APRIL 1980

HOLMES SAFETY ASSOCIATION

E PLURIBUS UNUM

SAFETY EFFICIENCY

MINERAL INDUSTRIES

BULLETIN

United States Department of Labor

MSHA

Mine Safety and Health Administration

April 1980

CONTENTS

HURRY....HURRY.....HURRY!

NEWS BRIEF

ANNUAL MEETING OF THE HOLMES SAFETY ASSN., WILL BE HELD AT QUALITY INN/CENTRAL, 1190 COURT-HOUSE ROAD, ARLINGTON, VA. 22201 WEDNESDAY, MAY 28, 1980, 10 a.m.

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

THE J.A.H.S.A. WILL MEET SAME TIME AND PLACE THE NEXT DAY.

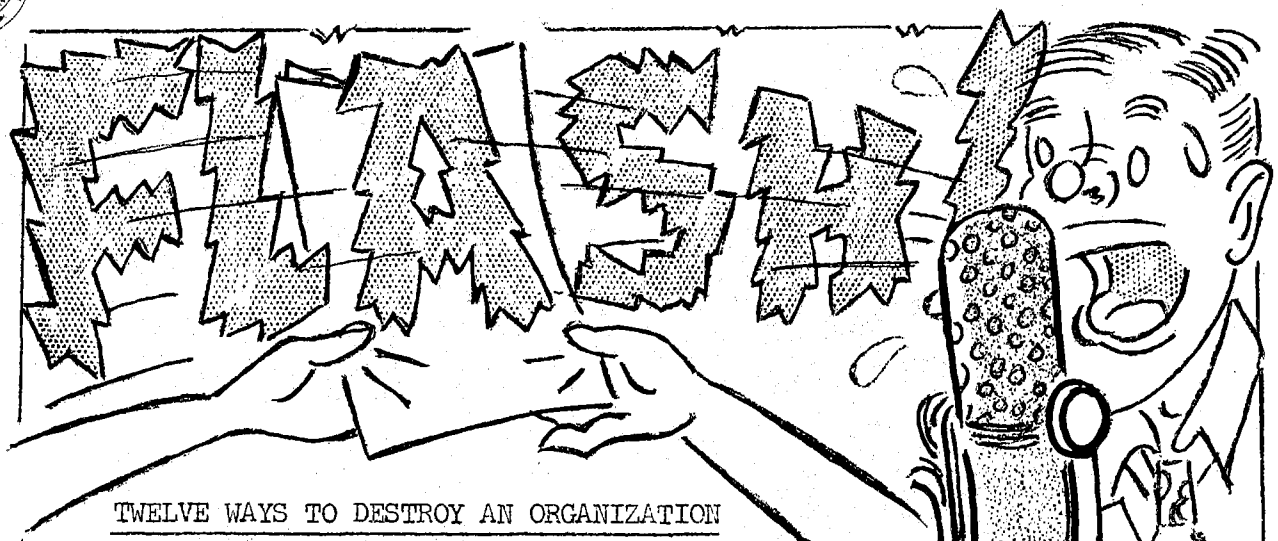
Everyone Is Invited. For Further Information Contact

Holmes Safety Association, Four Parkway Center, Suite 102,

Pittsburgh, PA 15220
(412) 922-0220

NATIONAL SECRETARY

April 1980



TWELVE WAYS TO DESTROY AN ORGANIZATION

1. Don't go to any of the meetings.
2. If you do, go late.
3. If the weather doesn't suit you, don't think of going.
4. If you should happen to attend, find fault with the work of the officers and members.
5. Never accept an office. It is much easier to criticize than to do things.
6. Get hurt if you are not appointed to a committee. Should you be appointed, don't attend any of the committee meetings.
7. If asked to give your opinion on some matter, tell the chairman you have nothing to say. After the meeting, tell everyone how it should be done.
8. Do nothing more than is absolutely necessary. When others roll up their sleeves and willingly and unselfishly use their ability to help matters along, howl that the organization is run by a clique.
9. Hold back your dues as long as possible, or don't pay at all.
10. Make no effort to get new members.
11. Don't be sociable, either within or outside the meeting.
12. If you SHOULD get a good idea, smother it at once.

