

THE HOLMES SAFETY ASSOCIATION

BULLETIN

FEBRUARY 2000

Black History Month

Inside:

- *New MSHA "Part 46 Training"*
- *A Report on the Surface Haulage Seminar*
- *Fatalities - Coal and Metal/Nonmetal*
- *Black History: Early Black Labor Leaders*



CONTENTS:

New MSHA “Part 46 Training” Launched by Northeast Ohio Holmes.....	3
A Report on the Surface Haulage Seminar.....	5
Early Black Labor Leaders.....	8
Fatalities - Coal and Metal/Nonmetal.....	10
“Take the Keys - Save Your Life”.....	14
“Catching the Crumbs Can Save Your Life”.....	15
The MII Baby.....	16
Did You Know That February 20-26, 2000, was National Engineer’s Week.....	17
Fitness and Wellness.....	18
Historical Notes on Black Mining History.....	20
What’s Happening at the National Mine Health and Safety Academy.....	21
Mining Our History.....	22
Joseph A. Holmes Safety Association 2000 National Meeting.....	24
Words to think about.....	26

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

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

COVER: Cover design provided by the AVMDB Staff Visual Information Specialist. If you have a potential cover photo, please send an 8" x 10" print to Donald Starr, Holmes Safety Association Bulletin, National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813-9426.

KEEP US IN CIRCULATION--PASS US ALONG

New MSHA "Part 46 Training"

Launched by Northeast Ohio Holmes

by Lloyd E. Mackall

- ✓Start with a lively agenda of electrical, stockpile, crusher, and equipment safety.

- ✓Add a hands-on review of the new MSHA "Part 46" training for metal and non-metal mines.

- ✓And what do you have?

- ✓One of the best mining safety and current events seminars yet.

"It took a lot of work to put it together, but it turned out fantastic," chairman Bill West explained. West, the president of Hilltop Aggregates, Mogadore, Ohio, organized the 6th annual safety conference of the Northeast Ohio Chapter of the Holmes Safety Association at Aurora Woodlands Resort and

industry. The Northeast Chapter meets the first Tuesday of each month in the Kent, Ohio, area where much of the conference planning took place.

This chapter was organized through the cooperation of the Mine Safety and Health Administration, mine operators, and the Ohio Division of Mines and Reclamation. James F. Myer, Ohio surface mine safety manager, helped form the chapter when he was with MSHA, along with Tom Kanopsic, state inspector.

West called on Myer to introduce Gerry Rothwell, state inspector, who was the first

going on, Linda Herbst, MSHA, Training Specialist, and Don Canfield, MSHA, explained Part 46 and Part 50 of the new



training regulations in what was called a "break-out session."

Also representing MSHA were Don Foster, who listed the five most sited violations and how to correct them, and George Schorr who explained the new Federal standards for noise which call for hearing tests, hearing conservation programs, and new actions to be taken at 85 dBA and above and 90 dBA levels.

Three made presentations from the Ohio Aggregates & Industrial Minerals Association-Sherry L. Weisgarber, Executive Director, who welcomed new members to her organization; Pat Jacomet, who spoke on stockpile safety during aggregate testing due to road job warranties now required in



Conference Center, Aurora, Ohio, Jan. 19th.

West said there were 82 participants, 10 speakers, and 24 exhibits (hosted by 53 people) of safety and equipment products for the mining

speaker of the seminar and gave the practical approach to electrical safety, using case histories and stressing concerns at home as well as on the job. While this safety discussion and others throughout the day were

(See next page)

FEBRUARY 2000

Ohio; and Atty. Brian Barger, who spoke on wetlands, zoning trends, and community relations.

Two other speakers provided safety insights - Dennis Apple, Ohio Bureau of Workers Compensation, and Ted Butts, Safety Director for Pioneer. Apple said many videos and free training are available through BWC. Butts had a lively "PowerPoint" slide presentation which highlighted safety concerns, such as guarding of conveyor belt components, where there are pinch points and dangers for hands and arms. ■

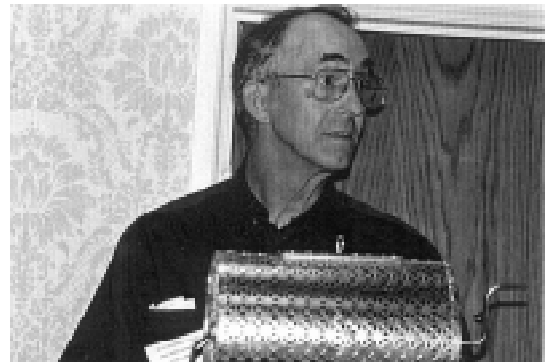


Literature and handouts available for participants.



Participants discussing items on display.

Article and photographs provided by Lloyd E. Mackall, recently retired from the coal and limestone industry. If you have any further questions, contact Mr. Mackall at 330/482-4057 or mackaky@valunet.com.



Bill West, Chairman, conducts door-prize drawing.



Seminar participants enjoy a good meal at the noon break.

A Report on the Surface Haulage Seminar

By Johnnie Tyler, Instructor, and Charlotte Richardson, Bulletin Staff Writer

“I don’t see how it could be made any better. I have seen and attended training academies...and this is the best I’ve ever experienced...” Comment received from attendee

The ‘Surface Haulage Safety Seminar’ which was held at the National Mine Academy August 17-19, 1999, was attended by approximately 150 persons who represented all types of environments in coal and metal/nonmetal mines. Over twenty surface haulage topics were offered in a workshop set up by more than twenty-five presenters during the two-and-a-half day seminar.

Besides the classroom workshops, there were several display booths where the latest in technologic equipment and materials were demonstrated or could be viewed. In addition, some companies brought in state-of-the-art haul trucks and encour-

aged hands-on participation by attendees.

Brief summaries of each topic (and presenters with their company/organization names) are as follows:



‘Application of Technology to Earth Moving Equipment and its Effect on the Environment’ (Greg Erickson, Volvo Construction Equipment Co.)—Hands-on operator safety training on the Volvo A30 articulated haul truck with a pre-operational check.

‘Care and Maintenance of Off-Road Tires and Off-Road Tire Basics’ (R. C. “Bob” Potts, Goodyear Tire) — Reasons why haulage tires fail; preventive maintenance, conditions underfoot, site

operations, vehicle maintenance, rim and valve hardware, basic engineering, load carrying capacities, industry code definitions, sidewall markings, bias vs. radial construction, and performance history.

‘Caterpillar Wet Brake Systems/Steering Transmission Integrated Control (STIC) on End Loaders’ (John Douglas, Walker Machinery) — A look at past and current Caterpillar brake systems; safety operation of Caterpillar machines; the various aspects of the ‘joystick’ steering control system.

‘Causes of Crane Accidents and Lift Concepts’ (Bob Bellman, Link Belt Construction Equipment Co.) — Primary causes of crane accidents; lift concepts and capacities; computers on cranes; terminology; development of lift charts with practical exercises.

‘Clean Air Machine’ (William R. French, Justice Supply Co.) — Developed to keep air inside armored vehicles clean (during the Gulf War), a recirculating air cleaner that can filter silica dust as small as one micron from an enclosed cab.

(See next page)

“This was the first conference (haulage) that I have attended...it was well organized...good variety of topics...too bad more people couldn’t have attended this seminar...Good job!”

'DOT Safety Procedures and Criteria' (Lee Dean and Edward Pritt, WV Dept. of Transportation, Div. of Motor Carriers) — Level 1 vehicle inspection procedures demonstrated on a commercial motor vehicle.

