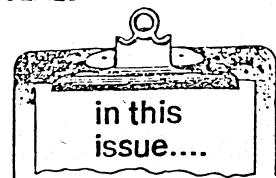


## HOLMES SAFETY ASSOCIATION



March 1984

1.	Safety Topic,	"News You Can Use"			
2.	Resolution				
3.	Safety Topic,	"Welcome New Members"			
4.	Safety Topic,	"Low-Voltage Electricity"			
5.	Announcement,	"Hurry, Hurry, HurryAnnual Meeting"			
6.	Safety Topic,	"How To Be A Better Listener"			
7.	Abstract,	'Fatal Powered Haulage Accident"			
8.	Abstract,	'Fatal Hoisting Accident"			
9.	Poster,	"AlcoholAccidents"			
10.	Safety Topic,	"Defensive Driving Course"			
		"How The Defensive Driving Course Began"			
11.	Announcement,	"Third Annual Western Holmes Safety Association Meeting In Jackson Hole, Wyoming"			
12.	Safety Topics,	"Part 77.1712Subpart RReopening Mines"			
		"Council News"			
13.	Safety Topic,	"Injuries Associated With Shuttle Cars In Underground Coal Mining1978-1980"			
14.	The Last Word				
15.	Meeting Report F	orm (Mine Chapters Only)			





### **NEWS YOU CAN USE**

#### COAL MINE FATALITIES IN 83 LOWEST EVER

The Mine Safety and Health Administration said last week that fewer American coal miners died on the job last year than in any year since the federal government began keeping accident statistics.

MSHA, which has accident numbers dating back to the late 1800s, said 70 miners suffered fatal injuries in 1983, compared with 122 in 1982 and 153 in 1981. The previous low fatality level was 106 in 1978, the year of a 112-day United Mine Workers strike.

Eight states - Kentucky, West Virginia, Virginia, Illinois, Utah, Alabama, Colorado and Wyoming - showed decreases in mining fatalities in 1983. Only three, Pennsylvania, Missouri and Tennessee, registered increases. The remainder stayed the same as in 1982 or had no fatalities.

MSHA spokesman John McGrath said the declining fatality level indicated that "people are working more safely and it's not just a factor of there being fewer people at work."

Willard Stanley, head of the Kentucky Department of Mines and Minerals, said the coal industry "has done an excellent job in compliance" with safety requirements. He said 1983 fatalities involved "no flagrant violations," but tended to be the result of isolated carelessness.

MSHA said the fatality rate for 1983, based on the number of deaths per 200,000 employee hours, will not be available for several weeks. However, the 0.04 rate through the first nine months of the year showed an improvement of 0.02 over the corresponding 1982 period.



## WINTER ALERT!

make frequent tests for methane

Mine Safety and Health Administration



#### WINTER ALERT!

always stay under supported roof

Mine Safety and Health Administration

## HOLMES SAFETY ASSOCIATION

#### RESOLUTION

WHEREAS: Mr. John O. Miller, a resident of Hastings, Cambria County, Pennsylvania, passed away July 6, 1983, and

WHEREAS: Mr. Miller was the secretary-treasurer of the Pennsylvania Bituminous Council since 1971, and

WHEREAS: Mr. Miller was a member of the executive committee and member of the awards committee and chairman of the finance-audit committee of the National Council, Holmes Safety Association for a score of years, and

WHEREAS: The undersigned has been duly designated by the officers of the National Council to draft a resolution for the permanent records, and

THEREFORE, BE IT RESOLVED: That the entire body of the Association hereby express their sincere gratitude for his faithful and outstanding service in furthering the objectives of the Association, and

BE IT FURTHER RESOLVED: That we hereby acknowledge the admirable contribution he made in promoting the safety and well-being of persons identified with the mineral industries of the United States.

BE IT FURTHER RESOLVED: That these resolutions be spread in our National Council minutes and that a copy be sent to the Miller family with the expression of appreciation of his efforts in behalf of the entire membership of the Holmes Safety Association.

Dated the 13th day of March 1984 National Council - Holmes Safety Association

William H. Hoover, Secretary







Wood Gravel Co. Wood Gravel Conneaut Lake, PA

Pioneer Fuel Pioneer Fuel Oceana, WV

Little J Coal Co. Little J Welch, WV

Golden Decade Golden Decade Premier, WV

Golden Industries Golden Industries Premier, WV

Serena Sand Plant Zemi Serena, IL

Felts Sand & Gravel Felts Elburn Pit North Aurora, IL

Beverly Coal Co. Inc. Beverly Coal No. 1 Richlands, VA

Amanda Coal Co. Inc. Amanda Coal No. 1 Tazewell, VA

C & T Development Co. C & T Development Webster Springs, WV

Gauley Coal Sales Co. Gauley Coal Sales Summersville, WV

Chickasaw Inc. Chickasaw Mallory, WV

Whitesville A & S Coal Whitesville A & S Coal Beckley, WV

Copper Valley Mining Copper Valley Beckley, WV

Coplay Cement Coplay Cement Nazareth, PA

Riverton Corp. Riverton Riverton, VA

Old Mill Mining Inc. Old Mill Mining Macarthur, WV Great Lakes Coal Co. Great Lakes-Linton Pit #1 Linton, IN

