backwards down the bank landing upside down. The driver was not wearing his seat belt, which caused him to be tossed around in the cab sustaining fractures to the left leg, left shoulder, and ribs, and also causing swelling and contusion on his left jaw. This resulted in critical injuries and subsequent death. Although there was extensive damage to the truck, it was evident there was sufficient space in the crushed cab area for the driver, had he worn his seat belt.

As recently as this year, the Arizona Mining community suffered a loss which presumably could have been avoided had the operator been wearing a seat belt. The driver of a 170-ton haul truck lost control and aimlessly traveled several feet to the edge of a 50 foot embankment. It appears the victim attempted to exit the cab from the passenger side as the truck lost its hold on the ground and rolled halfway down the steep slope. The truck landed on its side, with the driver found lying between the truck bed and the engine compartment. He was able to speak at first, however, due to the pressure on his brain from the head injuries, he died a few days later. Had he remained in the cab, he probably would have survived.

These are examples of lives that could have been saved. Even if the initial cause may have related to some other safety violation, the possibility still exists a life could have been preserved if the individual had worn a seat belt. The Cyprus Casa Grande Corporation, the Magma Copper Company, the Calmat Companies of Arizona, the Union Rock and Materials Corporation, the State of Nevada, and the State of New Mexico are currently requiring drivers to wear seat belts, recognizing the importance of this safety practice for moving equipment. The Arizona State Legislature will be hearing a bill next year to require wearing of seat belts.

The number one priority we must continue to stress is that of accident prevention to avoid injuries or fatalities. The Arizona State Mine Inspector's Office provides training which emphasizes the need to wear seat belts in equipment where there is a danger of collision or overturning and where rollover protection is required.