'Dump Point and Surge Pile Safety' (Jarrod Durig, MSHA Technical Support) — A review of related accidents and their causes; safety procedures to follow that will prevent these accidents.

'Dump Trailer Operation' (Charles R. Stephens and James E. Kenyon, East Manufacturing Corp.) — Pre-trip inspections, correct loading and unloading operations, general safety and precautionary measures.

'Electric Drive Off-Highway Haulage Trucks' (David Burlison, Komatsu Mining Systems, Inc.) — Safety aspects of an electric drive haul truck; operator inspection; steering and braking systems; dynamic retarding with emphasis on emergency back-up systems.

'Haul Roads — Keys to Accident Prevention' (John W. Friedland, Jr., MSHA Technical Support) — A review of factors that affect safety; importance of compatibility of truck to mine road; examples of haulage accidents where road conditions were a factor.

'Heavy Equipment Safety' (John White, Columbus Equipment Co.) -- Covered items that should be inspected

during pre-operation inspections; powered-haulage fatality statistics; areas of responsibility; the importance of training.

'I Lost My Business and My House; But, I Saved \$1850 on Repairs' (Franklin "Frank" M. Adkins, Safepro, Inc.) — A total maintenance approach to safe production.

'Independent Contractors' (Eldon Dunford, Ivy Tech State College) — Safety practices and accidents involving independent contractors.

'Komatsu WA700, WA800, and WA900 Large-Size Mining Wheel Loaders' (Joe Jania, Komatsu America International Co.) — Safety aspects and procedures on large loader operations.

'Maintenance and Service of Vehicle Fire Suppression Systems' (Tommy White, Air Gas Fire Protection) — Automatic fire suppression systems on large equipment.

'Review of Recent West Virginia Surface Haulage Accidents' (Terry Farley and John Meadows, WV MHS&T)

"Presentation...was very excellent..."
"Excellent, informative, and humorous"
"An excellent speaker"
"A great job...very important subject"
 Comments from attendees regarding Frank Adkins' presentation

— A ten-year investigative review of West Virginia surface haulage accidents using state reports, videos, pictures, etc. with personal experiences.

'Ruggedized Camera Systems for Blind Spot Safety' (Steve Sappol and John DeFazio, Intec Video Systems, Inc.) — A comparison of video cameras to other means of obstacle detection for vehicular



safety, proper camera selection and placement.

'Safe Aspects of Mounting/Demounting Off-Road Tires - When Should They Be Replaced' (Nick Sticklen, Appalachian Tire Products) — Hands-on demonstrations of a tire truck with tire hands.

'Safe Truck Operation' (Carl Hubbard, Heritage

Equipment, Inc.) — Safe operating procedures, driver responsibilities, effects of substance abuse.

'Simulators for Use in Vehicle Driver Training Systems' (Raymond R. Peterson, Video Information Systems Training Associates, Inc.) — State-of-the-art presentations from VISTA and Lockheed Martin Information Systems designed to train operators of powered haulage equipment in surface mines. Similar to technology used by airline industry and the military.

'Vision Technology Advancements for Surface Haulage and Mining' (Rex Colorado and Bruce Smith, Safety Vision Inc.) — Fatality reduction, blind spots, improving work efficiency and safety; thermal imaging cameras, digital and analog recording capabilities of rear vision and surround sight cameras.

'Vital Information Management Systems (VIMS)' (Richard E. Martin, Walker Machinery Co.) — The role of computerized equipment monitoring systems in mining; machine systems, event monitoring, payload productivity information, prognostics.

The seminar was very well received, as shown by the comments throughout. Suggestions for new topics included workshops on accident prevention, air and engine brakes, common citations and ways to prevent receiving them,

wet brake systems, management responsibilities on how to handle safety concerns, and more. Plans for the next seminar will soon be underway, and the coordinators welcome any further comments and suggestions you may have. ■



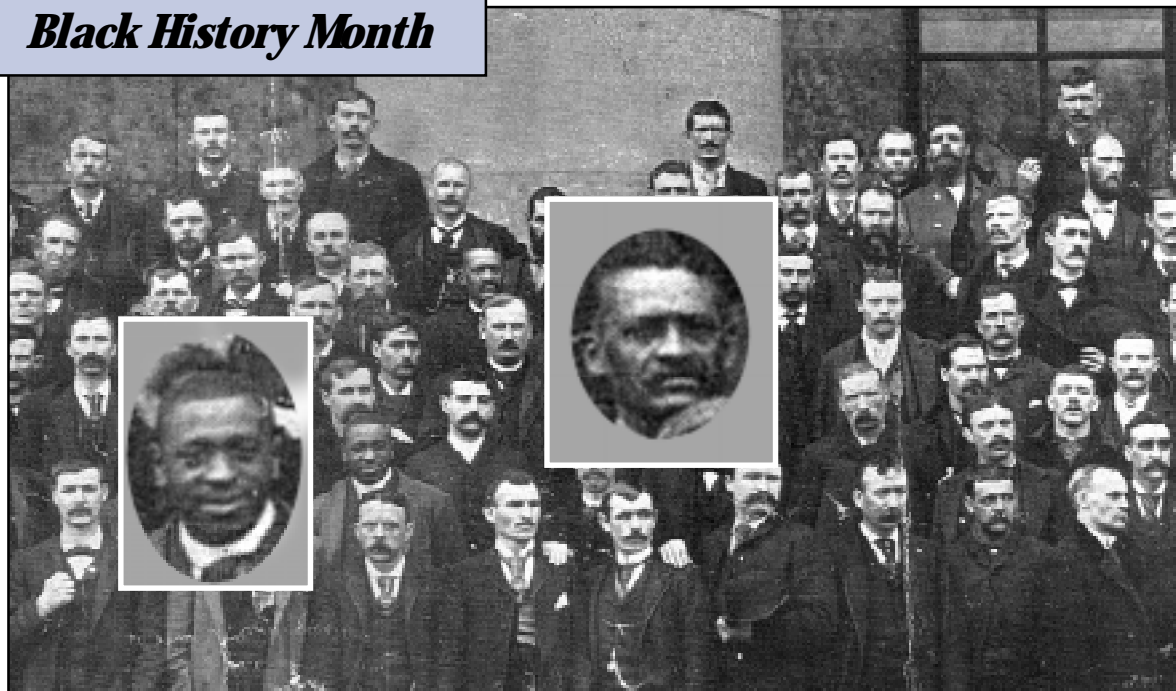
“...tire presentations one of the best.” Comment from attendee

What did you like best about the conference?

- “Safety based workshops.”
- “The variety, in general, great sessions.”
- “...very helpful.”
- “...able to hear some personal experiences, which helps to keep you focused.”
- “...opportunity to exchange information and ideas.”
- “...discuss with peers similar problems and solutions.”
- “Conversations with others about their field of expertise.”

Comments received from attendees

FEBRUARY 2000

Black History Month***Early Black Labor Leaders****by Melody Bragg, Bulletin Staff Writer*

Tales of mine wars, strikes, and battles for unionization have become legend in the coal fields and beyond. The determination and sacrifice of early miners who banded together to win safe and fair working conditions touches the hearts and fires the imagination of generations today who strive to maintain the fruits of those battles. From the very earliest years, this battle was one in which all races fought side by side, just as they worked side by side.

