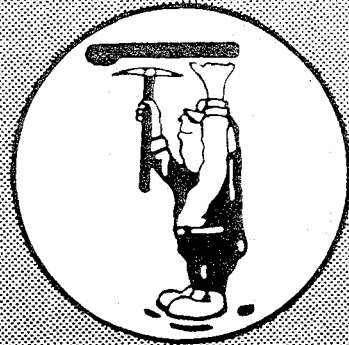
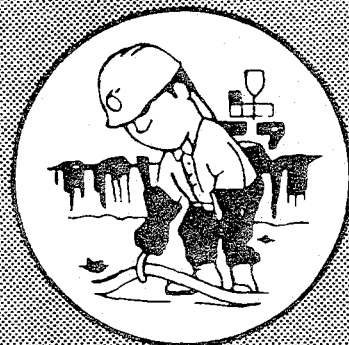


MARCH 1986



# BULLETIN



Give Accidents  
The Kick In

"86"



THIS SAFETY BULLETIN CONTAINS SAFETY ARTICLES ON A VARIETY OF SUBJECTS, FATAL ACCIDENT ABSTRACTS, STUDIES, POSTERS AND OTHER SAFETY INFORMATION FOR PRESENTATION TO GROUPS OF MINE AND PLANT WORKERS.

AS GROUP SPOKESPERSON, LEADER OR SUPERVISOR, YOU PLAY AN IMPORTANT ROLE IN THE ACCIDENT PREVENTION PROGRAM FOR YOUR COMPANY. THE WAY YOU TALK, THINK AND ACT ABOUT SAFETY DETERMINES, TO A GREAT EXTENT, THE ATTITUDE YOUR COWORKERS WILL HAVE ABOUT SAFETY.

THIS MATERIAL, FUNDED BY THE MINE SAFETY AND HEALTH ADMINISTRATION, U.S. DEPARTMENT OF LABOR, IS PROVIDED FREE AS A BASIS FOR DISCUSSION AT ON-THE-JOB SAFETY MEETINGS. IT MAY BE USED AS IS OR TAILORED TO FIT LOCAL CONDITIONS IN ANY MANNER THAT IS APPROPRIATE.

PLEASE USE THE ENCLOSED GREEN MEETING REPORT FORM TO RECORD YOUR SAFETY MEETINGS AND RETURN TO THE HOLMES SAFETY ASSOCIATION, POSTAGE-PAID.



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<u>COMPANY</u>	<u>CHAPTER NO.</u>	<u>LOCATION</u>
New Mexico Salt & Minerals	6530	Carlsbad, NM
M. & M. Lime Co.	6531	Worthington, PA
Genstar Gypsum Products Co.	6532	Sweetwater, TX
Card Industrial Sand Co.	6533	Elizabeth, IN
Chemgold, Inc.	6534	Yuma, AZ
Merrill Corp.	6535	El Centro, CA
Harmon Mining Safety Co.	6536	Powellton, WV
Genstar Gypsum Products Co.	6537	Coaldale, CO
Virginia Energy Co.	6538	Hurley, VA
Twin Pines Investment Ltd.	6539	Canon, CO
Reynolds Aluminum Co.	6540	Corpus Christi, TX
Stuart M. Perry, Inc.	6541	Winchester, VA
Middle Kentucky Construction	6542	Jetson, KY
Peabody Coal Co.	6543	Graham, KY
Kens Mining Inc.	6544	Cyclone, WV
West Virginia University	6545	Morgantown, WV
Harmco Coal Co., Inc.	6546	Hurley, VA
Island Mining Co., Inc.	6547	Stacy, VA
Micon Services Inc.	6548	Pittsburgh, PA
Tulsa Paving Co.	6549	Tulsa, OK
Tulsa Concrete Co.	6550	Tulsa, OK
McMichael Sand Co.	6551	Tulsa, OK
McMichael Concrete Co.	6552	Tulsa, OK
Hutchinson Community College	6553	Hutchinson, KS
Alley-Cassetty Coal Co., Inc.	6554	Morgantown, WV
Tri-Coal Energies, Inc.	6555	Morgantown, WV

# HOLMES SAFETY ASSOCIATION

## ALWAYS CONSULT YOUR MINE MAP



SEE FEBRUARY BULLETIN — PAGE 11 FOR TOPIC ON MINE MAP READING.

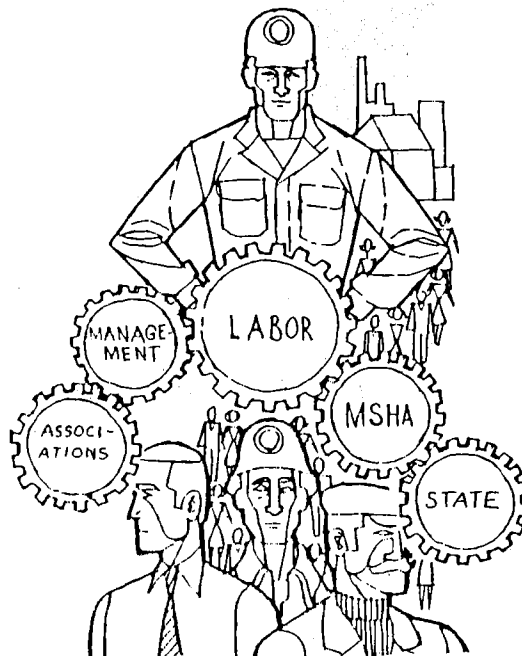


# INDUSTRY INFORMATIONAL MEETINGS

Despite inclement weather, representatives of management, labor, state and federal agencies met at the Sheraton Inn, Greensburg, Pennsylvania on January 28-29, 1986. Concern for health and safety and the reduction of injuries and fatalities was the major issue of this industry informational meeting.

Mr. Donald W. Huntley, District Manager, for Coal Mine Safety and Health, District 2, presided over the meetings. He began with a statistical review of District 2's past and present fatal accidents, fatal rates and NFDL incidence rates. He congratulated and thanked the miners, mine operators, labor (UMWA), state, MSHA and U.S.B.M. for the roles they played in the reduction in fatalities and the NFDL incidence rate.