*Courtesy of Southwest Contractor, October, 1990.*

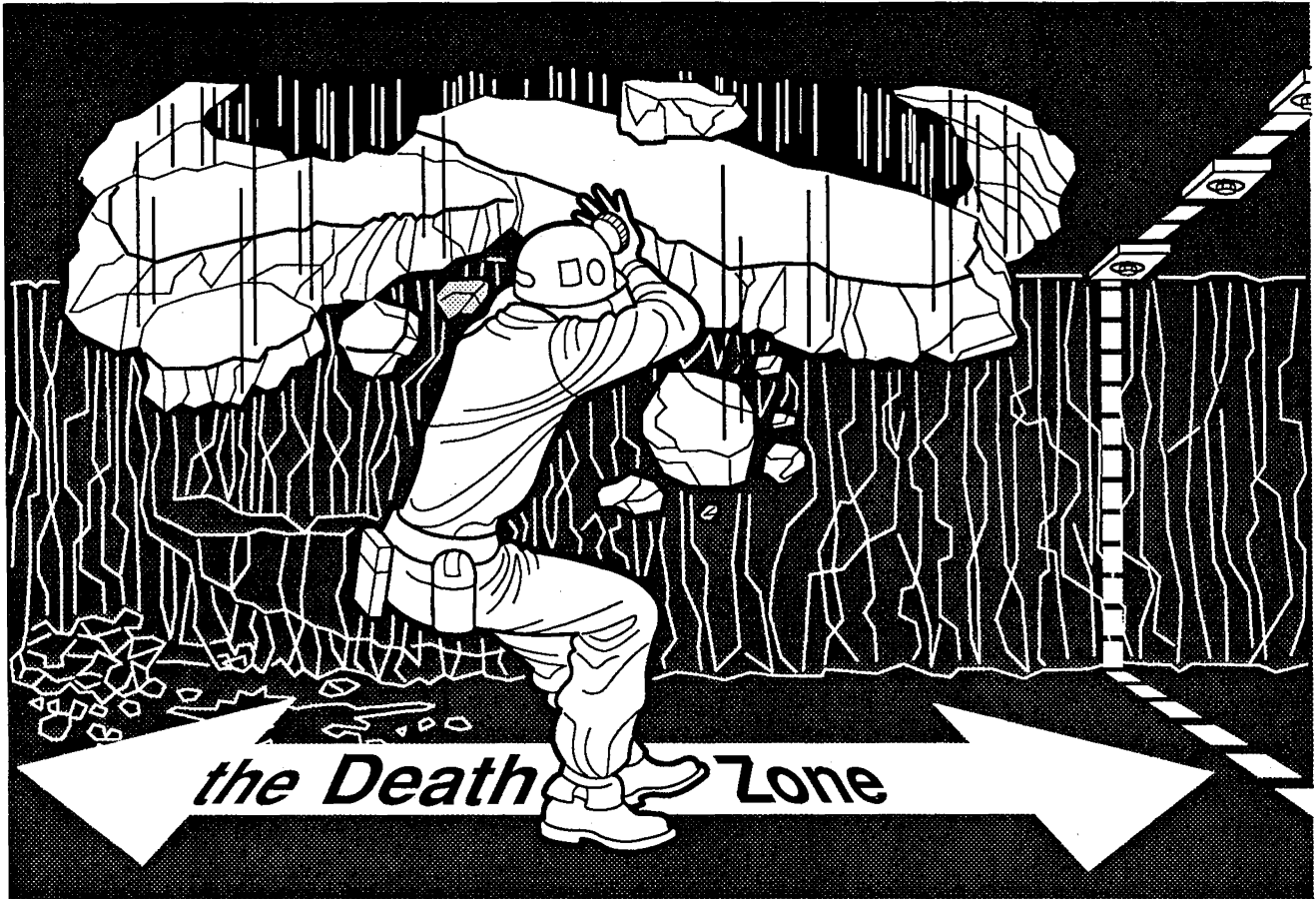


**Hook up  
first . . .  
your  
life is  
on the  
line!**

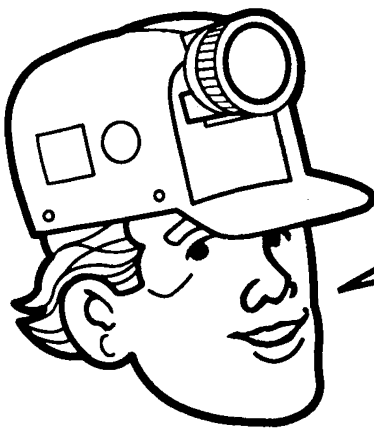


# Roof Evaluation—Accident Prevention

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



**Don't reach the end of the line . . .  
Stay out of the Death Zone**



**You've crossed the line  
when you're in by the last  
line of bolts!**

**MINERS:** Credit for this month's safety slogan goes to: a concerned MSHA employee. Please send your suggestions to: MSHA, Educational Policy & Development, 4015 Wilson Blvd., Graphics Room 523A, Arlington, VA 22203-1984.  
Phone: (703) 235-1400



April 1991

April 1991



# Coming soon

to  
Pipestem Resort State Park  
the  
Holmes Safety Association  
Joseph A. Holmes Safety Association  
Annual Meetings

## May 29-30, 1991

The Joseph A. Holmes Safety Association and the Holmes Safety Association will hold their annual business meeting at Pipestem State Resort Park at Pipestem, West Virginia on *May 29 and 30*. This will be a very important meeting. We will be setting the direction for our future. Please make an extra effort to attend. We need your ideas and support.

### Lodging at Pipestem

Single @ \$40 Double @ \$45  
Small Suite @ \$52/57  
2-Room Suite @ \$57/63  
Large Suite @ \$66/72  
Add 9% State Sales Tax  
Add \$6 per extra person.

Make your own lodging reservations directly with Pipestem State Resort Park by calling 1-800-CALLWVA. Please note: *the deadline for making reservations is April 29*. A first night's lodging deposit is required by check or credit card (Master Card, Visa and American Express—no Diners' Club). We have 100 rooms re-

served. There are plenty of activities for spouses and children.

For those who want to participate, a **golf tournament** will be held on Thursday morning 7:30 am -12:00 pm. Cost will be \$26.00 per golfer which includes 18 holes plus 1/2 cart fee. **Ten foursomes can be accommodated.** We will play "Scramble" or "Callaway" depending on the number of golfers. Handicaps will be needed when signing up for this tournament. Prizes will be awarded to winning teams and individual golfers. **Call Jim Adkins (304) 925-1222** for more information and to register for this golf tournament.

A meeting registration fee of \$24.00 per person will be required. This will cover the cost of the banquet on Thursday evening, the barbecue cook-out on Wednesday evening and the continental breakfast on Thursday morning. **REGISTRATIONS ARE DUE BY May 15, 1991.** Please complete the registration form on page 18.

## Meeting agenda May 29

9:00 AM - 4:30 PM  
Registration

2:00 PM - 3:00 PM  
Joseph A. Holmes Association  
Board of Directors

5:30 PM - 7:00 PM  
Barbecue Cook-Out  
Admission with Awards Banquet Ticket, only.

Steamship round  
Barbecue chicken  
Beef barbecue  
Baked beans  
Cole slaw  
Relish trays  
Fruit cobbler  
Coffee, Tea  
Rolls and Butter

7:30 PM - 9:00 PM  
Holmes Safety Association  
Executive Committee

8:00 AM - 12:00 Noon  
Late Registration

8:30 AM - 10:30 AM  
Danish.  
Coffee.  
Tea and juice.  
Admission with Awards Banquet Ticket.

9:30 AM - 11:30 AM  
Video of 1990 Meeting

1:00 PM - 2:30 PM  
Holmes Safety Association  
National Council Meeting

3:00 PM - 3:45 PM  
Joseph A. Holmes Safety Association  
Council Meeting

5:30 PM - 7:30 PM  
Annual Awards Banquet  
Ticket needed.

Roast prime rib of beef, 12 oz.,  
Chilled melon ball cup,  
Tossed salad,  
Dressings,  
Baked potato, sour cream,  
Green beans Almondine,  
Rolls, butter, drink,  
and Sheet Cake.

## Meeting agenda May 30

7:30 AM - 12:00 Noon  
Golf Tournament

✂️ ----- **Registration form** -----

Name \_\_\_\_\_ Telephone \_\_\_\_\_

Company/Agency representing \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP Code \_\_\_\_\_

*Non-golfers—All activities I/we would be interested in are indicated below:*

- Beauty Control Cosmetics demonstration (\$1 per person at time of demo) .....
- Contempo jewelry and scarf tying demonstration.....
- Annual National and State Meeting videos .....
- Joseph A. Holmes slide presentation .....

Enclosed is registration fee of \$30 each for \_\_\_\_\_ persons.  
Mail registration to: Irmadell Pugh, MSHA District 3, 5012 Mountaineer Mall  
Morgantown, WV 26505 Telephone: (304) 291-4277

**MUST be received by May 10 1991 NO REFUNDS after May 3, 1991**  
**Make checks payable to: West Virginia Holmes Safety Association**

# Coaching winners

## Supervisors inspire the team

We all want to feel good about ourselves and what we do for a living. Supervisors can help employees develop positive attitudes which will inspire them to do a good job. Then everyone wins: chances for promotions and raises are greater when profits are up, and people like each other better.

### **You're the coach**

Think of yourself as the team coach. You're the one with the big picture who can see where the team is headed, and what the problems might be. You're in the best position to know each player, and what strategies might work in which situations.

On any team, there are strengths and weaknesses. One player is fast, but not quite as strong. Another is smart, and a great receiver. A third has slower reaction times, but helps people keep their spirits high. Knowing the players means using their strengths and working with their weaknesses.