A look at the record of early black labor leaders clearly demonstrates that the battle for unionization was not one limited by color. In the Appalachian coal fields, in particular,

it was clear that the battle for unionization would require the cooperation of miners of all races. For example, by the last quarter of the nineteenth century, black miners represented over sixty percent of the workforce in the two largest coal regions of West Virginia. It soon became apparent that black miners would play an important part in the success of early unionization efforts.

At the founding convention of the United Mine Workers(UMW) in April of 1890, it was apparent that black miners were eager supporters of the new effort. Five African-Americans served as delegates to the first convention. R. F. Warren, a black

delegate from Ohio, was elected to the first National Executive Board. The other black delegate, Richard L. Davis, was a familiar face in the organizing efforts in West Virginia and would later serve as a district official and National Executive Board Member.

According to William H. Harris, in his book, "The Harder We Run," Richard Davis was one of the most influential early organizers and his efforts led to a dramatic increase in black enrollment. By 1900, the membership of blacks in the UMW numbered 20,000 - approximately one-fourth of the total membership. However, life was not easy for these early reformers. Davis spoke out

vehemently for equality for black members of the union. He urged his union colleagues to provide jobs for blacks in the UMW hierarchy in deed as well as in name and protested when he saw what he considered to be union-tolerated discrimination against black leaders.

Davis would pay a heavy price for his dedication to bringing black miners to the union cause. Harris says, "Mine operators eventually blacklisted Davis for his union work, and despite appeals of support to the UMW from white friends, he failed to find work and the union gave him no job." In 1900, Davis died a bitter and broken man at the age of thirty-five.

Another early black labor leader was Horace Smith, a black miner from Pocahontas, Virginia, who was active in union activities as early as 1885. At the founding convention in April of 1890, Smith was elected as the First Vice-President of the newly-formed UMW District 17.

Smith's election reflected the eager participation of black miners in union activities. District 17 President, Michael F. Moran, later stated, "The colored miners have been in the lead in this district until they have shamed their white brethren, and now the devil is to pay. The white men all want in at the same time."

Following the first convention, the UMW enjoyed a tidal

wave of new enrollment. Black miners responded positively to the message of Horace Smith, and in June of 1890 President Moran reported, "We have been told in very plain language that Vice-President Smith must get out on the road with us, and our (black) brothers mean just what they say."

District 17 President Moran also found an active supporter in the drive to increase black union membership in John L. Edmonds, a black miner and officer from a New River district. During the early months of 1891, Edmonds accompanied Moran on organizing marches through the New River field and often took the podium to speak and urge black miners to join the cause.

In April of 1891, Edmonds was elected to the position of vice-president of District 17, replacing Horace Smith. The battle to help miners was not over for Smith. In 1891, he led Pocahontas, Virginia, miners in their efforts to found two cooperative stores that reportedly did over \$100,000 in business annually.

William B. Wilson, who served as a member of the UMW Executive Board and later as Secretary of Labor for Woodrow Wilson, was so impressed with the work of Smith and others that he made the following statement after an organizing trip to Pocahontas, Virginia: "To the honor of the colored men, be it said that

they are the ones who are doing what they can to help us in our work, while the English-speaking white men . . . lie back on their oars . . . The truth is that the most persistent unionists here are blacks."

The career of Edmonds as Vice-President would prove to be short-lived, as he became involved in a bitter debate concerning the payment of black officers as organizers. In 1892, Richard Davis, writing the *United Mine Workers Journal*, protested the absence of Vice-President Edmonds from West Virginia. He felt that this was due to the failure of district officers to pay the black leader as a full-time organizer. The controversy would become more and more heated, as both Edmonds and District 17 Secretary - Treasurer Henry Stephenson argued the issue on the pages of the *Mine Workers Journal*.

Black miners seemed evenly split between their support of Edmonds and for the position of the UMW, which claimed a lack of funds. At the next annual convention, J. J. Wren, a black miner from Beury in Fayette County, West Virginia, was elected to succeed Edmonds as District 17 Vice-President, making him the third consecutive black elected to that office.

(See next page)

Perhaps as a result of the Edmonds controversy, Wren was appointed as a paid organizer which marked the first time a black district officer acted in that capacity. Throughout 1892, Wren traveled with District 17 President Moran on organizing efforts throughout West Virginia. When Moran was forced to retire due to illness in October of that year, Wren succeeded him as President of District 17.

Throughout mining history, there have been both gains and losses in the struggle for equality among workers. However, there is a clear record that the warriors for improved working conditions came in all colors and from all backgrounds.■

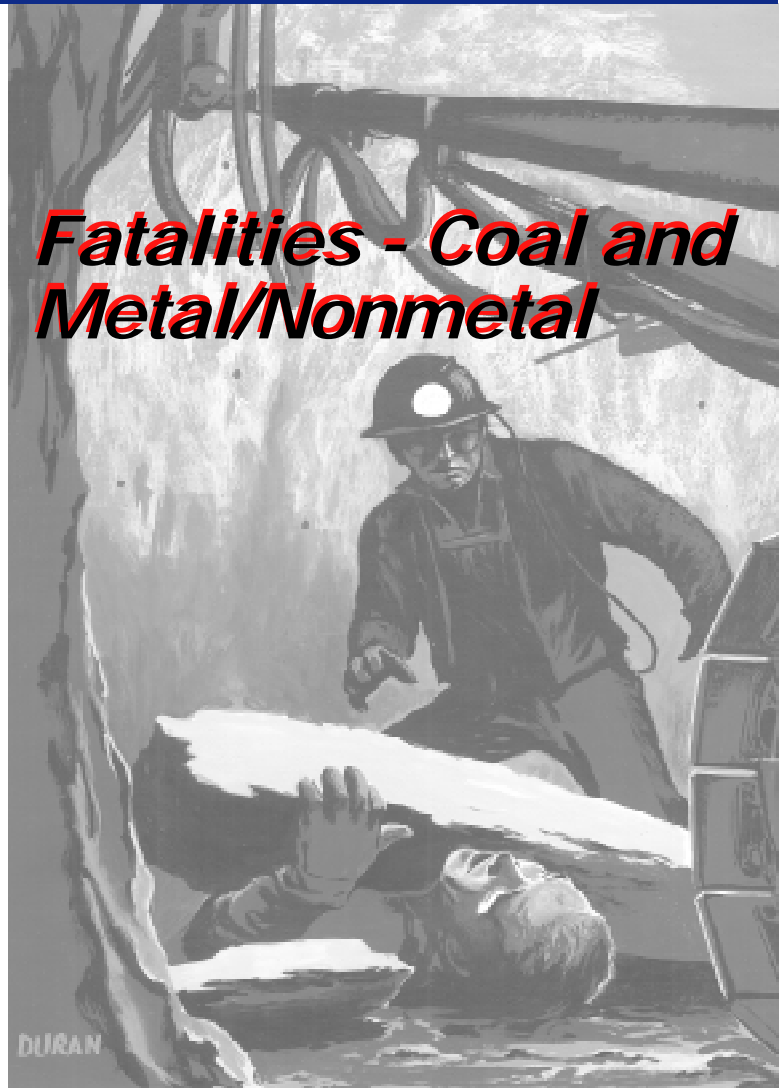


Illustration by Richard Duran

This article updates the status of fatalities occurring in both coal and metal/nonmetal mines from January 1, 1999, through December 31, 1999.

Based on preliminary accident reports as of December 31, 1999, eighty-seven fatalities occurred at coal and metal/nonmetal mining operations. During this period, thirty-four fatalities occurred at coal operations and fifty-three fatalities occurred at metal/nonmetal operations. Powered haulage and machinery resulted in 47 percent of the fatalities in metal and nonmetal. Fall of roof, accounting for 20 percent of the accidents, were the most frequent accident classifications that caused coal mining fatalities. The following chart gives a breakdown of the fatalities for this period.