He also pointed out that there is still room for more improvement and that is what we should all strive for in 1986 and the following years. The following additional topics were presented and discussed: Technical procedures for Quartz Program, reporting accidents, injuries and illnesses to MSHA, fatal accident slide program, haulage accident prevention program, quartz control on roof-bolting machines, self-contained self-rescuer program, progress on the REAP program and remote face ventilation.



# HOLMES SAFETY ASSOCIATION

## 79 MSHA Employees Enhance HSA

Men and women will be honored when the National Council holds its annual dinner at 7 p.m. Wednesday, May 21, 1986, at the Canaan Valley Resort, West Virginia.

The awards are given to people who through their work expanded the chapters and membership level of the Association.

<u>NAME</u>	<u>COAL DISTRICT</u>	<u>NO. OF CHAPTERS ESTABLISHED</u>
D. Rod Nichols	Nos. 2/4 Pgh., PA, & Mt. Hope, WV	18
Ewing R. Bell	No. 2, Pgh., PA	10
John M. Dower	No. 3, Morgantown, WV	13
Ronald V. Marrara	No. 3, Morgantown, WV	73
Aaron B. Justice	No. 3, Oakland, MD	36
Frank J. Cervo	No. 3, Clarksburg, WV	21
John D. Mehaulic, Jr.	No. 3, Clarksburg, WV	12
Clinton E. Cochran	No. 3, Elkins, WV	30
Linda H. Byers	No. 3, Fairmont, WV	33
Richard C. Allen	No. 4, Mt. Hope, WV	23
Charles D. Hambric, Jr.	No. 4, Mt. Hope, WV	10
Kirk Harman	No. 4, Mt. Hope, WV	94
Steve Szuch	No. 4, Mt. Hope, WV	12
George Vargo	No. 4, Mt. Hope, WV	17
Wayne L. Lively	No. 4, Mt. Carbon, WV	13
James W. Vencill	No. 4, Mt. Carbon, WV	40
Jennifer Underwood	No. 4, Sophia, WV	46
Raymond E. Coleman	No. 4, Summersville, WV	47

-MORE-

<u>NAME</u>	<u>COAL DISTRICT</u>	<u>NO. OF CHAPTERS ESTABLISHED</u>
James E. Haynes	No. 4, Summersville, WV	10
Preston T. White	No. 4, Princeton, WV	47
Alvin Jones	No. 4, Pineville, WV	13
Stephen E. Kowalski	No. 4, Pineville, WV	14
Harold Turner	No. 4, Pineville, WV	100
Vaughan Gartin	No. 4, Madison, WV	15
Loyd L. Cash, Jr.	No. 4, Logan, WV	108
Oscar Nalley, Jr.	No. 4, Logan, WV	18
James K. Salter	No. 4, Logan, WV	12
James M. Hackworth	No. 5, Norton, VA	21
Michael D. Clements	No. 5, Norton, VA	20
Charles D. Cooper	No. 5, Norton, VA	17
Stephen S. Phillips	No. 5, Norton, VA	13
James R. Baker	No. 5, Richlands, VA	22
James C. Franklin	No. 5, Richlands, VA	79
Glen D. Harman	No. 5, Richlands, VA	20
Ronald L. Pennington	No. 5, Richlands, VA	34
Stanley L. Brown	No. 5, Grundy, VA	11
Elmer L. Fuller	No. 5, Grundy, VA	13
Ronald C. Matney	No. 5, Grundy, VA	16
Larry M. Whitt	No. 5, Grundy, VA	36
Clifford Crum	No. 6, Pikeville, KY	19
Clifton C. Hamilton	No. 6, Pikeville, KY	13
Jonas R. Reeves	No. 6, Pikeville, KY	48

-MORE-



<u>NAME</u>	<u>COAL DISTRICT</u>	<u>NO. OF CHAPTERS ESTABLISHED</u>
Billy W. Damron	No. 6, Elkhorn City, KY	86
Hubert E. Stapleton	No. 6, Elkhorn City, KY	15
Troy Coleman	No. 6, Phelps, KY	56
Gerald W. McMasters	No. 6, Paintsville, KY	22
Thomas L. Yonts	No. 6, Prestonburg, KY	15
Robert L. Fleming	No. 6, Whitesburg, KY	20
Herbert Gillis	No. 7, Jellico, TN	15
Hewie Osborne	No. 7, Jellico, TN	16
Bobby Gibbs	No. 8, Vincennes, IN	64
Richard E. Wood	No. 10, Madisonville, KY	10
Leland Payne	No. 10, Beaver Dam, KY	59
John R. Alvis	No. 10, Morganfield, KY	14

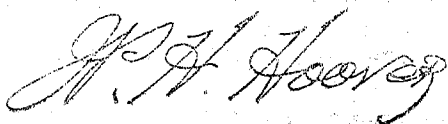
<u>NAME</u>	<u>METAL/NONMETAL DISTRICT</u>	<u>NO. OF CHAPTERS ESTABLISHED</u>
Charles E. Rines	N/East, Charlottesville, VA	24
Charles Vance	N/East, Beckley, WV	23
Wayne J. Wasson	N/East, Beckley, WV	34
Norman C. Hongisto	S/East, Franklin, TN	30
Walter C. Hibbeln	N/Central, Duluth, MN	21
Howard W. Broemer	N/Central, Marquette, MI	29
Don Bartlett	N/Central, Vincennes, IN	23
Jerry Spruell	N/Central, Vincennes, IN	16
Maxie Taylor	N/Central, Vincennes, IN	15
Thelmon Walden	N/Central, Vincennes, IN	30