J H & L Coal Co. Keller Mine Terre Haute, IN

VA Trap Rock Inc. VA Trap Rock Leesburg, VA

Pinnacle Creek Coal Co. Pinnacle Creek Bluefield, WV

White Coal Corp. Pattiki Mine Carmi, IL

Peerless Peerless Alma #11 Gilbert, WV

Racoon Mining Inc.
Racoon Mining
Man, WV

Chaney Land Clearing Graber Mine Cannelburg, IN

Dyer Enterprises Inc. Knepp Pit #1 Huntingburg, IN

Manley Bros. Manley Bros. Bridgman, MI

Raven Smokeless Coal Raven Smokeless #2 Mine Vansant, VA

Met, Inc. Met No. 1 Mine Swords Creek, VA

Atlantic Mining Atlanta Mining Van. WV

Union Slag Sand & Gravel Union Slag No. 3 Devola, OH

Dingess Coal Co. Dingess Chapmanville, WV

Island Creek Coal Co. Birch 2/A Mine Werth, WV

Island Creek Coal Co. Gauley Eagle #4 Plt. Werth, WV Island Creek Coal Co. #1 Surface Mine Werth, WV

Big Fork Coal Co. Inc. Big Fork #9 Summersville, WV

Big Fork Coal Co., Inc. Big Fork #15 Summersville, WV

Bowman Coal Co., Inc. Bowman Coal Hurley, VA

Ottawa Industrial Sand Co. OISC Ottawa, IL

Holy Land Coal Co., Inc. Holy Land Coal Grundy, VA

Lovilia Coal Co. Lovilia Mine No. 5 Shanneton, IL

Oceanlake Ready Mix Co. Oceanlake Lincoln City, OR

Waters Coal Co. Inc. Waters Coal Pruden, TN

B & J Excavating B & J Excavating Clairfield, TN

Rookie Coal Co. Inc. Rookie Coal Hurley, VA

John G. Lucas John G. Lucas Morgantown, WV

Walter D. Shaffer Walter D. Shaffer Aurora, WV

Archie B. Coal Co. Inc. Archie Julian, WV

Gayman Sand & Gravel Gayman Sand & Gravel North Platte, NE

Collinson Stone Co. Collinson Stone Moline, IL

Poncho and Lefty Coal Corp. Poncho and Lefty Coal Breaks, VA



Locher and Co. Locher Wytheville, VA

American Cyanamid Co. American Cyanamid Andersonville, GA

Foertsch Construction Co. Foertsch Construction Lamar, IN

Peabody Coal Co. Star South UG Graham, KY

Morgan Enterprises Inc. Ponderosa Neihart, MT

Four Leaf Coal Co., Inc. Four Leaf Coal Clairfield, TN

Onion Creek Gravel Co. Onion Creek DelValle, TX

Texas Cement Co. Texas Cement Buda, TX

Lucky J Coal Co. Lucky J Coal Hurley, VA

Bocephus Coal Co. Inc. Bocephus Coal Grundy, VA

Turkey Branch Fuel Corp. Turkey Branch Fuel Rhodell, WV

Draper Coal Co. Inc. Aracoma Holden, WV

K.M. & T. Associates K.M. & T. Fenwick, WV The Georgia Marble Co. Alabama Calcium Products Sylacauga, AL

APAC-Alabama Inc. Alabama Oxford, AL

Youngquist Mining Co. Mother Lode Georgetown, CA

American Fuels Inc. American Fuels Pryor, CO

American Salt Company American Lyons, KS

Cemstone Products Co. Cemstone Lakeland, MN

KNC Inc. KNC Farmington, NM

Oil-Dri Production Co. Oil-Dri Production Christmas Valley, OR

Becker Sand & Gravel Co. Becker Cheraw, SC

Hills Materials Co. Rapid City Quarry Rapid City, SD

Hills Materials Co. Hot Springs Quarry Hot Springs, SD

Texas Utilities Mining Texas Utilities Mining Mt. Pleasant, TX

Hoover Color Corporation Hoover Color Hiwassee, VA Hoover Color Corp. S & S Construction Hiwassee, VA