(See next pages)

Fatalities - Coal and Metal/Nonmetal

Accident Classification	Number of Accidents 1/1/99 - 10/31/99			
	Surface (Coal)	Underground (Coal)	Surface (M/NM)	Underground (M/NM)
Electrical	1		3	
Exploding Vessels Under Pressure			2	
Explosives	2			
Fall of Face/Roof		1		
Fall of Face, Ribs, Pillar, Highwall		1	2	
Fall of Highwall	3			
Fall of Materials		2		
Fall of Rib		1		1
Fall or Rib/Highwall		1		
Fall of Roof/Back			2	1
Fall or Roof		7		
Falling/Sliding Material			1	
Handling Materials	1		2	
Hand Tools				1
Hoisting				1
Ignition of Explosion of Gas or Dust			2	
Machinery	2	1	6	
Other	1		1	1
Powered Haulage	3	1	12	4
Slip or Fall of Person	1	1	3	1
TOTALS	14	16	36	10

FEBRUARY 2000

Coal Mining Fatalities by State (1/1/99-12/31/99)

Nine fatalities each occurred in Kentucky and West Virginia in 1999. Four fatalities occurred in Virginia and two fatalities each occurred in Alabama, Colorado, Ohio, and Pennsylvania. The chart below gives a state breakdown for these fatalities:

	AL	CO	IL	IN	KY	MD	OH	PA	UT	VA	WV	WY
SURFACE		1		1	6			1		2	4	1
UNDERGROUND	2		1		3	1	2	1	1	2	5	
TOTALS	2	1	1	1	9	1	2	2	1	4	9	1

Metal and Nonmetal Fatalities by State (1/1/99-12/31/99)

Nine fatalities occurred in Nevada in 1999. Three fatalities each occurred in Alabama, Arizona, Indiana, and Kansas. The chart on the right gives a state breakdown for these fatalities.

STATE	SURFACE	UNDERGROUND
Alabama	3	
Arizona	3	
Colorado	1	1
Connecticut	1	
Florida	2	
Iowa		1
Illinois	1	
Indiana	3	
Kansas	2	1
Kentucky		1
Michigan	1	
Missouri	1	1
Mississippi	2	
North Carolina	2	
New Mexico		1
Nevada	2	7
New York	2	
Ohio	2	
Oregon	2	
Pennsylvania	2	
Tennessee	2	
Texas	1	
Utah	2	
Virginia	1	
Wisconsin	1	
Wyoming		1
TOTAL	39	14

*Metal and Nonmetal Fatalities by Primary Mineral Mined
(1/1/99-12/31/99)*

Primary Mineral Mined	Surface	Underground
Basalt	1	
Cement	2	
Crushed Stone	1	
Copper	1	
Gold	1	9
Granite	1	
Gypsum	1	
Iron	1	
Lead/Zinc		1
Limestone	14	3
Phosphate	1	
Sand and Gravel	13	
Stone	1	
Titanium	1	
Uranium		1
TOTAL	39	14

Submitted by: John V. Forte
National Mine Health & Safety Academy

FEBRUARY 2000

“Take the Keys - Save Your Life”

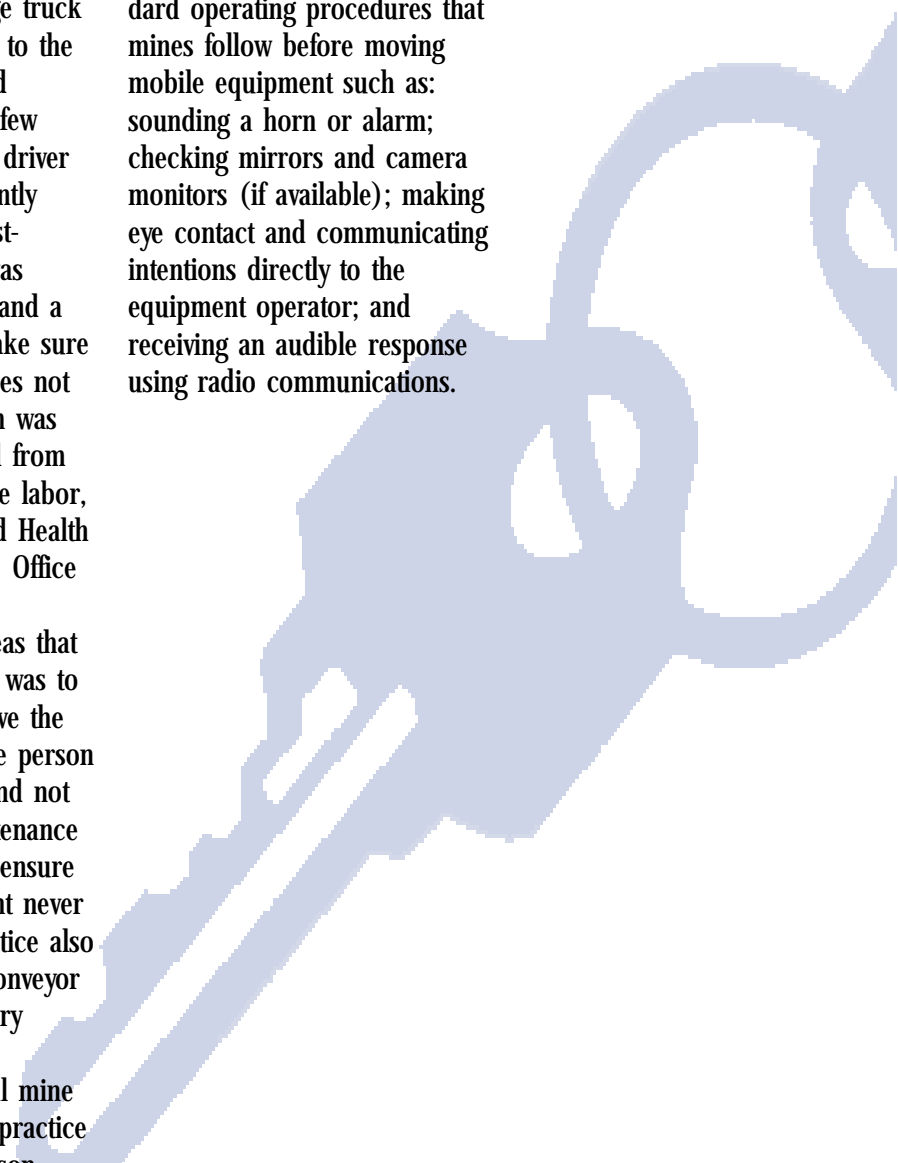
Post-Accident Investigation Remedies

On October 14, 1999, a 58-year-old maintenance man was fatally injured at a crushed stone operation. The victim had been servicing a haulage truck in the pit. He indicated to the truck driver that he had completed his work. A few minutes later the truck driver drove away and apparently struck the victim. A post-accident investigation was conducted at the mine and a team was formed to make sure this type of accident does not happen again. The team was comprised of personnel from mine management, mine labor, and the Mine Safety and Health Administration (MSHA), Office of Technical Support.

Among the many ideas that the team came up with was to require the driver to give the keys to the maintenance person prior to maintenance and not return them until maintenance is finished. This would ensure that this type of accident never occurs again. This practice also may be applicable to conveyor belts and other stationary equipment.