-MORE-

March 1986

<u>NAME</u>	<u>METAL/NONMETAL DISTRICT</u>	<u>NO. OF CHAPTERS ESTABLISHED</u>
Charles Ambrose	N/Central, Peru, IL	44
Albert Q. Christensen	N/Central, Peru, IL	40
Robert D. Flowers	N/Central, Peru, IL	44
John E. Guthrie	N/Central, Peru, IL	37
John Malik	N/Central, Peru, IL	57
Robert J. Ross	N/Central, Peru, IL	24
Daryl E. Beauchamp	N/Central, Newark, OH	21
Edward J. Cloud	N/Central, Newark, OH	14
D. E. Albright	S/Central, Dallas, TX	16
Jim Jones	S/Central, Dallas, TX	15
Henry Soto	S/Central, Dallas, TX	10
Virgil D. Wainscott	Western, Phoenix, AZ	17
Arthur D. Swanson	Western, Tucson, AZ	34
Jay Hart	Western, Bellevue, WA	18
Rita Hansen	Natl. Council, HSA	14

This award program will continue to recognize individuals who establish 10 or more safety chapters per year. There are thousands of coal and metal/nonmetal mining operations that are not yet members. Let's get them on our Holmes Safety Association safety team.



# ABSTRACT FROM FATAL ACCIDENT

\*This fatality could be discussed at your regular on-the-job safety meeting.



## FATAL POWERED HAULAGE ACCIDENT

GENERAL INFORMATION: The sand and gravel operation utilized the single bench method, with conventional means and equipment.

Two front-end loaders were used to extract sand and gravel from the pit and transport the material a short distance to a stockpile near the plant. From the stockpile, the material was fed into the crushing plant with one of the front-end loaders.

DESCRIPTION OF ACCIDENT: The victim's regular duties for the day were operating the 980B caterpillar front-end loader. Working with him was the plant operator who also operated a 980B caterpillar front-end loader.

The 2 men worked in the pit area at different times hauling material to the stockpile with their individual loaders. At times one loader had to be used to take material from the face of the stockpile and feed it into the crusher.

After lunch, the victim returned to his job of stockpiling material while the plant operator remained at the plant to do some required servicing. Work progressed normally for 1 hour until the plant operator realized that he could not hear the loader operating. He became concerned and went around the stockpile to check and found the loader overturned on the embankment with the victim pinned under it.

Although there were no eyewitnesses to the accident, it appeared that the following events had occurred.

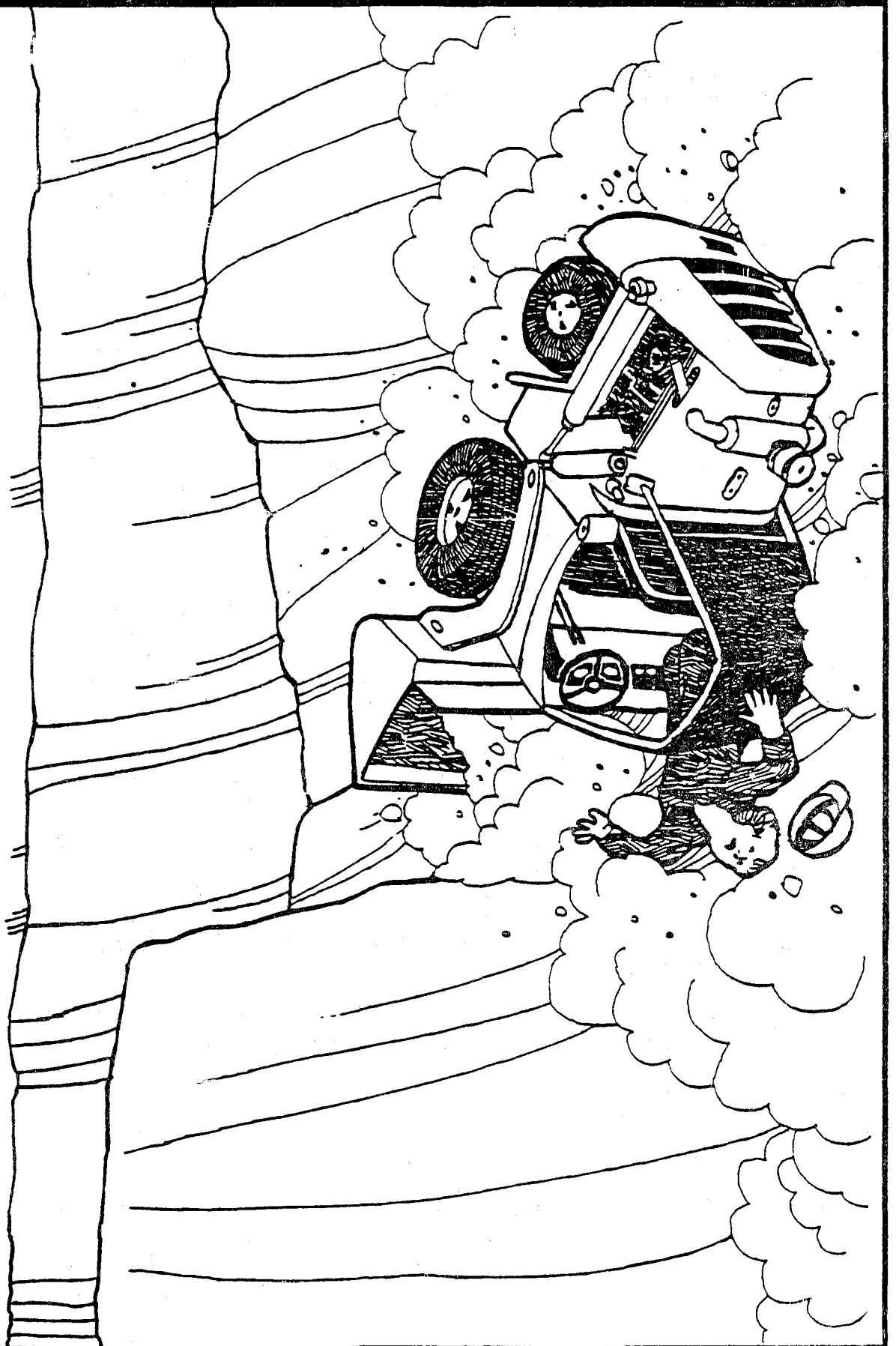
After the victim dumped the material over the end of the stockpile, he started to back the loader along the roadway on top of the stockpile. When he had traveled approximately 82 feet, the right rear wheel came too close to the edge of the roadway and the loader started to slide off the stockpile. At this point on the roadway the berm was inadequate to restrain the loader from going over the embankment.