Miami Coal Co. Inc. Miami Fairmont, WV

McMurry Bros. McMurry Bros. Casper, WY

Avery Coal Co. Inc. Van Wallaceton, PA

Avery Coal Co. Inc. Avery Coal Wallaceton, PA

Carborundum Company Carborundum-Proppants New Iberia, LA

S.  $\dot{\mathbb{T}}$ . Wooten Construction Co. S.  $\mathbb{T}$ . Wooten Construction Wilson,  $\mathbb{N}\mathbb{C}$ 

Stocker Sand & Gravel Co. Stocker Sand & Gravel Gnadenhutten, OH

Stewart & Reichman Inc. Stewart & Reichman Tuscarawas, OH

Chesterhill Stone Company Chesterhill Stone-Fultonham East Fultonham, OH

Chesterhill Stone Company Chesterhill Stone-Stockport Stockport, OH

Overton County Highway Dept. Overton County Livingston, TN

Back Valley Coal Co., Inc. Back Valley Coal No. 1 Mine Council, VA





#### LOW-VOLTAGE ELECTRICITY

Electrical hazards are all around us but they can be controlled. The use of electricity is so universal that we often accept it with only an occasional thought concerning its ability to harm or destroy. The term "low-voltage," our subject for today's discussion, is in itself deceiving because it implies low hazard. This, of course, is not true. Voltage is a factor, to be sure, but the injury suffered when an individual comes into contact with a "live" conductor depends upon the amount of current, the course it takes through the body and the length of time the victim is in the circuit. If conditions are right, 50 volts can be as fatal as 440 volts.

Approximately 1,000 persons in the United States lose their lives each year due to low-voltage electric shock. What makes this figure of 1,000 deaths so important, aside from the broken homes and other sorrows that result, is the fact that we and our families are almost constantly surrounded by this killer that we fail to recognize it as such. This agent of sorrow is electricity of 110 volts or less.

Many factors are involved when you contact a low voltage source. Your body resistance, ground condition, your physical condition and your age act together when you contact the electrical source to produce either a minor shock or death. We have no definite way of predicting if a low-voltage contact will spell death or only a slight shock to joke about.

Insulation and grounding are the recognized means of preventing injury from electricity but certain safe work practices must be followed when you are performing maintenance duties while at work or at home. These simple rules are:

- Always use safety equipment, such as rubber gloves and fuse tongs.
- 2. Lock and tag switches open before working on circuits.
- 3. Consider all circuits alive until proved otherwise.
- 4. Never bridge an electrical safety device, such as a fuse.
- 5. Never work alone on live circuits.

If you will always follow these simple yet necessary precautions you will not only be regarding low voltage with its proper respect but greatly reducing the possibilities of a serious if not fatal injury.



ANNUAL MEETING OF THE HOLMES SAFETY ASSN., WILL BE HELD AT QUALITY INN/CENTRAL, 1190 COURT—HOUSE ROAD, MAY 22, 1984, 10 a.m.

LODGING, FOOD, DRINKS, MEETING ROOM, ALL AT ONE LOCATION 4 BLOCKS FROM SUBWAY.

THERE WILL BE A HOSPITALITY BAR MAY 21, 1984 7-10 p.m.

NATIONAL SECRETARY





#### HOW TO BE A BETTER LISTENER

Concentration often is a matter of being a good listener. Dr. Ralph Nichols and his colleagues at the University of Minnesota offer 10 basic guidelines for improving your listening skills:

- 1. Be interested in the topic under discussion, or try to become more interested in it. Ask yourself what you can use out of what is being said, in terms of ideas, money, or something to make you happier or an idea to help you perform your job safer or more efficiently.
- 2. Don't hate the speaker. Ignore poor delivery or other distractions and focus on what you can get out of what is being said. Listen to what the speaker is saying; don't concentrate on the style.
- 3. Do not jump the gun. Don't be too eager to have your own viewpoint known. If you make up your mind too fast that you have an opposing viewpoint, you may tend to concentrate more on your rebuttal than on the speaker's argument.
- 4. Listen for ideas rather than facts, or you may miss the speaker's point.
- 5. Be a smart note taker. Taking notes helps focus your attention on the ideas being expressed. But don't overdo it. Jot down only a few key words or concepts from a speaker. They can later act as springboards for your memory.
- 6. Put some effort into your listening. Greater concentration can be achieved in listening if you sit correctly and establish eye contact with the speaker.
- 7. Tune out distractions. Poor listeners magnify noises or visual distractions when a speaker is talking. Good listeners try hard to eliminate the distractions or tune them out.
- 8. Become a more experienced listener. Don't just expose your mind to light, recreational input. Challenge your listening abilities with heavier, more thought-provoking or concentration-demanding information.

- 9. Beware of prejudices. Don't become emotionally upset or deafened when a speaker treads on your prejudices. Often, words can trigger anger, frustration, or prejudices. A good listener doesn't let words become like red flags waved in front of a bull.
- 10. Control leftover thinking time. If your mind tends to wander when a speaker talks slower than your mind can comprehend, try to make the most of your excess thinking time while listening. Pay closer attention to what is being said and look for greater value in the thoughts of the speaker.

Not capitalizing on thought speed is the greatest single handicap in being a good listener. Through listening training, the same problem can be converted into a genuine asset.