MAKE SAFETY SHINE

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

FINER SUPERVISON

You can fill a library chock-full of the material that's been written on the supervisors role in industrial safety. Today let's concentrate on just one outstanding fact: If supervisors really fill their shoes, you can bet your life that they throw their full weight into the "push" to prevent accidents.

Why? By pitching wholeheartedly into the promotion of safety, the supervisor is achieving many vitally important things that are expected.

Assuming rightful responsibilities, supervisors who are worth their salt know every possible hazard in their department as well as every operation. They are in the most logical position to weed out danger, and to correct unsafe conditions and practices. It's their job.

Supervisors take steps to insure keeping pace with the production schedule.

They must also see to it that the department functions properly for the proper way can only be the safe way.

The supervisor is driving for full efficiency--for efficiency depends upon accident-free operations. Here and there fair-grade efficiency may exist momentarily, in spite of weak-kneed safety efforts. But such efficiency has pure luck for its foundation; it lives on borrowed time!

Finally, supervisors must prove that they are big enough to fill this important position by promoting the best interests of the employer, the employees and the supervisors. Boosting production--the supervisor is insuring productiveness, welfare, and happiness for others--and proves to be a fit leader.

Supervisors who assign their safety responsibilities to the "bottom deck drawer" of their attention are dragging their own supervising abilities down to the same level. All earnest safety promoters may not necessarily be top-level supervisors--but it's a cinch that all top-level supervisors are safety conscious.

Everywhere, everyday, people go about their tasks without weariness if they are supported by enthusiasm and believe in what they are doing.

(For use in all mining operations)

SAFETY IS EVERYBODY'S BUSINESS

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

HAVE YOU THOUGHT ABOUT YOU?

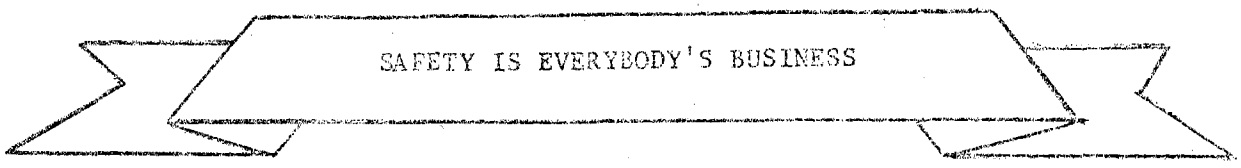
Have you ever thought about the price that is paid for about ten seconds of inattention?

Consider the following true experience: A continuous-mining machine was moved from a crosscut to the entry and bits were being replaced in the augers. The chain and belt conveyors that carried the material from the machine were stopped. When preparations were completed, the conveyors were started which was normally considered a signal for starting the mining machine. At this time a laborer was shoveling material near the augers when they were started. The laborer turned to put the shovel aside when he lost his balance and fell backward. The bits on the auger caught his lamp cord pulling him closer and dragging him under the auger before the machine was stopped. You can imagine what took place. A cry of pain, frantic movements to free the victim, and a sober deliberate trip to the surface and waiting ambulance. A half-hour later near the closed doors of the operating room a woman sobbed, while inside a surgeon, assisted by an intern and several nurses, gave skillful care. After a while the surgeon emerged and told the woman, "He'll pull through", and also spoke in a lowered voice to a buddy of the injured man, "What a fearful price to pay".

A fearful price it was. Weeks of agony passed for the man and weary days and sleepless nights of worry for the woman. Then came the money pinch. Despite the compensation payments, the savings account melted to nothing, and when the worker was discharged from the hospital, it was a case of starting all over again. Starting all over again meant in this instance, that the victim was unfit both physically and mentally, to do what it took years to learn. To be sure, the man obtained work that he was capable of doing, but at a much lesser pay than he received prior to the injury. House payments could not be met and it had to go eventually. There was no opportunity to lay anything aside for a rainy day. The parent's plans for an education for their children and better things for them with an education were hopelessly gone. The best they could do was make a living. The children left school as soon as they could get work, and with good cooperation among the members of the family; they now "manage to get along."

The surgeon was right when he said, "What a fearful price to pay".