### **The players' attitudes**

Skill is just one part of what makes a winning team. The players' attitudes are at least as important.

In sports, and on the job, attitude reflects how you feel about yourself and your teammates. We all know people who have a good attitude. They try to do their best. They cooperate. They look forward to learning new things. They help those who know less than they do. They care about other people's feelings.

### **Self-esteem and attitudes**

Yourself-esteem affects your attitude. Self-

esteem means whether or not you like yourself.

People with negative attitudes and low self-esteem often repeat negative things to themselves: "I can't do this job." They may be afraid to try new things: "I'll never understand computers." People who are stubborn may actually have low self-esteem, so they are afraid of change.

### **Inspire the team**

Anyone can learn to have a better attitude. Often, it begins with wanting to please someone who is encouraging.

As supervisor, you can inspire your team to have a good attitude. If you focus on what people do wrong, so will they. Instead, tell them what you like. They'll do things to try to please you, like make an extra effort to come to work on time.

Try this: for one week, make a list of what people are doing right, and what they're doing wrong. Then, for one month, take time each day to tell people what they're doing right. ("John, thanks for cleaning up that spill." "Jane, it's been great to see you on time this week.") At the end of this month, make a new list. Now compare it to the old list. Chances are, there will be more "right" behaviors than on the first list.

Look at your team. Think about each player's strengths and weaknesses. Is there a way to help Joe feel more successful? Can you help Sue turn her weaknesses into strengths? Write down your ideas and try a few.

Take the time to talk to people about their jobs. Listen to their concerns. Encourage them when they are insecure

about a new job. If they feel you're concerned about them personally, they will be more likely to feel inspired to do a better job.

Good supervisors ask for and listen to employees' suggestions. People who feel listened to and respected enjoy their work more. Keep an open mind. Don't assume that just because "we never do it that way," it can't be done.

If you do need to criticize, be specific. Let the employee know what the behavior was, and why there's a problem with it.

You'll soon find you're the coach of a winning team.

*Wisconsin DLHR Mine Safety News, January 1991, Vol. 3, No. 1.*

## Satellite teleconference on Job Safety Analysis

*By Stephen J. Hoyle, National Mine Health and Safety Academy*

More than 2,500 people at 125 viewing sites around the country participated in the satellite-delivered Job Safety Analysis teleconference presented on February 14, 1991. The broadcast originated from Beckley, West Virginia and was jointly sponsored by the Mine Safety and Health Administration and more than twenty mining associations and organizations.

In Job Safety Analysis (JSA), miners and supervisors together examine every aspect of a job to identify potential hazards and develop step-by-step procedures for completing the task safely. The teleconference emphasized audience participation while explaining the "back to basics" simplicity of JSA and its practical application in different mining situations.

After a brief opening segment, the program moderator introduced William J. Tattersall, Assistant Secretary for Mine Safety and Health, and Don Farley, Chief of the Safety and Health Technology Branch at the National Mine Health and Safety Academy. Farley reviewed the principles of JSA and facilitated an exercise in which viewers used a workbook to develop a sample JSA for use at their own mining operation. Assistant Secretary Tattersall then provided comments on Job Safety Analysis and its importance in

health and safety training. Participants used a toll-free number to telephone and ask questions of the speakers after these initial presentations. Their questions were answered on the air by the speakers.

The program resumed after a short pause with a panel consisting of Billy Saulter, Safety Specialist from Texasgulf Chemical Company, Aurora, North Carolina; Michael Resetar, Safety and Health Manager of the Central Ohio Coal Company, Cumberland, Ohio; and Adele Abrams, Director of Government Affairs for the National Stone Association, Washington, DC. The panelists described how their organizations used Job Safety Analysis to improve safety.

These opening remarks were followed by a series of short videos made at Texasgulf Inc., Aurora, North Carolina; Central Ohio Coal's Muskingum Mine, Cumberland, Ohio; and at Martinsville Stone Corporation's plant near Martinsville, Virginia. On these tapes, miners discussed the application of Job Safety Analysis at their mines and the success of the JSA process on their work. Following the videotapes, the panelists answered additional questions called in by viewers.

Assistant Secretary Tattersall endorses

JSA as "one of the most important safety tools available to mine managers, foremen and training personnel." This teleconference presented an opportunity to

work closely with industry to help reinforce MSHA's commitment of constantly striving to improve the health and safety of the nation's miners.

## Draeger OXY-SR60B SCSR problems

The MSHA and the NIOSH have become aware of a problem with the Draeger OXY-SR60B self-contained self-rescuers (SCSR). In some of these units, the inside walls of the corrugated hoses were stuck together in varying degrees, thereby restricting or preventing the flow of oxygen supplied by the device.

MSHA and NIOSH advise users to either:

- 1) return the Draeger OXY-SR60B to Draeger/National Mine Service for a refurbishment of the SCSR, or
- 2) replace their SCSRs with new MSHA/NIOSH-approved units.

A method of opening the stuck corrugated hose has been developed that can be used during the interim period while refurbishment or replacement is taking place. Information on this method will be forthcoming from Draeger and additional training information will be supplied by MSHA. The refurbishment of these SCSRs and the training are essential in view of the potential for serious injury of miners who encounter a stuck corrugated hose on their SCSR during a mine emergency.

To comply with Federal Regulations, all OXY-SR60B in service must be retrofitted or replaced.

## Practice the 5 Ps for successful safety talks

Here is a tried and tested technique that will help you give better safety talks. It is simple, it is effective, and it works. You will find that you can easily apply this technique not only to safety talks, but also communication contacts or other vital subjects such as quality, productivity, service, job instruction and cost improvement.