## ABSTRACT March 1984 FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC



#### FATAL POWERED HAULAGE ACCIDENT

DESCRIPTION OF ACCIDENT: On the day of the accident, the section mechanic was instructing an apprentice miner in the operation of a shuttle car. When the apprentice questioned the operation of the braking mechanism, the mechanic explained that the parking brake locking lever had to be all the way up in a vertical postion to release the brake. The apprentice, standing outside the operator's compartment of the shuttle car, reached into the compartment and put the locking lever into the up position, releasing the parking brake. The car started to drift and the apprentice immediately put the locking lever brake into the down position but the car continued to drift. The mechanic immediately went after the shuttle car in an attempt to stop it. He was in a stooped position and had the lower part of his body in the compartment when he was squeezed between the coal rib and the shuttle car.

CAUSE OF ACCIDENT: The apprentice miner was permitted to operate the shuttle car without sufficient knowledge of the basic operating controls. The apprentice miner was not aware that the parking brake locking lever could only be set by depressing the brake pedal first.

Positive acting stopblocks were not used to protect persons from dangers of runaway haulage equipment, a violation of Section 75.1403, 30 CFR, Part 75.

CONCLUSION: The accident was caused by the manipulation of the controls by the apprentice miner without being in a postion to control the movement of the shuttle car. A contributing factor may have been management's failure to properly instruct the apprentice miner in the use of the basic operating controls before permitting "hands on" use of equipment. Failure of the previous shuttle-car operator to block the shuttle car after parking it on the grade and failure of the victim to recognize the hazard of trying to stop a runaway shuttle car contributed to the seriousness of the accident.

## ABSTRACT FROM FATAL ACCIDENT

## HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC



#### FATAL HOISTING ACCIDENT

GENERAL INFORMATION: A skip tender was fatally injured when he failed to disconnect his safety line while attempting to ride a loaded muck skip and was dragged from the conveyance. He was crushed between the muck skip and the shaft timber. The victim had three months of mining experience and had completed the required training for new miners.

DESCRIPTION OF ACCIDENT: The victim began his normal assigned duties of skip tender following a three hour delay in the commencement of the shift.

when the shift boss began his normal tour of the work places on the upper levels of the mine, a miner informed him that he thought the victim had been drinking prior to going underground. The shift boss left the stope immediately with the intention of finding the victim. On the way he met a miner who informed him that the victim had been injured.

The shift boss found the victim lying in the shaft bottom some 75 feet below the station.

The direct cause of the accident was the victim's attempt to ride the loaded muck skip with his safety line attached to the shaft timber. The fact that the skip was loaded prevented the victim from feeling the tension of the tagline.

A contributing cause of the accident was the victim's use of alcohol as shown by the results of the blood sample taken from the victim.

RECOMMENDATIONS: Management should periodically instruct employees on safe work practices and follow-up the instruction with a strict enforcement policy. The instructions as they pertain to hoisting should include hoistmen and skip tenders.

Hoistmen should be instructed to report to management any unsafe work procedures followed by the skip tenders.

Management should implement more effective controls to prevent employees under influence of intoxicants from working at the mine.

# ALCOHOL:

It is a factor in more than half of all fatal motor vehicle accidents

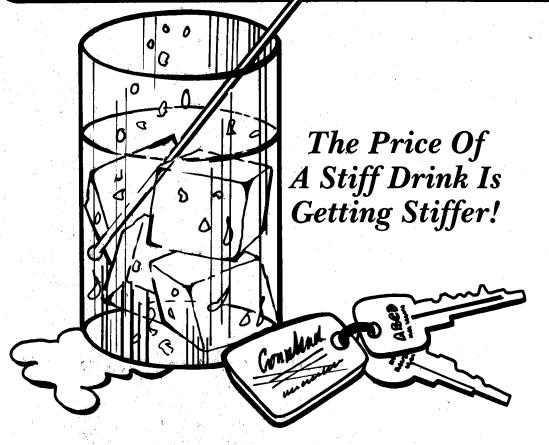
\$10 Billion

Is responsible for up to 47% of nonfatal and up to 40% of fatal industrial accidents

\$19 Billion

Is costing the nation about \$29 billion annually in alcohol-related accidents

\$29 Billion



\*COURTESY OF







#### ARTICLE 1 - DEFENSIVE DRIVING COURSE

The National Safety Council developed a Defensive Driving Course (DDC) that has won world-wide acclaim in educating drivers of all types of motor vehicles in the safe and productive operation of a motor vehicle. This defensive driving course has helped reduce losses and injuries, production delay and damages to property. It also has taught the saving of human life.

Mine operators have learned that automotive accidents and injuries rate high on their list of liabilities. Many insurance companies offer discounts to DDC graduates.

Once the operators and employees have formed the defensive driving habits, they can help their families, employer and community.

We at MSHA realize that safety and health is not just an "on-the-job" activity, but is a continuous activity "off-the-job" as well.