As the loader went over the embankment, the victim was either thrown out of the cab or he tried to jump clear. The loader appeared to have rolled once with the left front tire landing on the victim crushing his body into the stockpiled material causing fatal injuries.

CAUSE OF ACCIDENT: The direct cause of the accident was the loader being operated in reverse on a narrow roadway and the lack of adequate berms. Contributing to the severity of the accident was the fact that the loader was not provided with a seat belt.

-MORE-

# WATCH FOR SIGNS OF BENCH FAILURE





## H.S.A. SAFETY TOPIC

MANDATORY SAFETY STANDARDS - UNDERGROUND COAL MINESSUBPART R - MISCELLANEOUSSections 75.1700 and 75.1701

This topic concerns the sections of the underground safety standards that pertain to oil and gas wells, along with abandoned areas, adjacent mines, and drilling of boreholes. Before drilling a hole through a wall in your home, it would be wise to determine if a live electrical wire is in the path of the drill hole. In a similar manner, it is wise for miners to know if they are advancing workings towards an oil or gas well, or an abandoned entry, which may contain explosive or noxious gases or water. Penetrating old workings not plotted accurately on a mine map, along with failure to drill test boreholes, have resulted in several disasters and near misses over the years.

## 75.1700 Oil and gas wells

Each operator of a coal mine shall take reasonable measures to locate oil and gas wells penetrating coalbeds or any underground area of a coal mine. When located, such operator shall establish and maintain barriers around such oil and gas wells in accordance with State laws and regulations, except that such barriers shall not be less than 300 feet in diameter, unless the Secretary or his authorized representative permits a lesser barrier consistent with the applicable State laws and regulations where such lesser barrier will be adequate to protect against hazards from such wells to the miners in such mine, or unless the Secretary or his authorized representative requires a greater barrier where the depth of the mine, other geologic conditions, or other factors warrant such a greater barrier.

This provision shall apply to active or inactive gas or oil wells. Approval for barriers of less than 300 feet in diameter and consistent with State laws may be granted only by the District Manager.

## 75.1701 Abandoned areas, adjacent mines; drilling of boreholes

Whenever any working place approaches within 50 feet of abandoned areas in the mine as shown by surveys made and certified by a registered engineer or surveyor, or within 200 feet of any other abandoned areas of the mine which cannot be inspected and which may contain dangerous accumulations of water or gas, or within 200 feet of any workings of an adjacent mine, a borehole or boreholes shall be drilled to a distance of at least 20 feet in advance of the working face of such working place and shall be continually maintained to a distance of at least 10 feet in

-MORE-

advance of the advancing working face. When there is more than one borehole, they shall be drilled sufficiently close to each other to insure that the advancing working face will not accidentally hole through into abandoned areas or adjacent mines. Boreholes shall also be drilled not more than 8 feet apart in the rib of such working place to a distance of at least 20 feet and at an angle of 45 degrees. Such rib holes shall be drilled in one or both ribs of such working place as may be necessary for adequate protection of miners in such place.

This provision requires that boreholes shall be drilled at least 20 feet in advance of the face and shall be continually maintained to a distance of at least 10 feet in advance of the advancing face, and also not more than 8 feet apart in the rib or ribs to a distance of at least 20 feet at an angle of 45 degrees when approaching:

1. Within 50 feet of abandoned workings of the same mine that are shown on the mine map by surveys made and certified by a registered engineer or a registered land surveyor and which cannot be inspected and may contain dangerous accumulations of water or gas.
2. Within 200 feet of abandoned workings of the same mine which were not accurately located by surveys made and certified by a competent engineer or surveyor and which cannot be inspected and may contain dangerous accumulations of water or gas.
3. Within 200 feet of any workings of an adjacent mine that cannot be inspected and may contain dangerous accumulations of water or gas, even if shown by surveys made and certified by a competent engineer or surveyor.

This section shall not be construed to require boreholes in overlying or underlying strata to test abandoned mines above or below an active mine.

Let's take a look at a near miss that could have been a major disaster. Eight miners were working in 5 entry section advancing toward an abandoned area of the same mine that could not be examined. Boreholes were not being drilled in advance of the working faces when the working places advanced to within 50 feet of the abandoned panel. The continuous-mining machine approached to within 2 feet of the abandoned panel when the pressure of water in the abandoned panel broke through into the working section. About 2.5 million gallons of water inundated the section in a matter of minutes and trapped four workmen for about 1/2 hour.