**Prepare**—Think Safety. Write things down for your idea bank. Organize and outline.  
**Pinpoint**—Don't try to cover too much ground. Concentrate on one safety rule.  
**Personalize**—Establish common ground with your listeners. Bring it close to home.  
**Picturize**—Create clear mental pictures.  
**Prescribe**—In closing give a prescription.

## For all Bulletin readers . . .

This year's 1991 slogan sticker is now available.



Send your requests to:

Holmes Safety Association  
MSHA, EPD, Greg Graham  
4015 Wilson Boulevard  
Arlington, VA 22203-1984

All requests must be received no later than May 15, 1991.

*"Don't be caught without one in '91!"*

# Holmes Safety Association Monthly Safety Topic



## Fatal fall of highwall accident

**GENERAL INFORMATION:** A 37 year-old repairman/electrician with 15 years of mining experience, 11 years at this location, died of crushing injuries when a section of highwall collapsed burying him.

The mine has three drift openings which average 34 inches in thickness locally. The mine has one advancing section. Coal is produced by conventional mining methods and is loaded from the face areas by battery-powered scoops and transported to the surface by conveyor belt. The mine produces coal one shift per day, with one maintenance shift, five days per week, with six underground and three surface employees.

**DESCRIPTION OF ACCIDENT:** The 001 Section employees, under the supervision of the operator/foreman, entered the mine at approximately 7:15 a.m. and traveled to the working section. The crew proceeded to their assigned tasks and production activity commenced. The victim had entered the mine with the man-trip to check one of the battery-powered scoops which had a hydraulic problem. While underground, the victim was required to repair one of the other scoops. Upon completing these repairs he returned to the #2 Scoop, which he had determined would have to be taken to the surface for hydraulic repairs. He informed the operator/foreman that he was going to take the scoop to the surface to remove and repair the oil tank.

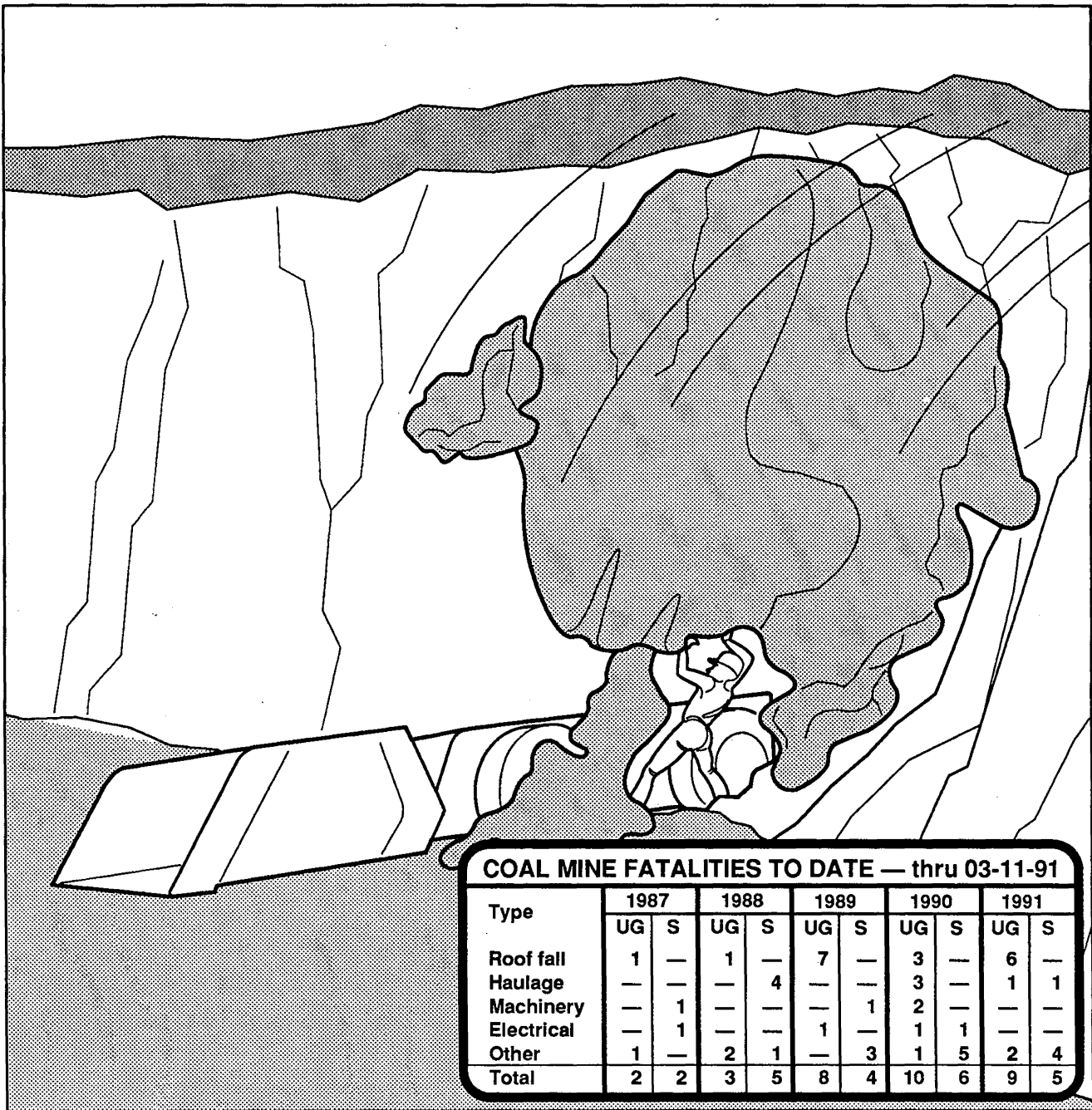
At approximately 8:00 a.m., the victim removed the scoop, under its own power,

from the mine to the surface. He parked the scoop next to the mine office and conveyor belt, then for an undetermined reason, he moved the scoop closer to the highwall. He had instructed one of the surface employees to move some water hoses out of the way prior to moving the scoop and to place a crib block under a tire of the scoop when he parked it, which he did. The victim then made several trips to the mine office for tools and then proceeded to the scoop to commence the repairs. He had positioned himself between the scoop and highwall to begin removal of the hydraulic oil tank.