MSHA encourages all mine operators to adopt the practice of the maintenance person insisting on taking the keys from the operator prior to maintenance on any mobile

piece of equipment and not returning them until the work is finished. This new practice would be in addition to standard operating procedures that mines follow before moving mobile equipment such as: sounding a horn or alarm; checking mirrors and camera monitors (if available); making eye contact and communicating intentions directly to the equipment operator; and receiving an audible response using radio communications.

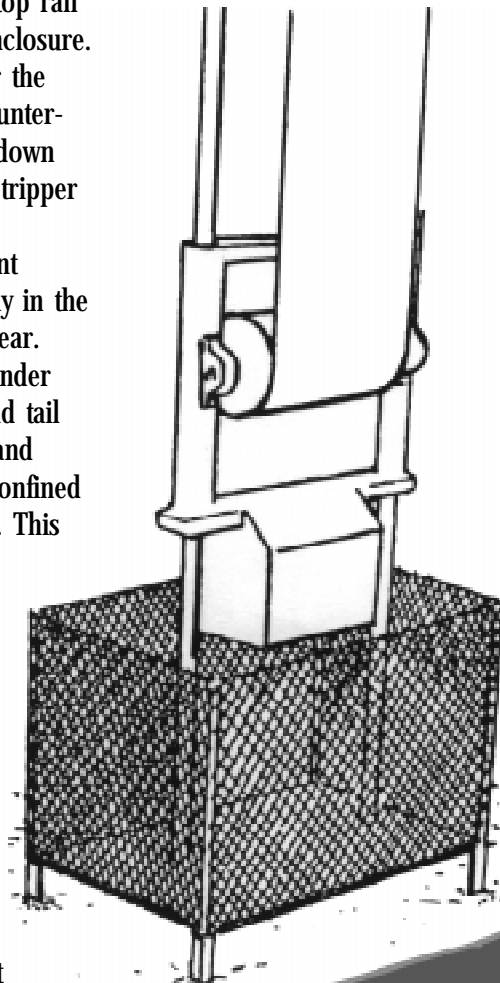


On January 26, 2000, a 37-year-old laborer was fatally injured at a burned lime operation. The accident involved a counterweighted take-up roller on a tripper conveyor system. The victim was attempting to clean up material spillage under the counterweight rail cage. In order to reach the spilled material, he had to climb onto the top rail of the counterweight enclosure. While attempting to bar the spilled material, the counterweight assembly came down unexpectedly when the tripper conveyor cycled.

This type of accident occurs all too frequently in the mining industry every year. Clean up around and under belt drives, take ups and tail pieces is inconvenient and hazardous due to the confined space and running belt. This kind of maintenance is generally neglected until the spillage actually interferes with and fouls the operation of the belt. There is a very simple and cost effective solution to this problem which can reduce unnecessary exposure of workers to the inherent hazards of belt maintenance. The solution is very similar to the crumb tray on a toaster or a drip pan under a kitchen range. A pan is fabricated from lightweight stainless steel with

“Catching the Crumbs Can Save Your Life”

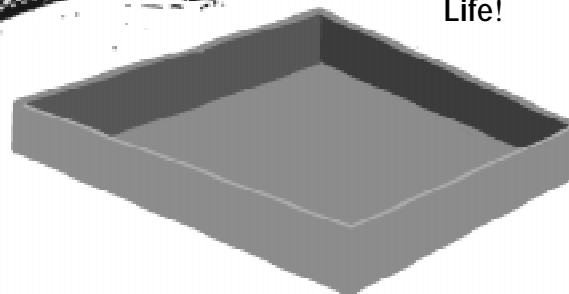
Post-Accident Investigation Remedies



rolled edges to prevent injury from sharp edges and corners. The pan can be fitted with handles or ropes and could include wheels or rollers if desired. This pan would be strategically placed under the point where spillage occurs (drives, takeups, tail pieces, and transfer points). A hinged door could be cut out of the guarding or cage which would permit access to slide the drip pan out periodically so that the spillage can be safely removed.

The mining industry is strongly encouraged to adopt this suggestion. MSHA believes that a significant number of unnecessary injuries and fatalities could be avoided in the future as a result.

Catch the Crumbs
and Save Your
Life!



The MII Baby

Article taken from the publication: Golden, CO Minerals Information Institute Update 1999-2000

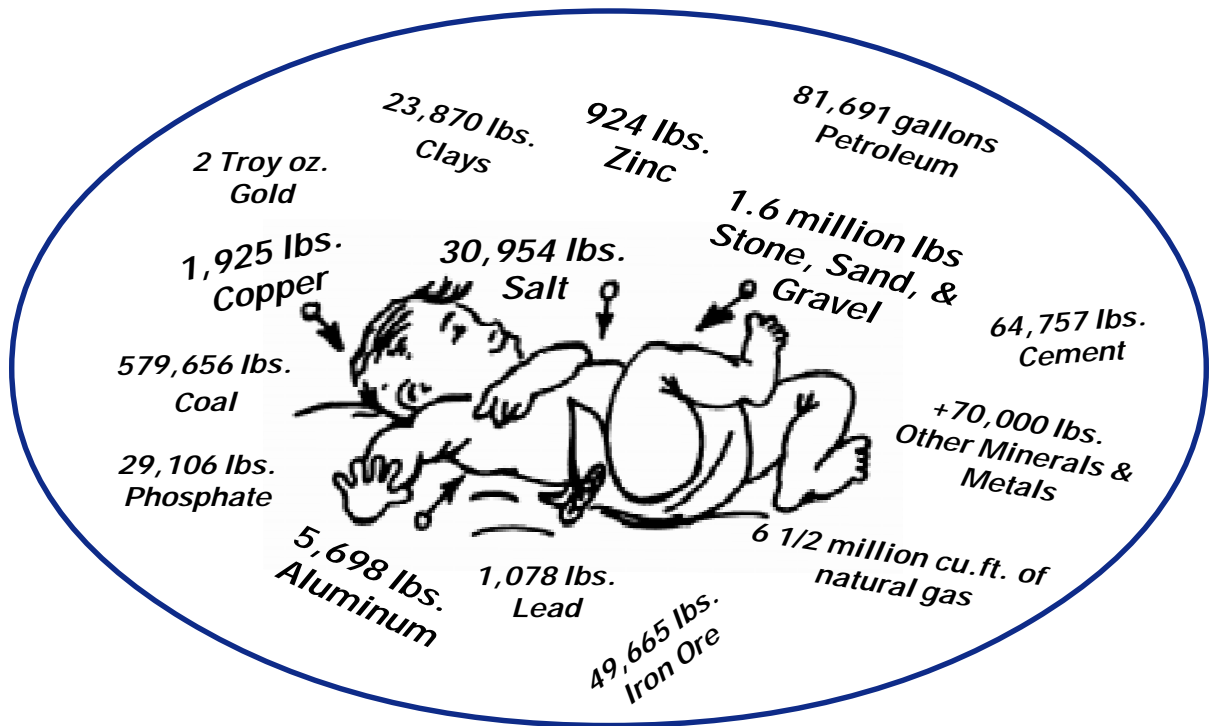
The MII Baby was created in the mid-1980's by Ted Mullings of Leadville, Colorado, for a special MII program.

To annually update the MII Baby, consumption statistics are derived primarily from the USGS Commodity Reports, with a little massaging and further research by Leslie Coleman of the NMA. This is where the U.S. Annual Mineral Use Per Person statistic is created.

For 1998, that use was 47,338 pounds of newly-mined minerals and metals for every one of the 270 million people in the United States.