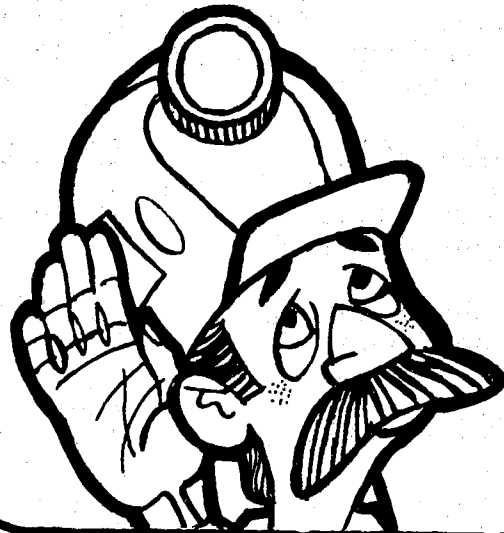


# REAP

**YOU CAN  
WATCH IT.**



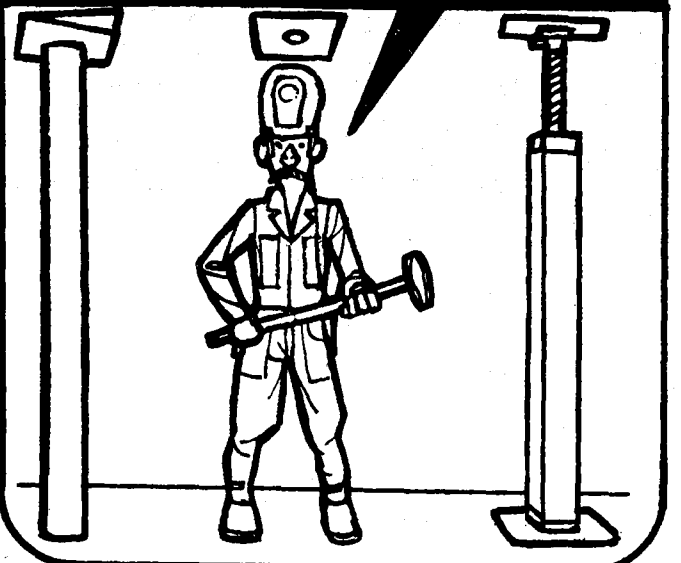
**LISTEN  
TO IT...**



**EVEN  
TEST IT.**



**But you'll LIVE  
LONGER if you  
support it!**



# HOLMES SAFETY ASSOCIATION

## DO YOU KNOW WHERE AND WHEN YOUR COUNCIL MEETS?

For your information, following is a list of active councils, dates and locations of meetings. Let's support your council— attend the meetings— take an active part— serve on a committee. Your council needs your support.

<u>PRES./SEC.</u>	<u>STATE COUNCILS</u>	<u>LOCATION</u>
George Shauer Wayne Gruneich	North Dakota " "	Quarterly Mtgs., at Beulah, ND
Richard Murphy Donald Conrad	PA. Bituminous " "	Spring and Fall Mtgs., Indiana, PA
Bart Lay John Nicholson	West Virginia " "	Annual Meeting, First Saturday in April
Melvin T. Colvin David Viley	North Missouri " "	Steak Palace, Moberly, MO

<u>PRES./SEC.</u>	<u>DISTRICT COUNCILS</u>	<u>LOCATION</u>
Wayne Walter	Middle GA. Kaolin Ind.	Fourth Wed. Monthly Sandersville, GA
Carl Day Trudy Williams	Central IL - Open-Pit " "	Quarterly Mtgs., Cuba, IL
Joe Bozarth Phil Bailie	John E. Jones " "	Quarterly Mtgs., Marion, IL
Larry Lewis Dona Chase	Kaskaskia Valley " "	Quarterly Mtgs., Freeburg, IL
Ronald Morse	Little Egypt Open-Pit	Quarterly Mtgs., Muddy, IL

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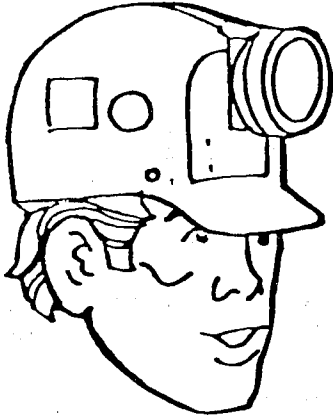
<u>PRES./SEC.</u>	<u>DISTRICT COUNCILS</u>	<u>LOCATION</u>
Don McConnell Ronald Morse	Shawnee Open-Pit " "	Quarterly Mtgs., Muddy, IL
Bob Conte Margaret L. Doughty	So. Illinois Open-Pit " "	Quarterly Mtgs., Pinckneyville, IL
Terry Adcock Ken Fritzsck	Kingfish Kessler " "	Quarterly Mtgs., Springfield, IL
Frank Cox Mike Kelly	No. IN. Joint Committee " " "	Every other month, Linton, IN
Richard Burns Mike Julian	So. IN. Joint Committee " " "	Every other month, Lynnville, IN
Charles Dotson, Jr. Joe Chafin	East Pike County " " "	Last Tue. each month, Phelps, KY
Patrick M. Graham Ed Morgan	E.KY. Joint Ind. " " "	Every other month, London, KY
Ed Chaffin Karen Blackburn	Martin County " "	Third Thurs. Monthly, Inez, KY
James Thorp Raymond D. Ashby	W.KY. Mining Institute " " "	Monthly Mtgs., Madisonville, KY
Glen Abshire Jim Blair	Louisiana Salt Mine " " "	3rd Wed. Every Month, New Iberia, LA
Henry Johnson Aaron Justice	Potomac Valley " "	Oakland Fire Hall, Oakland, MD
John Laughton David Berry	Western Maryland " "	Casselman Restaurant, Grantsville, MD
David Mickelson Nancy Staley	Great Lakes " "	Audie's Restaurant, Mackinaw City, MI
Gordon Brannon Gary Kilstrom	Eastern Montana " "	Quarterly Mtgs., Hardin, MT
Roy Souther Rudolph Siegmann	Uranium Operators, NM " " "	Third Thurs. Monthly, Grants, NM
Clint Fabry Auvil Parsons	Eastern Buckeye " "	Quarterly Meetings St. Clairsville, OH