What can we hope to learn from this experience? I believe that it is this: Operators of equipment, regardless of type or function, should always determine that everyone is in a safe location before the equipment is put into operation. A simple rule, to be sure, but one that will definitely reduce injuries related to machinery.



(For use in all mining operations)

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

HELP YOUR HEART

In today's meetings, we are concerned with a subject that definitely affects each of us in a very positive manner. I am referring to heart attacks and certain of our individual personal habits and their relation to our well-being and longevity.

While it is true that some people are in more danger of suffering a heart attack than others, it is also true that recognizing the factors that cause heart attacks, and correcting them can help to reverse the situation.

Some of the causes are: high blood pressure, high cholesterol level, overweight, excessive eating, too little exercise and physical activity, diabetes, excessive cigarette smoking, tension, and heredity. Should you have any one of these, the chance that you will have a heart attack is two to six times greater than that of the person who doesn't have any of these "symptoms".

One of the best ways to prevent heart disease is by controlling your diet. This prevents extra strain on your heart caused by excessive weight, and it also cuts down on the production of cholesterol.

A noted heart specialist recently stated: "Adult people must learn to distinguish between moderation and abuse. Two packs of cigarettes a day to me is an abuse. Too much fat or too many calories is an abuse. Drinking during most hours of the day is an abuse. Doing no physical work is an abuse. The answer lies in self-disciplining--not in forbidding."

You are familiar with the expression "Moderation in all things", and it certainly is a philosophy of life that will be worthy of our adoption to help our heart.

(For use in all mining operations)

SAFETY IS EVERYBODY'S BUSINESS

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WHAT IS YOUR MARKET VALUE?

It has been written that the commercial value of a human body is approximately $25. The basic elements which could be derived from a human body are as follows:

Enough Water to fill a 9-gallon container

Enough Sulphur to deflea one dog

Enough Fat to make nine bars of soap

Enough Iron to make one medium-size nail

Enough Lime to white wash one chicken coop

Enough Phosphorous to make 20 match heads

There are a few additional elements, but they would have little or no value. Why then should anyone worry about the safety of a human body with a commercial value of only $25? The answer, of course, goes beyond the commercial value and deals with the heart and soul of mankind upon which there is no value great enough to cover its worth. For instance:

The value of a human to those around him especially to his immediate family.

The value of love and understanding and the pleasure derived through association with others both on and off the job.

The value of guiding the family in fulfilling their moral and spiritual obligations.

These are the things that prevent placing a valuation on the human being.

Therefore, isn't it important that we humans do all in our power to prevent an accident from crippling us or, in some instances, taking our lives? If you agree to this, and we are sure you do, then may we suggest you start now to take every known step in accident prevention. This will require that you work safely and remove or report any unsafe working conditions.

(For use in all mining operations)

SAFETY IS EVERYBODY'S BUSINESS

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

First Aid--Artificial Respiration

Artificial respiration is a method by manual movements to induce breathing in persons whose respiration has stopped.

The most frequent conditions under which artificial respiration is required are electric shock, gas poisoning, drowning, and suffocation. Time is of utmost importance. Do not take time to move the person to a different location unless the place is unsafe.

If artificial respiration is to be successful, it must be started as soon as possible after breathing has stopped. If someone is with you, let that person loosen tight clothing, find a blanket to keep the person warm and call for help. You haven't time.

There are several methods of giving manual artificial respiration, but the one that we will discuss is the Holger-Nielson method, often referred to as the back-pressure arm-lift method. This method gives the largest exchange of air and should be used wherever possible. The Shafer (prone-pressure) method of artificial respiration is used when a person has injured arms that cannot be raised. The Silvester method is used when an individual cannot be placed on their stomach or has severe back injuries.