MSHA's presentation of the Defensive Driving Course is a provocative, informative and interesting course that is highly recommended for all drivers of any type of motor vehicles. It teaches us all to be more safety conscious at work and with recreational activities. The DDC can help operators maintain a safer driver's record.

For further details about MSHA's eight-hour Defensive Driving Course for instructors, contact George Wilson at (703) 235-1400.

#### MOTOR VEHICLE ACCIDENT

Employee's jacket and briefcase slid off the seat to the floor of the car. While still driving, he attempted to retrieve the belongings and the car went off the roadway and collided into a concrete culvert.





#### ARTICLE 2 - HOW THE DEFENSIVE DRIVING COURSE BEGAN

In 1963 the Executive Committee of the Women's Conference of the National Safety Council recommended the development of a driver improvement program. Their plan was to reach millions of drivers by promoting defensive driving through women's clubs, service clubs, church, farm and community groups. In their own words, their program would be "suitable for the smallest hamlet or the largest city." The women felt a program of this nature was geared toward their abilities and interests and presented them an opportunity to make a real contribution to traffic safety.

After the National Safety Council acknowledged their plan, a course evolved slowly as a Council staff committee and outside adult education specialists accepted the challenge of creating an accident prevention program designed to improve the driving of all licensed drivers.

While the actual writing of the course was being done, the women's group set to work planning the promotion of the new course. A kit of materials was developed to aid members as they introduced the ideas of a defensive driving course to local groups and organizations.

Other major promotion plans were also made to initiate the program. Council chapters and volunteer safety councils in approximately 300 cities were solicited for support, cooperation and assistance.

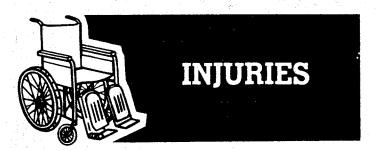
During this time of energetic enthusiasm, both the promoters and the writers met and quickly handled the many major and important decisions normally encountered during a new project. For example, once it was decided that a training course in accident-avoidance techniques for the average driver was needed, the first determination for the writers was the length of the course. It was decided that the course be organized into eight classroom sessions of 50 minutes duration each. The writers chose to stick to their eight-hour decision in spite of the objections from a few potential users.

"There will always be those who will want to shorten it (the course) even further. In one official's favorite phrase, "there are always those who want to make safety cheap and easy regardless of results," said the committee leader.

# Start with your own people...

The best way to begin your DDC training program is by educating drivers within your own organization! Remember DDC is for EVERYONE with a valid drivers license...just about your entire workforce! Gain maximum return on your investment in personnel and property through driver training!

## DDC helps you cut losses from











## Reach out to your entire Community!

Once your employees have formed the defensive driving habit, they'll want their family and friends to have the same opportunity. Your established DDC training facility can be made available to the general public (a nominal fee may be charged, if desired). You can build goodwill and help keep the roads safe for everyone in your area by offering DDC to your entire driving community!





# DDC has produced I MILLON DEFENSIVE DRIVERS

The National Safety Council's Defensive Driving Course is taught by concerned organizations whose common goal is the reduction of loss of life and property due to motor vehicle accidents. The course is offered in 27 countries and has been translated into 12 languages. More than 11 million DDC graduates continue to prove that good drivers can become better, safer drivers through DDC.

Now—you can participate in this established driver improvement plan by offering it to members of your organization and community.

Taught quickly and easily in eight interesting sessions, DDC covers the following accident-prevention topics:

"Preventable or Not"

"How to Avoid a Collision with the Vehicle Behind"

"How to Avoid a Collision with an Oncoming Vehicle"

"How to Avoid an Intersection Collision"

"The Art of Passing and Being Passed"
"The Mystery Crash"

"How to Avoid Other Common Types of Collisions"

Last year, traffic accidents accounted for more than

- 50,000 deaths,
- nearly 2 million disabling injuries,
  - approximately \$12 billion in property damage.

Based on past records, 85% of all accidents are due to human error. That means most of the accidents reflected in these figures could have been prevented by improving driver ability!

DDC helps reduce needless losses due to human error by teaching defensive driving methods and improving drivers' attitudes and behavior.





## NOTICE OF MEETING

#### 3rd Annual Western Holmes Safety association Meeting

Attention Holmes Safety Association Members:

You are invited to the 3rd annual Western Holmes Safety Association meeting to be held at the Jackson Lake Lodge, Jackson Hole, Wyoming, June 21, 1984, 2:00 p.m. You must make your hotel reservations as soon as possible, as rooms are limited.

If you plan to attend, please contact myself or William Hoover, Holmes Safety Association, 301 West Congress, Room 7K, Box FB53, Tucson, Arizona 85701.

Lets have safety and more in 1984.