To update the MII Baby, these annual numbers are multiplied by the average life span for newborns in the U.S. In 1997, average life expectancy (at birth) in the U.S. was 76.5 years, up .4 years since 1996. We guesstimated the 1998 US life expectancy to be 77 years. Therefore, 77 years x 47,338 lbs = 3,645,026 pounds of minerals in a lifetime. You can always get a copy of the most current MII Baby from our web home page, www.mii.org.

Every American Born Will Need...



3 1/2 million pounds of minerals, metals, and fuels in a lifetime.

Did you know that February 20-26, 2000, was National Engineers Week?

Across the nation, special events are planned to honor the contributions engineers have made to progress. Following is an excerpt from a special presidential message in honor of National Engineers Week 2000.

“As we begin a new century, it is an ideal time to recognize and give thanks for the many contributions America’s engineers have made to the life of our nation. From putting men on the moon to developing our interstate highway system, from cleaning our air and water to prolonging our health, engineers have been involved in many of our century’s most extraordinary and enduring accomplishments. With a passion for discovery, engineers have worked tirelessly to make our lives safer, easier, and more fulfilling.”

Bill Clinton.

Following are a few quotations from other important figures that paid tribute to the contributions of engineers in history:

“Scientists discover the world that exists; engineers create the world that never was.”

Theodore Von Karman, Aerospace Engineer

“Engineering is the art of organizing and directing men and controlling the forces and materials of nature for the benefit of the human race.”

Henry G. Stott (1907)

“Never express yourself more clearly than you think.”

Niels Bohr

“The story of civilization is, in a sense, the story of engineering - that long and arduous struggle to make the forces of nature work for man’s good.”

L. Sprague De Camp (1963)

“If we knew what we were doing, it would not be called research, would it?”

Albert Einstein

“The most exciting phrase to hear in science, the one that heralds new discoveries, is not ‘Eureka!’ but ‘That’s funny...’”

“Anything that is not nailed down belongs to the engineer. Anything that the engineer can pry loose is not nailed down.”

Submitted by Jerry Herndon

Now that you see how valuable engineers are to history, you should remember to be especially nice to your own engineers.

Fitness and Wellness

Before beginning any program, it's important to understand some of the terminology and basic concepts used in the field. Much information about physical fitness is fairly new. Ongoing research and experimentation have produced a dynamic field of study that continues to undergo constant change and to yield exciting new developments.

THE COMPONENTS OF PHYSICAL FITNESS

Fitness professionals divide fitness into four separate components: **flexibility, cardiovascular fitness, muscular fitness, and body composition**. Muscular fitness is further divided into muscular **strength, endurance, and power**.

Each component is equally important, and one component should not be emphasized over the others. Furthermore, each component is measured separately, and there are specific methods to improve fitness in each area. For individuals to be considered "physically fit," they must possess acceptable levels of fitness in all four

fitness components. The four components are described below briefly, more detail is presented in later sections of training.

Flexibility

Flexibility is the ability to move the joints of the body through their normal range of motion. An adequate degree of flexibility is important to prevent injury and maintain body mobility.

Cardiovascular Fitness

Cardiovascular fitness, also known as aerobic fitness, is the capacity of the heart-lung system to supply the working muscles with oxygen, and the ability of muscle tissues to process that oxygen. Since stamina is built through this component, cardiovascular fitness measures the ability to participate in sustained vigorous physical activity over extended periods of time. Aerobic fitness also plays a major role in preventing artery disease, high blood pressure, diabetes, and obesity.

Muscular Fitness

Muscles are bundles of tissues that shorten, or contract, when stimulated. Through their connection to bones and joints, they provide a system of levers which permit movement. Muscles also

contribute to the maintenance of body heat, since a by-product of contraction is heat production.

Subcomponents of this dimension of fitness include:

⌘ **Muscular strength**—the force a muscle or muscle group can generate with maximum effort, measured by how much weight can be pushed or pulled. This is sometimes known as absolute strength.

⌘ **Muscular endurance**—the ability of a muscle or group of muscles to generate force without fatiguing, measured by the length of time or number of times the action is repeated (multiple or sustained contractions).

⌘ **Muscular power**—how fast muscular strength can be applied.

Body Composition

Body composition is defined as the ratio of the body's lean and fat tissues. Lean body mass—consisting of the muscles, bones, nervous tissue, skin, and organs—represents the metabolically active part of the body that makes a direct and positive contribution during exercise. Body fat is tissue that stores energy for use during some forms of exercise, but otherwise does not contribute

directly to performance. Although some body fat is essential, excess body fat (obesity) acts as a dead weight and leads to injury and a number of health problems.

FITNESS AND HEALTH

Health may simply be described as the absence of illness. A person with excellent health is usually considered to be someone who is not sick, not requiring medical attention, and not dependent upon prescriptive medications on a daily basis. Many healthy individuals are also physically fit. However, it's important to realize that health and fitness are not always synonymous—you can be one and not the other.

Fitness is best defined as a state of optimal physical well-being. Fitness means having the energy and physical ability to maintain a desirable quality of life—enthusiasm for living, without fatigue or exhaustion from routine required activities. Persons with high levels of fitness are, on average, healthier and more able to participate in activities for personal enjoyment. On the other hand, persons with low fitness levels often have difficulty completing daily requirements, and usually have little or no energy left for other activities.

FITNESS AND PERFORMANCE

What is the relationship between fitness and performance, i.e., how well you do on the job, in sports, or on some other task? Simply stated, it depends on the task—fitness is more important for some activities than it is for others.

Performance is generally defined in terms of athletics and skill. However, high athletic ability and skill may or may not be related to physical fitness. It is possible for a highly-skilled individual to have a low level of fitness. It is just as possible for a physically fit individual to have little or no athletic skills.

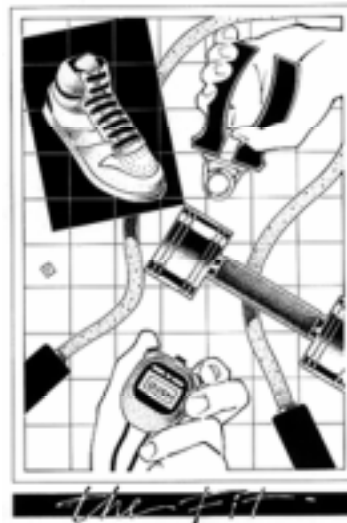
Good performance requires that you have at least the levels of fitness required to accomplish the task at hand. Some activities involve high levels of overall fitness. Others demand exceptional levels of one or more of the four components of fitness (e.g., runners require high levels of cardiovascular fitness, while football players may need to emphasize strength). For still other activities, such as playing pool, fitness is relatively unrelated to performance.

Experts believe that fitness is directly related to performance. Fit employees are able to

perform tasks more quickly and with less injuries than personnel who are not fit. Performance generally improves as fitness and skills increase, but both are necessary. Neither a high level of fitness combined with a low level of skill, nor a high level of skill combined with a low level of fitness, will result in outstanding performance.

Therefore, the levels of fitness you need depend on 1) the requirements of general health, 2) daily needs at home and on the job, and 3) your own goals and interests. Obviously, everyone should strive to stay healthy.

Miners, in addition, must maintain levels of fitness above those of most other workers because of their physically demanding occupation.



The Fit

FEBRUARY 2000

Historical Notes on Black Mining History

Did you know?

- During the UMWA strike of 1904, over 5,000 of the 9,000 striking miners were black.
- During the UMWA strike of 1908, 18,000 men belonged to the union and more than half of them were African-American.