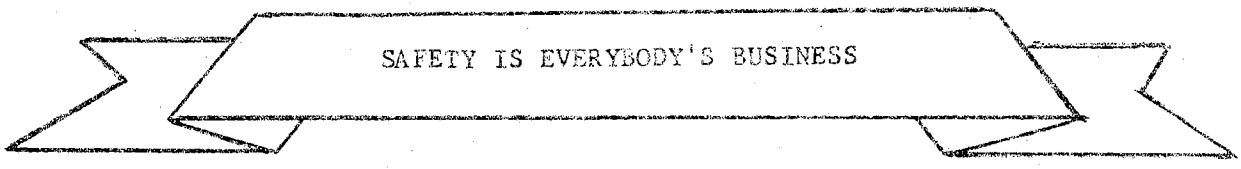
Following is a brief description of the procedures for giving the Holger-Nielson method of artificial respiration:

1. Place the victim face down with head turned to one side and cheek on one hand. Make sure that both the mouth and throat are free from obstruction. If the victim shows any tendency to swallow the tongue, clamp it forward with something.

2. Kneel at the head of the victim on one or two knees. It may take as long as 5 or 6 hours to revive the victim, so take the position that will enable you to continue the longest.

3. Fan your hands out in front of you, the tips of your thumbs together, place them on the victim's back just below the shoulder blades. Rock forward on your knees to exert a steady gentle pressure quickly without giving a push, just flex your elbows.

(For use in all mining operations)



4. After you have released the back pressure, rock back on your heels and run your hands up the victim's back and out along the arms until you are able to grasp them halfway between the shoulders and elbows. Move backward lifting the victim's arms up and towards you.

5. Pull just hard enough to feel resistance and tension in the arms. Rock forward again, and as you move, lower the victim's elbows to the ground. Run your hands along the arms and place them on the back again just below the shoulder blades. Continue moving forward with your elbows straight until the weight of your body is supported again by your hands.

6. Release the pressure and repeat the arm-lift phase. It should take about 2 seconds from the time you release the pressure on the victim's back until you release the pull on the arms. A complete cycle should take from 5 to 6 seconds. Repeat rhythmically 10 to 12 times per minute.

7. You may change your position at any time during the operation. Do this without breaking the rhythm. Continue artifical respiration until the victim is breathing steadily and strongly by themself.

8. At first the breathing will consist of a few occasional gasps. Adjust the rhythm of your movements as the victim's breathing becomes more regular. If breathing fails, return to the 12 cycle rhythm until breathing commences again. Help the victim breathe until you are certain that breathing is regular and strong.

A good suggestion is to study your first-aid manuals regarding these procedures and to participate in any first-aid training available.

April 1980

ABSTRACT FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

FATAL ELECTRICAL ACCIDENT

General Information: A lead-heavy-duty mechanic was electrocuted in a lower crawl hole of a 10-yard P & H shovel when he inadvertently contacted a collector ring energized with 4,160 volts. The victim was employed for 28 years, the last 8 years as a lead heavy-duty mechanic.

Another heavy-duty mechanic received severe electrical burns on the head, right arm, right foot and leg while trying to rescue the victim.

The ore was mined using a multiple-bench method with conventional pattern drilling and blasting. The 10- and 20-cubic yard capacity electric-powered shovels were used to load broken ore into 85 to 120-ton capacity haulage trucks for transportation to the primary crusher. The shovel involved was a P & H model 1900 A-1, 10-yard.

Power entered the lower shovel body through collector rings. These collector rings remained energized while the main disconnects were closed. The rings were located in a small compartment adjacent to the transmission access crawl hole. The right swing transmission was removed for repair and in order to complete reinstallation, it was necessary for a person to enter the crawl hole and align certain bolt holes. While in this position, a person would be in almost direct contact with the energized ring.

The ground fault interrupter was estimated to trip under fault conditions at about 12 amps. The ground fault relay did not trip when the victim made contact with the collector ring, but tripped when the second miner who was injured made contact.

Description of Accident: The victim and the injured miner reported for work at their regular starting time. The supervisor instructed them to install the rebuilt transmission. Assuming the victim had complete knowledge of installation procedures and hazards, the supervisor did not give detailed instructions.

The supervisor went to the work site later in the day and asked the victim if the crew would work overtime to complete the job. He also inquired of need for a rubber-tired dozer to move the boom.