Steve K. Lipe

Director of Safety and Health

Carbon County Coal Company

P. O. Box 830

Hanna, Wyoming 82327

the Klipe

307-325-9471





### MANDATORY SAFETY STANDARDS, SURFACE COAL MINES AND SURFACE WORK AREAS OF UNDERGROUND COAL MINES

#### SUBPART R

#### MISCELLANEOUS SECTION 77.1712

The success of a vacation trip, a party or a home improvement project depends on planning. Likewise, the success of reopening a mine that has been abandoned could depend on having the required plans approved in a timely manner.

Section 77.1712 Reopening mines; notification; inspection prior to mining. Prior to reopening any surface coal mine after it has been abandoned or declared inactive by the operator, the operator shall notify the Coal Mine Safety and Health District Manager for the District in which the mine is located and an inspection of the entire mine shall be completed by an authorized representative of the Secretary before any mining operations in such mine are instituted.

During a reopening inspection required by Section 77.1712, the inspector should ascertain that the operator is fully informed and aware of the applicable plans, programs and systems required by Part 77.

Failure of the operator to notify MSHA of the reopening of the mine before operations begin is a violation of Section 77.1712. Failure to have all the plans, programs and systems listed below during this inspection is not necessarily a violation. However, the inspector should determine whether violations exist in each instance and if violations do exist, they should be cited under the appropriate section.

- 77.107 Training Program shall be submitted to and approved by MSHA.
- 77.215 Refuse Pile Requirements shall be submitted to and approved by MSHA.
- 77.216 Impoundment Structure Requirements shall be submitted to and approved by MSHA.
- 77.1000 Ground Control Plan shall be submitted to MSHA.
- 77.1200 Mine Map shall be available at the mine.

- 77.1701 Emergency Communication shall be established and maintained.
- 77.1702 Emergency Medical Assistance and Transportation Arrangements shall be submitted to MSHA and posted.
- 77.1900 Slope and shaft sinking plans shall be submitted to and approved by MSHA.

# COUNCIL NEWS

The Indiana District Council had 163 persons in attendance, on January 20, 1983, at the OMNI Civic and Convention Center, Indiana, Pennsylvania.

On January 2, 1984, the Northern Cambria District Council, changed the name to the John O. Miller District Council, in memory of the late John O. Miller.



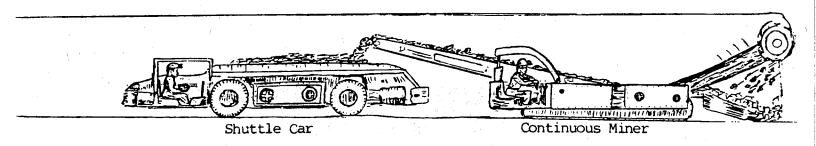


## HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC INJURIES ASSOCIATED WITH SHUTTLE CARS

#### IN UNDERGROUND COAL MINING

#### 1978-1980

Underground coal is mined by methods designed to remove as much coal as quickly as possible. Once dislodged, it must be hauled away from the working face. Shuttle cars are used to move the broken coal. This report has been prepared to present the findings of a study into injuries associated with the shuttle car haulage activity in underground coal mining.



Information contained in injury and accident reports submitted to Health Safety Analysis Center for the period 1978 through 1980 was analyzed. A total of 1,146 injury accidents was analyzed, including nine (9) fatals. Roadway condition (uneven, slippery, sloping roadways, excessive grades, mud and water) and debris accumulation (haphazardly stored supplies, excessive spillage, etc.) accounted for nearly 40 percent of the reported injuries. Improper use or operation of equipment, i.e., standing, not facing direction of travel, cutting too sharply, pushing, tramming with door open or with arm, leg, shoulder, etc. outside cab area, accounted for 14.6 percent of the injuries. The following table lists the hazardous condition or unsafe act which caused the injuries in shuttle car accidents.

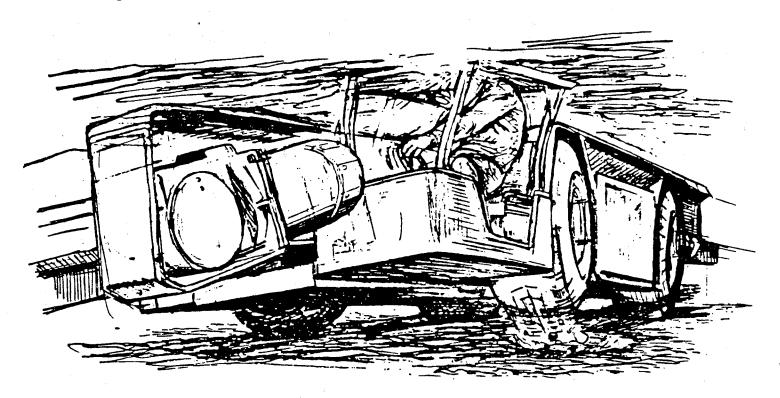
TABLE 1. - CAUSE OF ACCIDENTS ASSOCIATED WITH SHUTTLE CARS