■ **Early Black Labor Leaders:**

Richard Davis of Ohio - State and National UMWA labor boards -1892 and 1898
 William R. Riley - Secretary-Treasurer of Tennessee-Kentucky District 1891-1893
 F. A. Bannister - West Virginia District Vice-president - 1890's
 John L. Edmonds - West Virginia District Vice-President - 1890's
 J. J. Wren - West Virginia District Vice-President - 1890's
 William M. Prentice - International organizer -1916-1926
 George H. Edmunds of Iowa - International organizer
 Walter W. Jones of Alabama - International organizer
 Bozo Damish of Pennsylvania - International organizer

Black Involvement in the Paint and Cabin Creek Union Battles: 1912-1914

- International organizer George H. Edmunds was an active speaker and union leader during the marches, along with Mother Jones, President John P. White, and Vice-President Frank Hayes.
- Hundreds of blacks participated in the strikes and marches.

Black Participation in the Mine Wars 1920-1921

- In 1920, 12 percent of the 4,000 miners in Mingo County were black.
- Black organizer, Frank Ingham of Chattaroy, was an important force during the strikes and worked to defeat company efforts to turn white miners against the black miners. He was jailed several times by company controlled law enforcement officers and was once beaten and left for dead.
- Black miners in Logan County numbered 2,068 in 1921 or almost one-fourth of the working force.
- Reporter Heber Blankenhorn estimated that one-fourth of the 8,000 miners who gathered for the march on Blair Mountain were black.
- At least two black marchers were killed or seriously wounded during the march.
- 400 of the 600 miners jailed in Kanawha County during the march were black.

What's happening at the ...

National Mine Health and Safety Academy

Conferences/Seminars and Workshops



**Mine Rescue Team Training Informational Seminar,
May 23 - 24, 2000
Technical coordinator: David Friley**

**Mine Construction, Maintenance, and Repairs Safety Workshop,
May 31- June 1, 2000
Technical coordinator: John Tyler or Bruce E. Dial**

**Roof Control Seminar, May 31 - June 01, 2000
Technical coordinator: Joseph P. Fama**

**Surface Haulage Safety Seminar, August 22 - 24, 2000
Technical coordinator: John Tyler**

**Tram/National Mine Instructors Seminar,
October 10 - 12, 2000
Technical coordinator: Jimmy L. Shumate or Sharon T. Casto**

**If you need more information about contents of a seminar/
workshop, contact the technical coordinator at 304/256-3100
or Jan Keaton at 304/256-3234.**

Free Catalog!

Order Academy products by requesting a Catalog of Training Products for the Mining Industry

Contact:

National Mine Health and Safety Academy

ATTENTION: ***Mary Lord***

Department of Instructional Materials

1301 Airport Road

Beaver, West Virginia 25813-9426

or phone us at 304/256-3257

FAX us at 304/256-3368, e-mail us at mlord@msha.gov



Mining Our History *An Overview of Disaster Anniversaries*

by Melody Bragg, Bulletin Staff Writer

116 Years Ago

Ignition/Explosion of Gas
West Leisenring Mine
West Leisenring, PA

February 20, 1884

Nineteen men were killed in this mine when gas that had accumulated during the night was ignited by a miner's open light. Although most of the workers fell victim to the blast or afterdamp, several others escaped by going around to another entry.

110 Years Ago

Explosion
Nottingham Mine
Plymouth, PA

February 1, 1890

Eight men lost their lives in this mine when a fireboss unexpectedly entered a body of firedamp with his naked light and caused a terrible explosion. The fireboss was fatally burned, seven others were killed, and several others were seriously injured.

105 Years Ago

Explosion
White Ash Mine
Cerrillos, NM

February 27, 1895

Twenty-four of the 125 men working underground were killed when an explosion erupted in this mine. The explosion occurred when two men who were sent into a room to take up track ignited a body of standing gas. The explosion, propagated by dust, traversed the entire mine.

95 Years Ago

Explosion
Virginia City Mine
Virginia City, AL

February 20, 1905

Every man working underground was killed when an explosion in this mine took the lives of 112 miners. It was the opinion of the coroner's jury that the explosion was caused by a windy shot in which too much

dynamite or powder was used. The shot caused a dust explosion which spread throughout the mine.

90 Years Ago

Ignition/Explosion of Gas
Browder Mine
Browder, KY

February 1, 1910

An explosion occurred in the No. 11 seam, resulting in the death of 34 men and the serious injury of two boys. Gas had accumulated in unventilated idle rooms and was ignited by open lights. Coal dust and kegs of black powder spread the explosion.

89 Years Ago

Mine Fire
Belmont Mine
Tonopah, NV

February 23, 1911

Seventeen men lost their lives at this underground mine during a fire. The fire was discovered

while it was still small and efforts were underway to control it. It is uncertain as to exactly what happened, but apparently some reversal of air current forced the smoke into parts of the mine that had previously been safe. The men who died were trapped at different points, several at the shift stations where they had crawled but from which they were unable to signal.

85 Years Ago

Ignition/Explosion of Gas
Carlisle Mine
Carlisle, WV

February 6, 1915

An explosion in a section of this mine located more than a mile from the shaft killed 20 men and injured 4 others. Gas had accumulated overnight in the faces of one section where a door was partly opened and was ignited by a miner's open light.

83 Years Ago

Snowslide
North Star Mine
Hailey, ID

February 25, 1917

A snowslide at the North Star Mine, 12 miles northeast of Hailey, Idaho, struck the compressor house and bunkhouse and killed 16 men.



FEBRUARY 2000



**Joseph A.
Holmes Safety
Association
2000
National Meeting
June 12-15, 2000**

The 2000 National Meetings of the *Holmes Safety Association*, *Mine Safety Institute of America*, and *National Association of State Mine Inspection Agencies* will be held together in Pittsburgh, Pennsylvania, during June 12-15, 2000. These first meetings of the new millennium are hosted by the Pennsylvania State Council of the Holmes Safety Association. The main attraction will be safety and health workshops led by experts from around the U.S. These workshops represent all sectors of mining.

These combined meetings provide a unique opportunity to meet and “network” with other safety and health professionals who, like Joseph A. Holmes himself, put “safety first.”

Workshops (June 14-15)

- Firefighting and Emergency Preparedness
- Oxygen/Acetylene Safety
- Team Building and Communications
- Explosives Safety
- Abandoned Mines
- Human Factors
- Electrical Safety
- Roof Control
- Incident Investigations
- Life Flight and Special Medical Response Team
- Health Issues in Burning and Welding
- Miner Training Panel Discussion

Special events

- Reception, June 13
- MSIA banquet on the Gateway Clipper, June 14
- NIOSH/MSHA facility field trip, June 15
- HSA awards banquet, June 15

The annual Three Rivers Arts Festival will be going on during the conference, with all events within easy walking distance of the hotel.

Business Meetings

- NASMIA, June 12
- MSIA board of directors, June 13
- JAH/HSA Executive Committee, June 13
- MSIA annual meeting, June 14
- JAH/HSA annual meeting, June 15

Location

The conference will be held at the Pittsburgh Marriott City Center at 112 Washington Place in downtown Pittsburgh. Call 800-228-9290 to make your reservations. Reserve by May 22 and mention the Holmes Safety Association to get the discounted room rate of \$90.