(For use in surface mining operations)

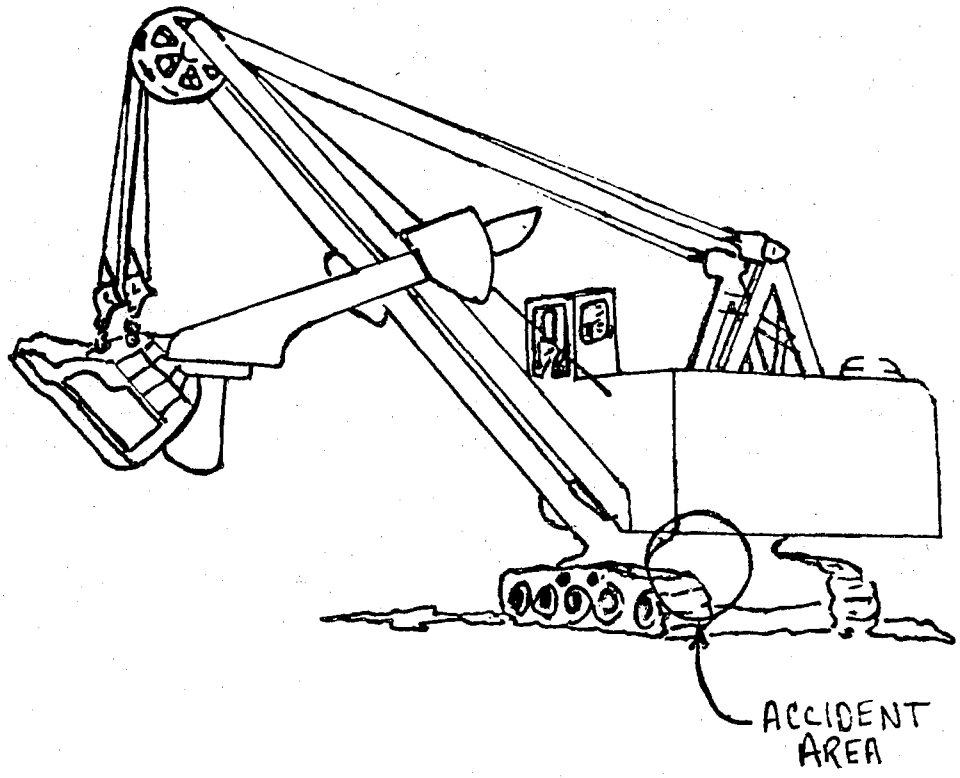
The victim agreed to work overtime and said they were not ready for a dozer. In about an hour, the transmission was in place and it was necessary to align the bolt holes.

The victim entered the crawl hole and after a few minutes passed with no response, a check of the compartment revealed that the victim was unconscious. Not suspecting that he had contacted the ring and was electrocuted, his coworker entered the hole to rescue him and also contacted the ring. The mechanics outside heard a sizzling sound and could smell something burning. Help was summoned, the pole-mounted disconnects were opened and both men were removed from the compartment. First aid was applied immediately and both were transported to the hospital. The victim was pronounced dead on arrival.

Investigation indicated that four large shovels were in operation, one of which required the DC generator to be operating before the collector rings were energized. Interviews with mechanical personnel indicated this condition may have caused some confusion. Some mechanics stated that no rings were energized unless the DC generator is operating, while others stated the rings are constantly energized.

Cause of Accident: The direct cause of the accident was the failure to deenergize and lock out the power source before entering the compartment containing the collector rings.

The failure of the company to establish and enforce a detailed written procedure for safe performance of work in the collector ring compartment contributed to the primary cause of this accident.



April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

PORTRAIT OF A COMPRESSED GAS CYLINDER

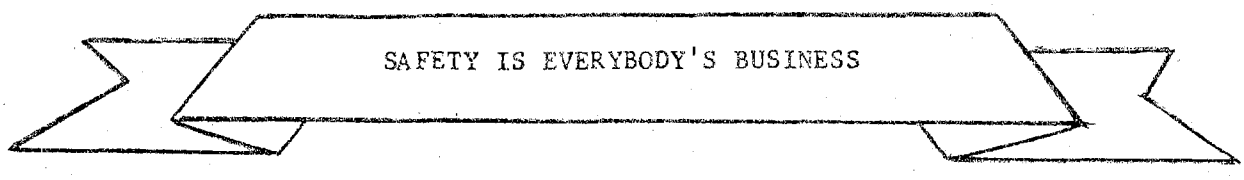
Treat me with respect--I am a sleeping giant!
I weight in at 175 lbs. when filled.
I am pressurized at 2,200 p.s.i.
I have a wall thickness of about ¼ inch.
I stand 57 in. tall.
I have a 9-in. diam.
I wear a cap when not in use.
I have valves, gauges and hoses when at work.
I wear many colors and bands to indicate the tasks I perform.
I transform miscellaneous stacks of material into many things--when properly used.