Hazardous Condition		1978	1979	1980	Total	Percent
Irregularities in roadway		96	129	116	3,41	29.7
Poor housekeeping (de roadway, debris accuin deck)		26	51	40	117	10.2
Poor visibility (thro tains, around corner adequate illuminatio	s, in-	26	33	17	76	6.6(1)
Low overhead clearance		27	25	20	72	6.3
Equipment defects (br tram control, door l wheel, canopy, etc.)		9	25	15	49	4.3
Low overhanging cable Subtot		<u>4</u> 188	10 273	212	18 673	1.6 58.7(1)
Unsafe Acts						
<pre>Improper equipment operation  (excessive speed, standing,  facing wrong direction,  tramming with door open etc.)</pre>						
		41	70	56	167	14.6(3)
Collision with rib, c (cause not specified)	rib etc.	21	30	28	79	7.0
Working in close prox moving equipment	imity of	15	19	24	58	5.0(3)
Walking too close to shuttle car cable	operating	11	27	20	58	5.0
Not setting brake and properly blocking	/or not	17	22	18	57	5.0(1)
Not securing raised reel cover		15	19	2	36	3.1
Working on energized ment	equip-	6	3	1	10	0.9
Boarding or leaving m	ling or leaving moving		2 -	2	8	0.7(1)
Subtot	al	$\frac{4}{130}$ $\overline{318}$	192 465	151 363	473	41.3(8)
Total		210	400	303	1146	100.0(9)

Numbers in parentheses indicate fatalities.

The increasing size, complexity and sophistication of today's mining machinery demands highly qualified operators and maintenance personnel with an acute awareness of the working environment. These workers must keep their minds on their work at all times. At the beginning of each shift, the shuttle car operator should check the mechanical performance of the vehicle, including brakes, steering, lights, cable reel and tires. Every mechanical defect is a potentially dangerous hazard representing a latent accident. If any defect is detected, the operator should inform the section supervisor and the shuttle car should be removed from use until such conditions are corrected. should make a trial run through the section or exercise utmost caution on the first loaded run, observing changes from the previous shift and such hazards as over-hanging ribs, hazardous timber sets, location of check curtains, stored material, low overhead clearances and bad spots in the roadway.

Of all shuttle car accidents, 29.7 percent involved irregularities in the roadway.



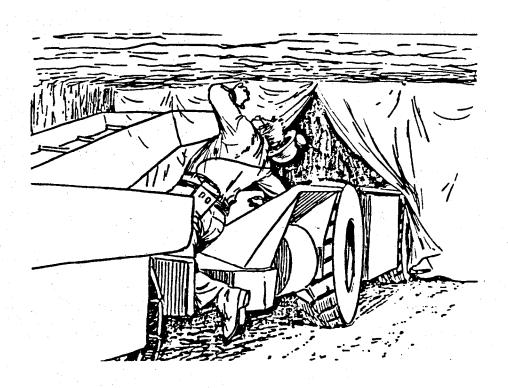
Haulage roadways should be maintained as free as possible from bottom irregularities, debris and wet or muddy conditions that affect control of the equipment. Hour after hour of tramming over rough, soft, sliding roadways can make an operator extremely tired. This can reduce the operator's concentration and increase the chances of being involved in an accident.

Bottom irregularities can be averted by choosing adequate drainage systems, proper roadbed conditioning, using equipment drags for leveling and selecting appropriate tires.

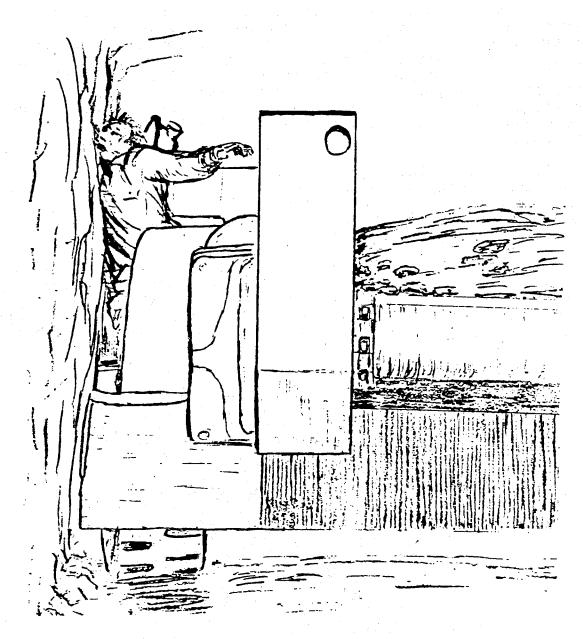
The shuttle car operator should be provided with a warning of a reduction in clearance rather than relying on their own perception and ability to see the obstruction in time to react. Warning lights or reflective signs or tapes should be installed to warn the operator of an area where the overhead clearance is reduced abruptly. These warnings should be installed at a distance which gives the operator ample time to respond. Shuttle car lights positioned or designed to provide illumination on the roof and upper rib areas assist in detecting dangerous projections. They should be adjusted so as not to cause a "blinding" effect on nearby workers.