At approximately 9:30 a.m., a section of the highwall, approximately 10 feet high, 15 feet wide, and 2 feet thick, collapsed, without warning, covering the victim and the scoop, and inflicting fatal crushing injuries.

Two surface employees who were located approximately 40 feet away, saw the highwall collapse. One of the employees first thought that the victim had gone back into the mine office but the other saw him at the scoop when the fall occurred, and yelled that the victim was under the fall of highwall. One employee began removing material from the victim while the other telephoned underground to the section and told the foreman what had happened. The foreman and the crew proceeded immediately to the surface and began helping remove the fallen material from the victim.

The recovery work consisted of removing the material by hand and by use



COAL MINE FATALITIES TO DATE — thru 03-11-91										
Type	1987		1988		1989		1990		1991	
	UG	S	UG	S	UG	S	UG	S	UG	S
Roof fall	1	—	1	—	7	—	3	—	6	—
Haulage	—	—	—	4	—	—	3	—	1	1
Machinery	—	1	—	—	—	1	2	—	—	—
Electrical	—	1	—	—	1	—	1	1	—	—
Other	1	—	2	1	—	3	1	5	2	4
<b>Total</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>9</b>	<b>5</b>

of an endloader and chain to lift the larger material from the victim. It took approximately 15 to 20 minutes to uncover the upper portion of the victim's body. The victim was recovered approximately one hour after the fall of highwall.

The county coroner pronounced the victim dead and instructed the ambulance service to transport the victim to the regional hospital.

**CONCLUSION:** The accident and resul-

tant fatality occurred as a result of the victim placing himself in a hazardous location between the highwall and a battery-powered scoop which he was attempting to repair, thereby limiting observation of the highwall and rapid escape from any falling material. A contributing factor to the occurrence was management's failure to conduct and record an adequate examination of the highwall during inclement weather.



# First aid



## Lyme disease: a review of the facts

Lyme disease is an illness that people have been hearing a great deal about recently. It is an illness which can cause serious infection and grave health problems if not detected, diagnosed and treated. Lyme disease was first officially recognized in the United States in 1975 in children from Lyme, Connecticut. However, what is now recognized as Lyme disease was reported in a grouse hunter from Taylor Counts, Wisconsin, as early as 1969. Lyme disease is transmitted to humans, pets and domestic animals by infected deer ticks. The actual transmission of the disease takes place when the tick bites and feeds on its host.

The adult deer tick is about half the size of an adult wood tick and tends to be brownish red or black in color. Wood ticks are brown with white markings on their backs. Deer ticks are smaller. An adult

deer tick, if placed on a dime, would only cover the words "in God we trust."

Ticks generally are most dangerous in summer and fall, but in the northern Midwest the peak season for bites spans November to June. The tick starts as an egg laid by an adult in the spring. In summer, it becomes a larva. The larva feeds once in the summer by sucking blood from a small mammal, such as a mouse. If the mouse carries the Lyme disease spirochetes—and in some areas, half of them do—the larva carries the spirochetes too. The larva winters over in the ground. The following spring, it becomes a nymph infected with the spirochetes. It too, feeds once in the summer on birds and on mammals—dogs, deer, mice and people. By fall, adult ticks attach themselves to the same group of creatures, mating if possible. Females survive the winter and

lay eggs in the spring.

The following are the signs and symptoms that are observed during the various stages of Lyme disease. If you develop any of the symptoms listed under stage 1 and recall being bitten by a tick, or have been bitten by a tick, or have been in an area where ticks are abundant, contact your physician and discuss your suspicions of Lyme disease. Lab tests can usually confirm a diagnosis of Lyme disease and prompt treatment with antibiotics can cure the infection and will usually prevent later complications.

### Stage 1

The earliest stage of Lyme disease is the initial contact with the bacterium, *Borrelia burgdorferi*, through a deer tick bite. At that time people may have any combination of the following symptoms:

- Headache
- Chills
- Nausea
- Fever
- Fatigue
- Aching joints
- A spreading rash

Without treatment these signs and symptoms may disappear altogether, or they may recur intermittently for several months. A combination of any of the first six symptoms with the characteristic spreading rash is cause to see your physician immediately. The characteristic red rash, known as erythema migrans or erythema chronicum migrans (ECM) usually appears within 3 to 32 days after a person is bitten by an infected tick. The rash is circular in shape and can be from 2 to as much as 20 inches in diameter. The rash is not restricted to the area of the tick bite and more than one lesion can occur

on the body. A difficulty in recognizing Lyme disease at this stage is the fact that up to 30% of the people who have contracted Lyme disease do not develop the characteristic ECM. If Lyme disease is diagnosed during stage 1 it is usually easily treated with antibiotics.

### Stage 2

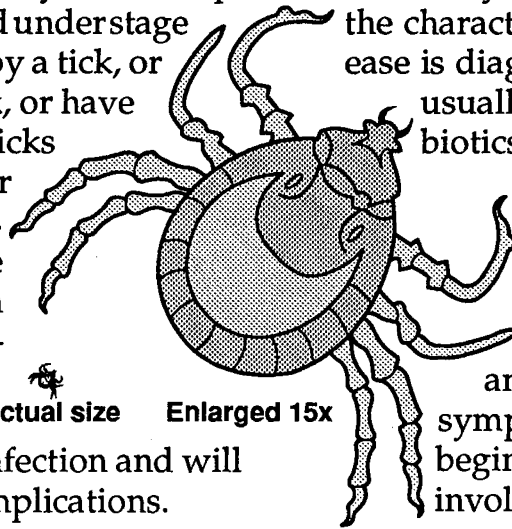
Weeks to months after the initial exposure to the Lyme disease bacterium, and appearance of the initial symptoms, some people may begin to develop complications involving the heart and/or nervous system. Painful joints, tendons, or muscles may also be noted during this stage of the disease.