I transform many things into miscellaneous stacks of material when allowed to unleash my fury unchecked.
I am ruthless and deadly in the hands of the careless or uninformed.
I am too frequently left standing alone on my small base, my cap removed and lost. Then I am ready to be toppled over, my naked valve can be snapped off--and all of my power can be unleashed through an opening no larger than a lead pencil.
I have been known to jet away faster than any dragster.

I smash my way through brick walls with the greatest of ease.
I fly through the air and reach distances of a ½ mile or more.
I spin, ricochet, crash and slash through anything in my path.
I scoff at the puny efforts of human flesh, bone and muscle to change my erratic course.
I can rupture and explode.
You can be my master only on my terms. Full or empty, see to it that my cap is on, straight and snug. Never leave me standing alone. Keep me in a secure rack, and tie me so that I cannot fall.

AVOID RISKS

(For use in all mining operations)



April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

FIRE EXTINGUISHERS, THEIR LOCATION AND USE

Today our message is of a general nature and concerns everyone. Control of fires is necessary for when they become uncontrollable, loss of life or property damage is usually the result.

Two methods of approach to the fire problem have been adopted by fire-control authorities. One is known as fire prevention and the other as fire protection. It is the latter that we want to discuss today. Fire protection deals with extinguishing or subduing fires; also, it includes all types of equipment, materials, and techniques used in fighting fires. Authorities on firefighting agree that most fires can be extinguished quicker if they are discovered early and if no time is lost in fighting them. Practically all fires in their early stages could be put out with portable fire extinguishers with little or no effort; however, unless firefighting procedures are started immediately, these same fires can be raging out of control, destroying lives and property. Speed is essential in putting out a fire.

Fires are classified by the National Fire Protection Association as Class A, B, or C, and each fire extinguisher is marked with the appropriate identifying letter. At this time, suppose we review briefly the different classes of fires and the type of fire extinguisher or extinguishing agent that should be used on each.

Class A Fires are fires in ordinary solid combustible materials, such as coal, wood, rubber, textiles, paper, and rubbish.

Class A fires can be best controlled through the quenching or cooling action of water or certain chemical fire extinguishers, such as soda acid, foam, and loaded stream. These fire extinguishers are labeled Class A.

Class B Fires are fires in flammable liquids, such as fuel or lubricating oils, grease, paint, varnish, and lacquers. A blanketing or smothering effect is necessary to successfully fight Class B fires. Chemical fire extinguishers, such as foam, dry chemical, and liquid carbon dioxide are suitable to use on this class of fire. Rock dust or fine sand may be used also. In no case should water be used, unless a spray, mist, or fog-type nozzle is provided.

Class C Fires are fires of an electrical origin, such as live electrical equipment, transformers, generators, motors, and switch panels. A nonconductive extinguishing agent is necessary for fighting fires of this nature; chemical fire extinguishers, such as liquid carbon dioxide, dry chemical, and

vaporizing liquids are suitable to use along with rock dust and fine sand. Fine sand and rock dust should be used only as a last resort, since either may cause damage to the electrical equipment.

Each day as you go about your duties, you pass by fire extinguishers. You should fix these locations firmly in your mind as your job and your life may depend on you knowing the location of the nearest fire extinguisher. Also, you should know how each one should be used. If you lost even a few seconds in getting a fire extinguisher into operation, you might not be able to control the fire.

One final thought that I want to leave with each of you is that we shouldn't rely on fire extinguishers to protect us from fires. The only sure way to protect ourselves is to prevent fires from starting. If you see a fire hazard, remove it or report it at once. Don't let fires have an opportunity to start.