For more information, contact **Donna Schorr**
412-386-6901, schorrd@msha.gov

Hotel web site:

marriotthotels.com/PITDT

Pittsburgh information and events:

www.realpittsburgh.com

Holmes Safety Association

www.msha.gov/PROGRAMS/HSA.HTM

Registration Form

FEBRUARY 2000

2000 Holmes Safety Association, MSIA, NASMIA National Meetings

Please complete this form, detach
and mail with check to:

Donna Schorr
MSHA
Box 18233
Cochrans Mill Road
Pittsburgh, PA 15236

Name

Address

Phone

Fax

Email

The conference registration fee is \$150. A discounted fee of \$100 is available for spouses and guests. The fee includes social functions (reception, riverboat dinner cruise, NIOSH/MSHA field trip with bag lunch).

Number of attendees: _____ @ \$150 = _____

Number of spouses/
guests: _____ @ \$100 = _____

Total: _____

Make checks payable to *Holmes Safety Association*

HOLMES SAFETY ASSOCIATION

25

FEBRUARY 2000

*Words to think about...***Quotes by Famous Black Leaders**

No race can prosper till it learns that there is as much dignity in tilling a field as in writing a poem.
Booker T. Washington

You can't hold a man down without staying down with him.
Booker T. Washington

If a man hasn't discovered something he will die for, he isn't fit to live.
Martin Luther King

The very nature of a struggle on the part of labor and minorities...renders it inevitable that labor and minorities join the camp of and stand by and for the forces of democracy. For it is only within the framework of democracy that labor and minorities can achieve freedom, equality, and justice.
A. Phillip Randolph

NOTICE: We welcome any materials that you submit to the Holmes Safety Association Bulletin. For more information visit the MSHA Home Page at www.msha.gov. If you have any color and black/white photographs that you feel are suitable for use on the front cover of the Bulletin, please submit them to the editor. 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**.

**For address changes and new
subscription requests, contact:**
Bob Rhea
**Holmes Safety Association Bulletin
Mailing List**
MSHA-US DOL
4015 Wilson Blvd.
Rm. 523A
Arlington, VA 22203-1984
703/235-1400

Please address any comments to:
Donald Starr
Holmes Safety Association Bulletin
MSHA-US DOL,
National Mine Health and Safety
Academy
1301 Airport Road
Beaver, WV 25813-9426
Please call us at 304/256-3283 or
Fax us at 304/256-3524

Reminder: The District Council Safety Competition for 2000 is underway - please remember that if you are participating this year, you need to mail your quarterly report to:

Mine Safety & Health Administration
Educational Policy and Development
Holmes Safety Association Bulletin
P.O. Box 4187
Falls Church, Virginia 22044-0187

Holmes Safety Association Officers and Executive Committee 1998-1999

<i>Officer</i>	<i>Name</i>	<i>Representing</i>	<i>State</i>
President	Steve Lipe	Supplier	AZ
First Vice President	Joseph Scaffoni	State	PA
Second Vice President	Doyle Fink	Federal	TX
Third Vice President	Harry Tuggle	Labor	PA
Fourth Vice President	William Vance	Mgmt.	NM
Secretary-Treasurer	Pat Hurley	Federal	VA

Name	Representing	State	Name	Representing	State	Name	Representing	State
Rod Breland.....	Federal	CO	Richard Burns	Mgmt.	WY	Ron Cunningham	State	OK
Jesse Cole	Federal	WV	Robert Coker	Mgmt.	TX	Steve Dunn	State	MO
John Collins	Federal	OH	Gary Cook	Mgmt.	NM	John Franklin.....	State	KY
Don Conrad	Federal	PA	Jim Dean.....	Mgmt.	WV	Larry Frisbie	State	WA
Dave Couillard	Federal	MN	Vern Demich, Jr.	Mgmt.	PA	William Garay	State	PA
Robert Crumrine	Federal	OH	Matt Hindman	Mgmt.	PA	Lee Graham	State	KS
Gerald Davis	Federal	PA	Bill Holder	Mgmt.	NM	Tom Gregorich	State	MN
Ron Deaton.....	Federal	KY	Glen Hood	Mgmt.	TX	Tony Grbac	State	WV
Bruce Dial	Federal	WV	Robert Johnson	Mgmt.	CO	Ben Hart	State	FL
Bob Glatter	Federal	VA	Joe Kinnikin	Mgmt.	NM	Paul Hummel	State	PA
Jim Hackworth.....	Federal	VA	George Krug.....	Mgmt.	FL	D. J. Johnson	State	IL
Whitey Jacobson	Federal	TX	Pete Kuhn	Mgmt.	WY	Phillip Johnson	State	KY
Jerry Johnson	Federal	WV	Joseph Lamonica	Mgmt.	DC	Debbie Kendrick	State	AK
Jack A. Kuzar	Federal	CO	Kevin LeGrand.....	Mgmt.	IA	Douglas Martin	State	AZ
Rexford Music	Federal	KY	Brian Luby.....	Mgmt.	NM	Gilbert Miera	State	NM
Joseph Pavlovich.....	Federal	KY	Ernest Marcum	Mgmt.	WV	Dick Mottershaw.....	State	IL
Leland Payne.....	Federal	IN	Jon Merrifield	Mgmt.	OH	Jim Myer	State	OH
James Petrie.....	Federal	PA	Bill Moser	Mgmt.	WV	Bob Novello	State	TX
Bob Randolph.....	Federal	PA	Kevin Myers	Mgmt.	KY	Glen Rasco	State	GA
Mel Remington	Federal	MD	Myron Nehrebecki	Mgmt.	PA	Ed Sinner	State	OR
Martin Rosta	Federal	AL	Greg Oster	Mgmt.	MN	Richard Stickler	State	PA
James Salois.....	Federal	CA	Richie Phillips	Mgmt.	KY	Bonita Stocks	State	AR
Donna Schorr	Federal	PA	Richard Radakovich	Mgmt.	PA	Ron Umshied	State	MT
John Shutack	Federal	VA	David Rebuck	Mgmt.	PA	Sam Vancil	State	IL
Judy Tate	Federal	TX	Ray Rucker	Mgmt.	TX	Michael Weaver	State	ID
Timothy Thompson	Federal	WV	Subash Sethi	Mgmt.	NM	Alan Cook	Supplier	AZ
Glenn Tinney.....	Federal	PA	Nancy Staley.....	Mgmt.	MI	Chuck Edwards.....	Supplier	PA
Richard Wood.....	Federal	WV	Cheryl Suzio.....	Mgmt.	CT	Shea Kirkpatrick	Supplier	CA
Roger Carlson	Labor	MN	Steve Taylor	Mgmt.	TX	Steve Walker	Supplier	WV
Joe Main	Labor	DC	Penny Traver	Mgmt.	MI	Vern Demich.....	Emeritus	PA
Lloyd Armstrong	Mgmt.	MN	Gary Moore	Mgmt.	NM	William Hoover	Emeritus	AZ
H.L. Boling.....	Mgmt.	AZ	Doug Conaway	State	WV	Al Simonson.....	Emeritus	MN
						Harry Thompson	Emeritus	PA

U.S. Department of Lab or
MSHA, Holmes Safety Association
1301 Airport Road
Beaver, WV 25813-9426

FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. DEPARTMENT OF LABOR
Permit No. G-745

Place mailing label here

JOIN and GROW with us

Mark your calendar

NOW!



h, Safety

*and Research,
Aug 28-30, 2000, Blacksburg VA*

*Nevada Mining Association
Sept. (TBA) 2000,
Lake Tahoe, NV (TBA)*

*MINE Expo 2000
Oct. 9-12, 2000,
Las Vegas, NV*