### Stage 3

Arthritis is the most commonly recognized long-term symptom of Lyme disease. From as early as one month after the initial infection to years after the first symptoms appeared, people may experience attacks of arthritis. Research has shown that even if Lyme disease was not diagnosed and treated promptly, people who eventually received appropriate antibiotic therapy had fewer relapses than those who were never treated.

There is a controversy over Lyme disease diagnoses. Some "Lyme doctors"—physicians who specialize in treating the disease—reportedly give the diagnosis of Lyme disease to almost any patient showing some of its symptoms. At the Robert Wood Johnson University Hospital in New Brunswick, N.J., doctors carefully examined the first 100 patients said to have Lyme disease and found that only 37 actually did have it.

Current blood tests are inaccurate. They measure the antibodies that your



immune system makes to attack the Lyme disease spirochete. But if you have been infected by other spirochetes—as, for example, persons with trench mouth—you will test positive for Lyme disease even if you don't have it.

For now, a person could register positive with the antibody test but *not* have the disease—or they could test negative yet *have* it.

Where possible, avoid tick-infested areas. To keep out ticks, wear long pants and a long-sleeved shirt. Tuck your pant legs into your socks and tape shut the openings around the tops of the socks. Keep your collar buttoned and tape the sleeves shut around your wrists.

Each day, inspect your body for the tick, have someone check you over too. It might look like a poppy seed—or a small, plump raisin, if it is engorged with blood—hanging on your skin. Don't mash it. Remove it with tweezers, pulling steadily, then wash the site with alcohol.

Working outdoors, especially near wooded areas, does not mean you will automatically get Lyme disease. Nor does finding a tick or tick bite. Knowing the symptoms, routinely checking for ticks after being outdoors, using tick/insect repellents, and seeking prompt medical treatment if necessary can minimize the risk of Lyme disease.

#### **Insect repellent recalled**

Two major brands of insect repellent and scores of others are being pulled from stores because an ingredient used for decades damaged reproductive organs and caused tumors in test animals according to the Environmental Protection Agency.

In all, 200 brands of insect repellent, including *Cutter* and *Deep Woods Off!*, used the ingredient 2,3,4,5-BIS (2, butylene) tetrahydro-2-furaldehyde as an additive.

Companies notified retailers in April to take the products containing the additive, known as R-11, off their shelves. The products have been reformulated, have received government approval, and are back on store shelves. The voluntary recall does not include every repellent the companies make or distribute.

#### **Refund**

The North Carolina Mine and Quarry Division recommended the use of insect repellents containing DEET, such as OFF!, Deep Woods Off!, 3M Insect Repellent Lotion, and Cutter to decrease the risk of tick attachment. The ingredient N,N-diethyl-m-toluamide (DEET) is not in question—only the additive known as R-11.

If you purchased Cutter repellent or Deep Woods Off!, you can receive coupons for the reformulated products by calling special hot line numbers. For other brands, refer to the company address on the product container.

Cutter Products—708-458-6100

Deep Woods Off!—1-800-558-5252

#### **Preventive measures**

Tick research indicates that a repellent should have at least 30% DEET to be effective against ticks which carry Lyme disease.

10-15% DEET protects for one hour.

35-50% DEET protects for as long as six hours.

100% DEET lengthens the duration of protection to ten hours.

Also, remember a higher percentage of DEET can increase the possibility of allergic reactions in some people, especially small children. Permethrin, which kills ticks, is sold in some states for use on clothing.

*North Carolina Department of Labor, Mine and Quarry Division, November 1990.*

# Suggested first aid kit contents

Activated charcoal	Matches
Adhesive strip bandages, assorted sizes	Measuring spoons
Adhesive tape, 1- and 2-inch rolls	Needles
Alcohol (70%)	Paper and pencil
Alcohol wipes	Paper drinking cups
Antimicrobial skin ointment	Roller, self-adhering gauze, 2- to 4-inch widths
Baking soda	Safety pins, various sizes
Calamine lotion	Salt
Cotton balls	Scissors
Elastic bandages, 2- and 3-inch widths	Sugar
Face mask with one-way valve	Syrup of ipecac
Epsom salts	Telfa pads, 3 x 4 inch
Flashlight and extra batteries	Thermometers—1 oral, 1 rectal
Gauze pads, 2 x 2 and 4 x 4 inches	Triangular bandages, 2 or 3
Hot-water bottle	Tweezers
Ice bag (plastic)	Water, distilled, in plastic squeeze bottle
Latex or vinyl gloves	

## The family medicine chest

It is a good idea to have useful medical supplies on hand for emergencies and to treat minor ills, but the family medicine chest does not have to be a mini-drug-store. What should be kept in the average household depends on the makeup of the family.

Generally, medicine chests should include only those health care products likely to be used on a regular basis. A person rarely bothered by constipation, for instance, would have little need for a laxative.

Some drug products lose their potency on the shelf in time, especially after they are opened. Other drugs change in consistency. Milk of magnesia, for instance, dries out if it remains on the shelf for a while after opening. Buying the large "family size" of a product infrequently used may seem like a bargain, but it is poor economy if it has to be thrown out before the contents are used up. Ideally, supplies in

the medicine chest should be bought to last over a period of no more than twelve months.