Classes of fires

1. Class A - Fires in ordinary solid material; coal, wood, rubber, paper, rubbish
    a. Control- Quenching or cooling action of water and some chemicals
        1. Class A extinguishers
            a. Soda acid
            b. Foam
            c. Loaded stream
2. Class B - Flammable liquids; smothering action required
    a. Control
        1. Chemical extinguishers
            a. Foam
            b. Dry chemical
            c. Liquid carbon dioxide
        2. Rock dust
        3. Fine sand
        4. Water - Only in mist form
3. Class C - Electrical origin
    a. Control - Nonconductive agent required
        1. Chemical extinguishers
            a. Liquid carbon dioxide
            b. Dry chemical
            c. Vaporizing liquids - "carbon tet"
        2. Fine sand and rock dust used as last resort

April 1980

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

HANGOVER OR LOOSE GROUND

There are at least three meanings to the slang word "hangover". The first concerns a person who unwisely indulges to excess, for example, on a pay-day weekend, and by Monday morning may have a severe headache and butter-flies in their stomach. The ill feeling of this person is commonly called a "hangover". The second circumstance of a "hangover" develops when a person finds their pay statement showing less than the actual earnings and is assured by the supervisor that the next pay statement will reflect the correct wages. This situation can be, and usually is, called a "hangover". The third definition of "hangover" refers to a piece of roof and/or coal protruding from the ribs or the faces of the working places.

Naturally, in our discussion today, we are not too concerned with the first and second types of "hangovers", but as miners, are principally interested in the "hangovers" or loose ground present in the working places and along haulage roads. The best situation would be to have no "hangovers", or loose ground but we know they do develop through a series of circumstances.

"Hangovers" come in different sizes, and shapes and cause many injuries, some of a minor nature; while others may produce serious injuries, many resulting in lost-time accidents and hospitalization of the injured employees, as well as numerous fatal accidents.

As you and I know, the time to do something about a "hangover" or loose ground is when it is first observed. Every effort should be made to take down "the hangover", and under no circumstances should it be left to possibly injure some unsuspecting person after an unsuccessful effort has been made to remove it. Some type of warning should be left to inform other persons of the danger. Ususally, the first person to see a "hangover" is the supervisor or blaster when they return to examine the face area after blasting. Often times, these "hangovers" cannot be observed until part or all of the coal or product has been loaded. In these instances, it then becomes the duty of the mining-machine operator or hand loader to remove the "hangover".

A very definite hazard and accident potential exists for the blasters when they enter to charge the holes for blasting and for some reason, a "hangover" remains after the faces have been cut and drilled. You are well aware that the blasters duties require working close to the face, and running the risk of a "hangover" falling or rolling.

In every mine, each employee has assigned duties and is expected to perform them in a safe and efficient manner. Possibly some of you recall the slogan used by the N.R.A. (National Recovery Act), "WE DO OUR PART". I would like for each of you to ask yourself this question, "AM I DOING MY PART"? Let us hope that you can answer in the affirmative, and that you will try to do everything in your power to eliminate any future "hangovers".

(For use in underground coal-mining operations)

April 1980

ABSTRACT FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

FATAL SURFACE HAULAGE ACCIDENT

General Information: A fatal accident occurred which resulted in the death of the driver of a 773 Caterpillar 50-ton rock truck. He had a total of 4 years of mining experience with 4 weeks as a truck driver.

Description of Accident: Several hours after the beginning of the shift, the victim took over the operation of the rock truck. A new haulage road was completed at the beginning of the shift. This road cut across the spoil pike and was connected to the highwall. Two coal trucks used this roadway to haul coal from the pit during this shift. Operations proceeded normally for about 3 hours at which time the victim's truck became stuck in the mud at the top of the hill on the highwall side. Another employee, an oiler, operated the truck while it was being pulled from the mud. He stated that there was nothing wrong with the truck at that time. The dozer operator stated that he then told the victim to stop his truck at the top of the spoil pile on his return trip from the pit and he would signal him with his lights when the road was repaired. The victim stopped at the top of the hill on the spoil side. The dozer operator signaled him from atop the hill on the highwall side and watched as the victim proceeded. He stated that the victim drove the truck straight, rubbing the edges of the berms, climbed upon the berm, then started rolling down the embankment, turning approximately a three-quarter turn and resting on its side in approximately 10 feet of mud and water.