-MORE-

<u>FRES./SEC.</u>	<u>DISTRICT COUNCILS</u>	<u>LOCATION</u>
Charles Chambers Ellsworth Bengry	Southeastern Ohio " "	4th Thurs. Every Month, Athens, OH
John Shutack Wayne Grames	Wyoming Valley " "	Wilkes-Barre, PA
Hank Pollick Rich Zilka	Allegheny Valley " "	1st Fri. Monthly, Logan's Ferry, PA
Fred Ferlito Skip Peters	Clearfield "	4th Wed. Monthly, Clearfield, PA
Fred Kammerdiener David Alsop	Clymer "	Monthly, Marion Center, PA
Wendall Stahlman John J. Javorsky	Grove City/Clarion " "	Quarterly Mtgs., Clarion, PA
Art Guty Mary Ellen Sanner	Wm. "Scotty" Groves " " "	2nd Thurs. Monthly, Centerville, PA
Richard Flack Rick Radakovich	Indiana "	Monthly Meetings Indiana, PA
Vernon Demich, Sr. Lester Walker	Kiski - Tri-County " " "	3rd Thurs. Monthly, Ford City, PA
Carl Sensabaugh Mike Kaschak	John O. Miller " "	4th Thurs. Monthly, Spangler, PA
Theodore Evans Richard Schrock	Richard Maize " "	3rd Wed. Monthly Somerset, PA
Paul Lenyo. Edward Kaiser	Windber "	Quarterly Mtgs., Windber, PA
Joseph Fielder John Tatton	Utah Coal " "	Every Third Month, 1st Thurs., Price, UT
William Corbett Charles Riordan	Buchanan County " "	1st Wed. Monthly, Harmon, VA
Charles Justice Terry Simmons	Aracoma "	1st Tue., Every other month, Holden, WV
Ivan Puckett Gale Workman	Coal River " "	2nd Tue., Every other month, Madison, WV

-MORE-

<u>PRES./SEC.</u>	<u>DISTRICT COUNCILS</u>	<u>LOCATION</u>
Red Mitchem	Eddie Jarvis	Quarterly Mtgs., Vivian, WV
Freddie Adkins Kit Jackson	Frank Cervo " "	Best Western Motel Summersville, WV
James Baughman Alice Akers	Gauley "	Monthly Mtgs., Nettie, WV
Ken Purdue Nancy Cook	Guyandotte "	Quarterly Mtgs., Jesse, WV
Charles Shawkey Phyllis Hodge	Kanawha Valley " "	Quarterly Mtgs., Mount Carbon, WV
Ronald Marrara Ralph Mashuda	Mon Valley " "	Quarterly Mtgs., Masontown, WV
Gerald Silvester Willie Saucerman	Mountaineer Tri-County " " "	Monthly Mtgs., Beverly, WV
Rick Hickman Barbara James	New River Valley " " "	Every Other Month, Beckley, WV
Gary Pastorial Linda Byers	North Central " "	Quarterly Mtgs., Fairmont, WV
Tom Olzer Edsel D. Craft	Northern Panhandle " "	Quarterly Mtgs., Elm Grove, WV
Gene Berry Robert Wentz	Sur. Safety Asso., WV " " " "	Monthly Mtgs., Clarksburg, WV
Bruce Short Terry McGee	Tygart Valley " "	Quarterly Mtgs., Clarksburg, WV
John Meadows Larry Carpenter	Upshur Division " "	Monthly Mtgs., Buckhannon, WV
Leo Porreca Jim Flanagan	Winding Gulf " "	Monthly Mtgs., Beckley, WV
Joe Vendetti Doug Malicoat	No. Colorado/So. Wyoming " "	Quarterly Mtgs., Various Locations
Clifford Haynes James Williams	Powder River Basin " " "	Quarterly Mtgs., Gillette, WV



## **MINE MANAGEMENT**

**AS PART OF THE REAP PROGRAM, MINE MANAGEMENT IS REQUESTED TO:**

- 1. Take steps necessary to assure continual, day-to-day compliance with approved roof control plans.**
- 2. Mark all entrances to unsupported roof with two red reflective streamers, 2 inches by 24 inches, or large reflective warning signs.**
- 3. Prohibit entrance into areas beyond the last row of roof bolts or other permanent roof supports except to install temporary supports and then in strict compliance with the roof control plan.**
- 4. Install automated temporary support on all roof bolting machines and cabs or canopies on all equipment where feasible.**
- 5. Train all miners in the requirements of the roof control plan, emphasizing the hazards of unsupported roof.**
- 6. Insist that supervisors set a good example for their crews by not working or traveling under unsupported roof and not permitting others to do so.**

**PREVENT DEATHS FROM ROOF FALLS — SUPPORT REAP**

# HOLMES SAFETY ASSOCIATION

## MOBILE DIESEL EQUIPMENT FIRES

A fire involving any type of mining equipment is a serious hazard to life and property. Mobile diesel equipment, due to the large amounts of hydraulic fluids, lubricants, and diesel fuel present, is especially susceptible to fires. This study presents information relative to mobile diesel equipment fires, i.e., haulage truck, front-end loader, dozer, etc.

From 1978 through 1983, the Health and Safety Analysis Center (HSAC) received reports of 106 mobile diesel equipment fires: 64 in the coal mining industry (61 at surface operations and 3 at underground operations) and 42 in the metal/nonmetal mining industry (30 at surface operations and 12 at underground operations). Thirty-five accidents were reported which did not involve injuries. There were 53 injuries which involved days away from work; two injuries resulted in restricted work activity; and 16 injuries involved no lost work days.

Table I presents the cause of the fire where stated by the operator. A specific cause for the equipment catching on fire was given in 46 percent of the submitted reports and normally involved a mechanical failure (hydraulic line rupture, bad wiring, fuel line break, etc.). It is significant to note that the predominate problem is hydraulic oil rather than the fuel.

Many factors contribute to failure of hydraulic hoses, fuel line breaks, and other similar malfunctions. Vibration from driving, which caused metal fatigue, hose fatigue at articulation point due to motion of the equipment and inherent high system pressure contributed to many line ruptures and resultant fires. Failure of any of the numerous lines or fittings carrying high-pressure, high-temperature combustible fluids near ignition sources (hot manifold, frictional heat sources, ring gear area where grease can accumulate, etc.) often resulted in a flash fire.

Table II presents the manner in which an injury was incurred. Over 40 percent of the equipment operators were injured while escaping the burning vehicle and over 26 percent of the injuries were directly attributable to fire or smoke. The 38 instances in which the miner was injured while jumping off the equipment generally involved large surface equipment where the equipment operator was from 5 feet to 15 feet above the ground.