Many injuries occur due to poor visibility when entering intersections, going around curves and tramming through curtains. Equipment should not be parked in these blind areas but if unavoidable an effective warning system should be used in any area where vision is impaired.

A continuous mining machine operator was fatally injured when he was caught between a moving shuttle car and bumper of a continuous mining machine which was parked just inby the ventilation check curtain. Signs or other visual warning devices were not used and the warning bell was inaudible over noise generated by the shuttle car.



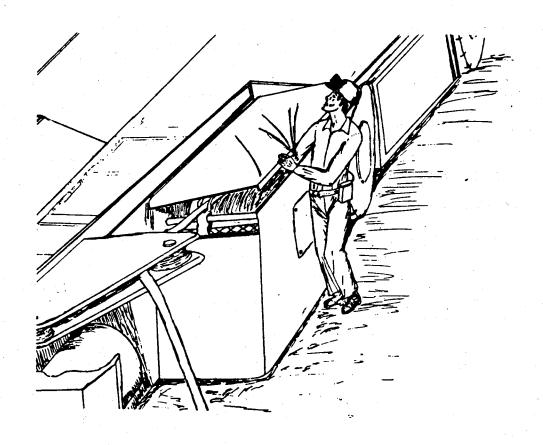
A shuttle car operator received fatal injuries to the head when he was squeezed between the rib and shuttle car cab. The victim was apparently outside the confines of the cab. The shuttle car was being loaded at the face area when it accidentally moved, resulting in the fatal accident.



In areas where an audible sounding device will not provide satisfactory warning, signs should be posted to alert the driver, another worker stationed on the opposite side of the curtain from the parked equipment, or the equipment made visible to oncoming equipment operators.

During loading the operator should remain seated and alert. When tramming, hands, feet, shoulders and other parts of the body should remain completely within the cab area and the operator should face the direction of travel.

An operator should not change seat positions while the car is in motion. After the dumping process has been completed, the vehicle should be brought to a complete stop, properly braked and then seat positions switched so that the operator faces the direction of travel. Persons should not attempt to mount or dismount while the car is in motion.



While trying to board a runaway shuttle car, a mechanic received fatal injuries. He was squeezed between the car and rib.

Shuttle cars should be parked, de-energized, the brake set and the vehicle blocked before repairs are started. Compartment lids should be securely blocked or supported before work is attempted in the compartment.

Sometimes operators are struck by stones or mud kicked by the wheels. Wheel covers would help prevent road debris from being thrown towards the operator.

Coal, mud and other materials often accumulate on the deck of the operator's compartment. This buildup can restrict pedal movement. Self-cleaning grating in this area would be beneficial in reducing injuries associated with the foot slipping off control pedals and slip and fall accidents while getting in/out of the vehicle.

Increased emphasis on roadway preparation and maintenance, equipment selection and maintenance would help eliminate many shuttle car related injuries. Operator capability, awareness, training and adaptation is equally necessary to accomplish reduction of accidents within this category of the haulage activity.

# LAST WORD

#### THINK--SAFETY!

It isn't the number of guards you put on,
Or the stairs with the well-kept rails,
It isn't the lights that they install,
Or the lack of rusty nails;
It's true that these do help a bit,
But when all has been done and said,
The things that prevent the accidents,
IS THE WAY YOU USE YOUR HEAD!

\*\*\*\*\*

Think positive. If you fall in a mud puddle, check your pockets for fish.

\*\*\*\*\*

One sure way to avoid the disadvantages of old age is to ignore the safety rules.

\*\*\*\*\*

About the time you learn to make the most of life, most of it is gone.

\*\*\*\*\*

Middle age is when your memory is shorter, your experience longer, your stamina lower, your forehead higher.

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#### RANDOM THOUGHTS

The right angle to solve a difficult problem is the "try-angle."

#### MARCH

Before January and February were introduced into the calendar, the Roman year had only 10 months, and March, named in honor of the God Mars, was the first instead of the third month. In the Middle Ages the year was usually reckoned as beginning March 25 and England did not abandon this practice until 1752. The vernal equinox falls on March 21, so the month is part winter and part spring.

Since life began on this old world, people have been persecuted for their beliefs. Centuries ago men of the cloth, like Saint Patrick, brought the teachings of the Lord to the heathens in all lands. For following such teachings, many people were driven from their homes. While millions believe in the "Supreme Being," there are those among us who are still heathens. Recent episodes throughout the world bring forcibly to our attention what a terrible situation exists.

The heathens are not all confined to religious beliefs but include those among us who ignore the teachings in safety. The type of employment or social position of individuals have little bearing on the acceptance of the need for accident prevention. Undoubtedly, such people care very little for othersor perhaps believe they are immune to accidents because of their own ability. Not unlike Saint Patrick's shamrocks which are a symbol of faith, so too are the green crosses of universal safety a symbol of the teachings and expression for a cooperative effort necessary to preserve life and limb.