Obviously, selecting health care items for the family medicine chest is a matter of common sense. Here are some suggested items that will meet the needs of most families:

### Nondrug products

Adhesive bandages of assorted sizes
Sterile gauze in pads and a roll
Absorbent cotton
Adhesive tape
Elastic bandage
Scissors, small blunt-end
Tweezers
Fever thermometers, including rectal type for young child
Hot water bottle
Heating pad
Ice bag
Dosage spoon (household teaspoons are rarely the correct dosage size)

Vaporizer or humidifier

**Drug items**

**Analgesic** (aspirin and/or acetaminophen. Both reduce fever and relieve pain, but only aspirin can reduce inflammation.)

**Emetic** (ipecac syrup to induce vomiting and activated charcoal. Read instructions on how to use these products.)

**Antacid**

**Antiseptic solution**

**Hydrocortisone creams** for skin problems

**Calamine** for poison ivy and other skin irritations

**Petroleum jelly** as a lubricant

**Antidiarrhetic**

**Cough syrup** (nonsuppressant type)

**Decongestant**

**Antibacterial topical ointment**

**Seasonal items** (e.g., insect repellents and sunscreens)

When it comes to storing these health care items, the cardinal rule is to keep all medicines out of the reach of children. In addition, be sure all medications have child-resistant caps. Elderly people who have difficulty opening such caps can ask the pharmacist for caps with regular closure. However, they should be extra careful to see that young visitors cannot get to these drugs.

Both prescription and nonprescription drugs should be kept in a cool, dry place [a closet in the bathroom is just about the worst place according to pharmacological experts] away from foods and other household products. Some drugs may require refrigeration. This should be indicated on the label. If in doubt, ask the pharmacist.

Many people keep medicines on a high shelf in a hall or bedroom closet. Some experts suggest using a locking box. A tackle box might do. A word of warning, however: Be sure all responsible adults in the family know where the key is kept.

To avoid confusion keep prescription and nonprescription drugs in separate boxes clearly labeled to distinguish one type of drug from another. A list of what is in each box, attached to the outside if possible, will make it easier to find specific items, particularly in an emergency.

The medicine chest should be checked periodically to be sure supplies are adequate and to get rid of drugs that may have gone bad or become outdated. Many drug labels have an expiration date beyond which the product should not be used. If there is no date, put a label on the container with the date of purchase and the date it was first opened. Then, if there are any questions in the future, a pharmacist can tell whether the product is safe to use.

Tablets that have become crumbly and medicines that have changed color, odor, or consistency, or are outdated should be destroyed. Empty the bottle of medicine into the toilet, flush it down, and rinse out the bottle. Do not put leftover drugs in the trash basket, where they can be dug out by inquisitive youngsters. Newly purchased drug products that do not look right should be returned to the pharmacy. Drug products that have lost their labels should also be destroyed.

Keep the telephone numbers of the local poison control center, physician, hospital, rescue squad, and fire and police departments near every phone in the house. Tape the emergency phone list inside the bathroom medicine cabinet door, and also keep it with the emergency supplies.

Each family's medicine chest is bound to contain some different items. For help in selecting appropriate health care products, check with a physician and a pharmacist.

*National Safety Council, First Aid and CPR, 1991.*

# First aid quiz

## Part I. Choose the best answer regarding types of wounds.

1. A smooth cut made by a sharp object, such as a razor blade, is called:
  - A. An incision
  - B. A laceration
  - C. An avulsion
  - D. An abrasion
2. Skinned elbows and knees are examples of:
  - A. Hematomas
  - B. Avulsions
  - C. Lacerations
  - D. Abrasions
3. Which type of wound has a jagged cut where the tissue are snagged and torn, forming a rough edge around the wound?
  - A. Incision
  - B. Laceration
  - C. Contusion
  - D. Hematoma
4. The most common form of closed wound is:
  - A. Abrasion
  - B. Contusion
  - C. Laceration
  - D. Incision
5. Which type of wound is caused by sharp, pointed objects such as nails, splinters, or knives?
  - A. Abrasion
  - B. Avulsion
  - C. Puncture
  - D. Contusion
6. Which of the following is most susceptible to tetanus?
  - A. Laceration
  - B. Amputation
  - C. Incision
  - D. Puncture

## 7. Which of the following describes bleeding from a vein?

- A. Bright red, flowing steadily
- B. Bright red, spurting
- C. Dark maroon, flowing steadily
- D. Dark maroon, spurting

## Part II. Choose the best answer regarding dressings.

### 1. The material used to hold sterile material over a wound:

- A. Must be sterile
- B. Must be adhesive
- C. Is a dressing
- D. Is a bandage

### 2. Any material applied directly to a wound in an effort to control bleeding and prevent further contamination:

- A. Is a bandage
- B. Is a dressing
- C. Should not be sterile
- D. Should be loosely secured to help in checking the wound

### 3. Use of a sterile dressing on an open wound will:

- A. Reduce further contamination
- B. Kill any bacteria present in the wound
- C. Only be necessary if the wound is bleeding profusely
- D. Prevent shock

### 4. After a dressing has been applied to a wound, if bleeding continues, the first aider should:

- A. Remove the blood-soaked dressing and replace it with a clean, sterile dressing
- B. Leave the original dressing in place and place a new dressing over the blood-soaked ones

*Answers: Part I: 1. A 2. D 3. B 4. B 5. C 6. D 7. C Part II: 1. D 2. B 3. A 4. B*

*National Safety Council, First Aid and CPR, 1991*

# The Last Word...

"To obtain maximum attention, it's hard to beat a good, big mistake."

"An intellectual is somebody who can bore you and make you feel guilty about it."

"If we had as little on our minds as elephants do, we could remember, too."

"The past gives us experience and memories; the present gives us challenges and opportunities; the future gives us vision and hope."

"The only difference between stumbling blocks and stepping stones is the way you use them."