- MORE -

**TABLE I - MOBILE DIESEL EQUIPMENT FIRES  
BY CAUSE OF ACCIDENT**

Cause	Coal		Metal/Nonmetal	
	Surface	Under-ground	Surface	Under-ground
1. Hydraulic line rupture	19	1	9	1
2. Bad wiring	6	0	0	3
3. Fuel line break	2	0	2	1
4. Drive line failed	0	0	1	1
5. Brake caught on fire	0	0	1	0
6. Engine threw rod	1	0	0	0
7. Dust, oil on manifold	1	0	0	0
Subtotals	<u>29</u>	<u>1</u>	<u>13</u>	<u>6</u>
Total	<u>30</u>		<u>19</u>	
	49			

**TABLE II - SOURCE OF INJURY DUE TO  
MOBILE DIESEL EQUIPMENT FIRES**

Source of injury	Coal		Metal/Nonmetal	
	Surface	Under-ground	Surface	Under-ground
1. Jumped off equipment	26	0	12	1
2. Flash fire burns	11	1	6	2
3. Inhaled fumes/smoke in cab	2	2	1	3
4. Touched hot metal on exit	0	0	1	0
5. Cut on sharp object on exit	2	0	1	0
6. Non injury	20	0	9	6
Subtotals	<u>61</u>	<u>3</u>	<u>30</u>	<u>12</u>
	<u>64</u>		<u>42</u>	
	106			

-MORE-

Equipment distribution is given in Table III. Analysis revealed no predominance of make or model of equipment.

**TABLE III - TYPE OF EQUIPMENT**

<u>Type of equipment</u>	<u>Total</u>	<u>Percent</u>
1. Front-end loaders	57	53.8
2. Haulage trucks	27	25.5
3. Bulldozers	14	13.2
4. Scrapers	5	4.7
5. Unclassified	3	2.8
Total	<u>106</u>	<u>100.0</u>

Mobile diesel equipment fires have occurred as a result of component failure, improper or lack of maintenance, and accumulations of combustible materials. Operators are frequently injured while escaping from the burning equipment. Preventive measures to reduce the probability of fire are well known but not always taken.

A thorough pre-shift examination would provide an effective way to check for unsafe conditions. Accumulations of coal dust, oil, grease, etc., in the engine compartment, around the transmission, and under the cargo bed provide an additional fuel source for an ongoing fire as well as an original source for nearby hot surfaces, sparks, etc. If equipment with faulty wiring was immediately taken out of service and the wiring repaired, a source of sparking would be eliminated. Immediate repair of kinked or leaking lines would reduce the leakage of combustible liquids. Equipment operator awareness and familiarity with emergency procedures and systems would help to reduce the seriousness of any fire.

Automatic fire protection systems are essential components of modern mining equipment. These systems incorporate fire detection, alarm, time-delay or automatic engine shut-down, and extinguishment by automatic or manual means. An emergency or immediate engine shut-down switch functions to stop the engine and shut off the fuel supply thereby reducing the possibility of additional fuel being added to an existing fire. If combustible or flammable liquids lines rupture under pressure and the engine is not shut down, the liquids will continue to be pumped onto hot surfaces. This intensifies the resulting fire and usually results in total destruction of the equipment.

-MORE-

Human behavior is quite often unpredictable in the event of an emergency. An equipment operator's initial response in a fire emergency is to leave the unit as quickly as possible. If an operator jumps from the unit, he or she is likely to be injured by the fall or by being run over by the equipment. If the ladder is used, the operator is often exposed to the articulation area which is a prime fire hazard zone. Injury reports indicate that operators tend to jump from elevated areas when they would not normally do so in a non-emergency situation. The use of simulated exercises to familiarize equipment operators with correct emergency procedures would reduce the risk of injury during an actual fire.

Therefore, equipment operator training programs should include emergency procedures, familiarization with emergency systems, recognition of potential fire hazards, and fire-egress simulated exercises. Equipment operators should perform thorough pre-shift examinations to check for unsafe conditions, and any unsafe conditions should be corrected before the equipment is used. Older equipment should retrofitted with effective fire suppression systems which are automatically or manually activated.

\* \* \* \* \*

## **BANNER YEAR**

### **TO ALL NEW CHAPTERS:**

We wish to thank you. Your concern for health and safety in the mines has made them a better place to work.



# HOLMES SAFETY ASSOCIATION

## HOLMES SAFETY ASSOCIATION ANNUAL MEETING

To accomodate the 4,000 safety chapters and 53 district councils spread throughout the 50 states, the Executive Body of the National Council has voted to change the location of its annual spring meetings to various state and district sites each year.

This year, the state of West Virginia, representing over 1,000 chapters, 16 district councils and one state council, will host the meeting at Canaan Valley Resort State Park in Davis, West Virginia, "a wholesome family type resort in a superb natural setting," says the New York Times. The resort has a restaurant, snack bar and lounge in addition to a swimming pool, tennis courts, 18-hole golf course, mini golf, gift shop and walking and hiking trails.

### Itinerary:

#### Monday-May 19

Travel Day  
Social Hour-Cash Bar

#### Wednesday-May 21

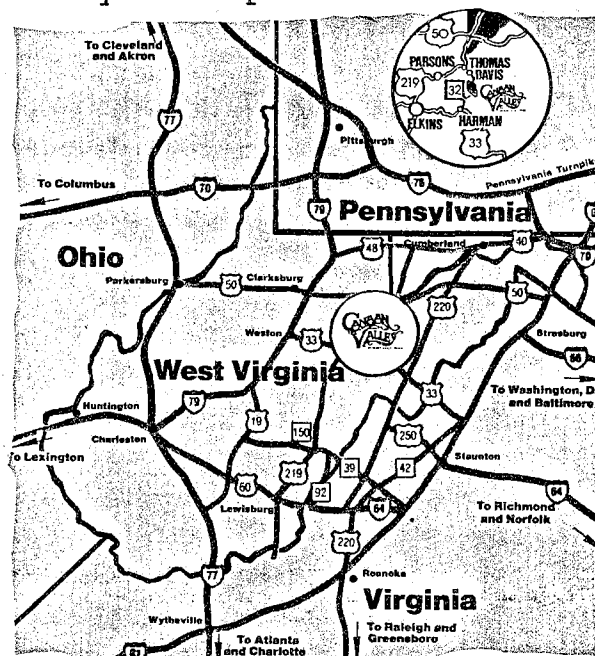
HSA Exec. Mtg.--9 a.m.  
HSA Reg. Mtg.--10 a.m.  
Jos. A. Holmes Mtgs.--2-4 p.m.  
Host Bar--5-7 p.m.  
Dinner and Awards Banquet--7 p.m.