"It isn't the mountain ahead that wears you out – it's the grain of sand in your shoe."

"One thing is certain – more people are going on diets tomorrow than today."

"You can tell when people are pretty well informed. Their views are pretty much like your own."

"Nothing seems to bring on an emergency as quickly as putting money aside in case of one."

"The trouble with learning from experience is that you get the test before the lesson."

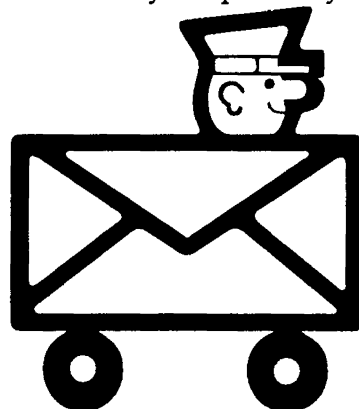
"The trouble with being young is that you're not old enough to enjoy it."

**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 Officers and Executive Committee 1990-1991

<i>Officer</i>	<i>Name</i>	<i>State</i>	<i>Representing</i>
President .....	Joe Main .....	DC .....	Labor
First Vice President.....	Ron Keaton .....	WV .....	Federal
Second Vice President .....	Thomas Ward .....	PA .....	State
Third Vice President .....	Dick Machesky .....	PA .....	Management
Fourth Vice President .....	Joseph Forte .....	PA .....	Supplier
Secretary-Treasurer .....	Don Farley .....	WV .....	Federal

<i>Member</i>	<i>Representing</i>	<i>From</i>	<i>State</i>	<i>Title</i>
Raymond Ashby .....	Management .....	Island Creek Coal Company .....	KY .....	Safety Director
Alex Bacho .....	Federal .....	Bureau of Mines .....	DC .....	Chief, Mine Tech.
William Garay .....	State .....	Pa. Dept. of Deep Mine Safety .....	PA .....	Mine Inspector
Ellsworth Bengry .....	Federal .....	MSHA, Coal Mine H & S .....	OH .....	Training Specialist
J.D. Breedon .....	Federal .....	MSHA, Coal Mine H & S .....	PA .....	District Manager
Vernon Demich, Sr. ....	Labor .....	UMWA .....	PA .....	Safety committeeman
Maurice Childers .....	Federal .....	MSHA, Coal Mine S & H .....	IN .....	District Manager
James Clem .....	Management .....	Peabody Coal Company .....	KY .....	Vice President
Adele Abrams .....	Association .....	National Stone Association .....	DC .....	Director, Govt. Affairs
Donald Conrad .....	Federal .....	MSHA, Pa. Bit. Safety Council .....	PA .....	Secretary
John DeMichie .....	Federal .....	MSHA .....	VA .....	Special Assistant
Lonnie Gore .....	Management .....	Marrowbone Dev. Corp. ....	WV .....	Safety Supervisor
Richard Flack .....	Management .....	R & P Coal Company .....	WV .....	Senior Safety Inspector
Ford B. Ford .....	Federal .....	MS & H Review Commission .....	DC .....	Chairman
Richard Burns .....	Management .....	Old Ben Coal Company .....	IN .....	Safety Inspector
Henderson Grigley .....	State .....	Ohio Division of Mines .....	OH .....	Deputy Director
James Adkins .....	Management .....	Cannelton Industries .....	WV .....	Safety Director
Jeff Duncan .....	Labor .....	UMWA .....	PA .....	S & H Representative
Thomas Rabbitt .....	Labor .....	UMWA .....	PA .....	S & H Representative
Donald Lilley .....	Management .....	Darmac Associates .....	PA .....	Safety Director
Douglas K. Martin .....	State .....	Dept. of Mine Inspection .....	AZ .....	Mine Inspector
Ivan Moreton .....	Management .....	Inland Steel Coal Company .....	IL .....	Safety Director
Robert Nelson .....	Federal .....	MSHA, Coal Mine S & H .....	PA .....	Supervisory Inspector
Bob Scaramozzino .....	Labor .....	UMWA .....	DC .....	Deputy Administrator
Irmadell Pugh .....	Federal .....	MSHA, Coal Mine S & H .....	WV .....	Program Analyst
Rick Radakovich .....	Management .....	R & P Coal Company .....	PA .....	Supervisor of Tng.
Joseph Sbaffoni .....	State .....	Dept. of Envir. Resources .....	PA .....	Chief
Walter Schell .....	Federal .....	MSHA, Coal Mine S & H .....	CO .....	Training Supervisor
John B. Shutack .....	Federal .....	MSHA, Coal Mine S & H .....	PA .....	District Manager
Harry Tuggle .....	Labor .....	U.S.W.A. ....	PA .....	S & H Technician
Ival Van Horne .....	Federal .....	MSHA, Coal Mine S & H .....	CO .....	Training Specialist
Joe Vendetti .....	Management .....	Carbon County Coal .....	WY .....	Safety Director
Robert L. Vines .....	Association .....	Bit. Coal Operators Association .....	DC .....	Safety Director
Joseph Williams .....	State .....	Illinois Dept. of Mines/Minerals .....	IL .....	Inspector
David Hazlett .....	— .....	Loss control representative .....	PA .....	Retired
Charles Jones .....	— .....	MSHA, Coal Mine S & H .....	PA .....	Retired
James Krese .....	— .....	MSHA, Coal Mine S & H .....	WV .....	Retired
Harry Thompson .....	— .....	MSHA, Coal Mine S & H .....	PA .....	Retired
Michael P. Trainor .....	— .....	MSHA, Metal/Nonmetal .....	PA .....	Retired
Robert Vargo .....	— .....	National Mine Service .....	IL .....	Retired



# **Joseph A. Holmes Safety Association Awards Criteria**

## **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