#### Tuesday-May 20

Golf  
Ladies' Tour and Luncheon  
Free Beer & Snacks--6-8 p.m.

#### Thursday-May 22

Travel or  
Stay and Play Golf etc.



March 1986

**HOLMES SAFETY ASSOCIATION**

**ANNUAL MEETING**

**MAY 19-21, 1986**

**RESERVATION REQUEST**

CANAAN VALLEY RESORT STATE PARK

\$38 - Single ( ) No. of Rooms Required ( )

\$44 - Double ( ) No. of Rooms Required ( )

Arrival Date \_\_\_\_\_ Departure Date \_\_\_\_\_

**BANQUET BUFFET TICKETS** \$15 includes tax and gratuity\*

Buffet includes:

Roast turkey breast, sugar cured ham, beef stroganoff,  
2 vegetables, rice, potatoes, salad bar, dessert, coffee/tea.

No. of buffet tickets at \$15 \_\_\_\_\_.

\*Payment for buffet must accompany reservation request. Checks payable to William H. Hoover, National Treasurer, Holmes Safety Association.

Name \_\_\_\_\_ Phone \_\_\_\_\_

Representing \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please return no later than May 2, 1986 to:

MSHA, Holmes Safety Association  
4800 Forbes Avenue, Room A268  
Pittsburgh, PA 15213

# HOLMES SAFETY ASSOCIATION



## Notebook

### IDEAL CEMENT'S PORTLAND PLANT

1. Holmes Safety Association Safety Chapter No. 5914, wins safety records citation. Employees of the Portland plant of the Ideal Cement Company worked through all of 1985 without a disabling injury, a feat which was last accomplished in 1975.

The year 1985 is to be enscribed in the Portland Cement Association concrete monument which was presented to the employees of Portland for achieving 3,990 days without a lost time injury over a ten year span.

The next immediate goal for Portland is to reach 500 days in March, 1986.

The completion of 1985 without a lost time injury represents almost 500,000 manhours by the workforce during the year.

2. The American Mining Congress Coal Convention to be held at the David Lawrence Convention Center, Pgh., PA, on May 4-7, 1986.

3. The 3rd Annual West Virginia State Council Meeting to be held at MSHA Academy, Beckley, WV, on April 4-5, 1986.

4. The Pennsylvania Bituminous Council Annual Business Meeting to be held on March 14, 1986, at the Omni Civic Center, Indiana, PA.

\*Members: Short news of your Council activities can be included in the Notebook. Information needed two months in advance. Forward to:

Louise  
MSHA-Holmes Safety Association  
4800 Forbes Avenue, Rm. 268A  
Pittsburgh, PA 15213

# THE LAST WORD

## AS YOU GO THROUGH LIFE

Don't look for the flaws-as  
 you go through life;  
 And even when you find them,  
 It is wise and kind to be  
 somewhat blind,  
 And look for the virtue  
 behind them;  
 For the cloudiest night has  
 a tint of light  
 Somewhere in its shadows  
 hiding,  
 It is better by far to look  
 for a star,  
 Than the spots on the sun  
 abiding.

Courtesy of the Coal Mining  
 Women's Support Team News

One more pepped-up breakfast  
 cereal on the market and  
 people will have to have seat  
 belts in their breakfast  
 nooks!

\* \* \* \*

A man is always as young as he  
 feels but seldom as important.

\* \* \* \*

The trouble with opportunity  
 is that it comes disguised as  
 hard work.

\* \* \* \*

Gus: "Who gave you that black  
 eye?"

Jack: "Nobody, I had to fight  
 for it."

## FACTS OF LIFE

Tell a man there are 3 billion  
 stars in the sky, he'll believe  
 you.

Tell him a park bench has just  
 been painted, he has to touch it  
 to be sure.

\* \* \* \*

Did you hear about the two red  
 corpuscles who loved in vain?

\* \* \* \*

## ALMOST PERFECT

The job applicant was asked, "Do  
 you smoke?"

"No," he replied.

"Do you drink?"

"No."

"Do you go out with women a great  
 deal?"

"Seldom, I really don't care for  
 women very much."

"It's amazing," exclaimed the  
 personnel manager, "You don't  
 seem to have any vices at all."

"Oh, yes, I have one," the man  
 replied.

"I tell lies."

\* \* \* \*



POSTAGE AND FEES PAID  
U.S. Department of Labor  
LAB 441

MSHA, Office of Holmes  
Safety Association  
Educational Policy & Development  
4800 Forbes Avenue, Room A268  
Pittsburgh, PA 15213

5000-22  
(Rev. 12-78)



HOLMES SAFETY ASSOCIATION  
MEETING REPORT FORM

For the month of \_\_\_\_\_

TOTAL meetings held this month \_\_\_\_\_

TOTAL attendance this month \_\_\_\_\_

Chapter Number \_\_\_\_\_ (See address label, if incorrect, please indicate change.)

\_\_\_\_\_  
(Telephone No.)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

FILL OUT - FOLD AND STAPLE - FREE MAIL-IN

NOTE: BE SURE OUR ADDRESS SHOWS

-----  
If you do not care to receive this Bulletin, please check here and return this form.

Please include any change of address below:

The Joseph A. Holmes Safety Association was founded in 1916 by 24 leading National organizations of the mining industries.

The Joseph A. Holmes Safety Association is named to commemorate the first director of the Bureau of Mines for his efforts in reducing accidents and illness throughout the mineral industries.

The following is the different award 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!

Contact: HSA Office