The dozer operator quickly obtained help. Two employees tried unsuccessfully to get into the cab of the truck, which was approximately 4 feet under water. Heavy equipment had to be brought into the area to move the truck to where the victim could be free. He was pronounced dead from accidental drowning by the coroner.

Cause of Accident: The accident occurred when for some unknown reason the 773 Caterpillar rock truck rubbed, climbed and subsequently breached a roadway berm and overturned into an impoundment of water and mud, approximately 12-feet deep. The investigation revealed no indication that vehicle malfunction contributed to the accident.

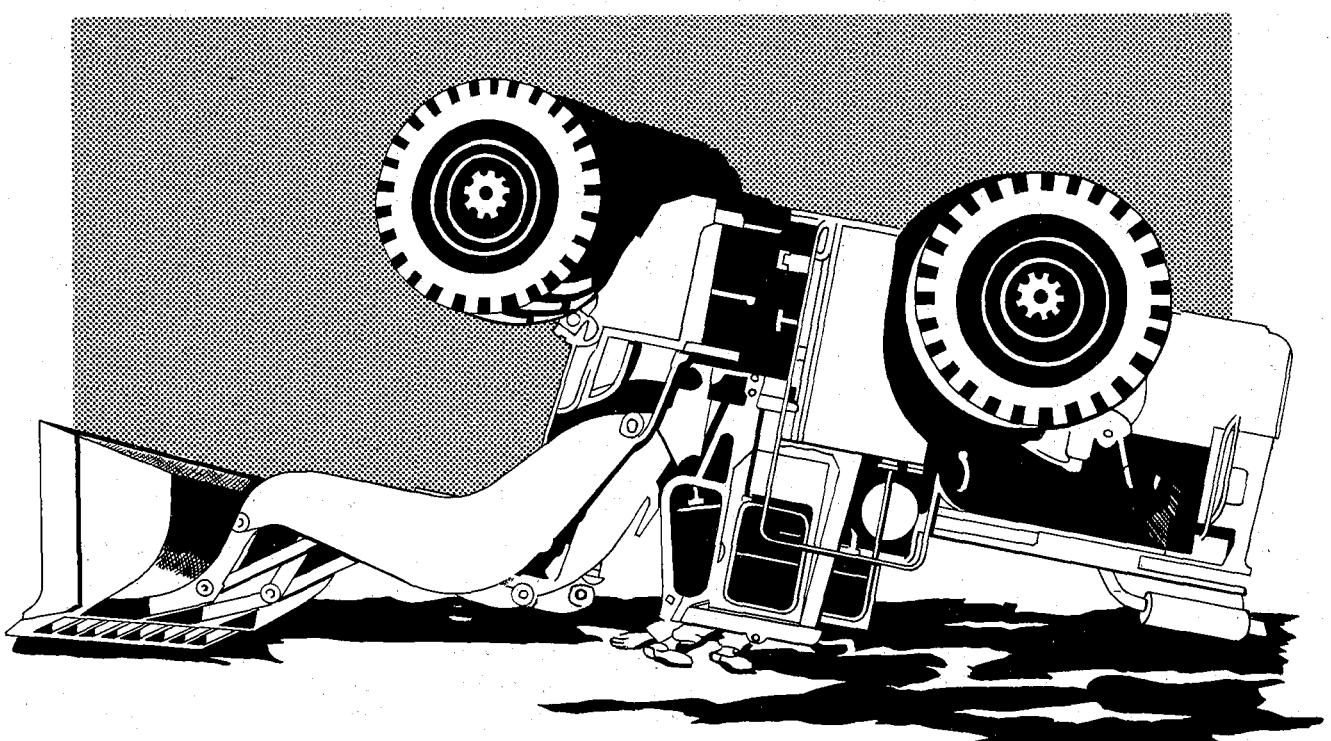
(For use in surface mining operations)

★ U.S. GOVERNMENT PRINTING OFFICE: 1980-O-677-182/7

April 1980

HOLMES SAFETY ASSOCIATION

When will we learn that we need ROLLOVER PROTECTION, SEAT BELTS, AND BERMS.



VOTE FOR SAFETY IN 1980

United States Department of Labor
MSHA
Mine Safety and Health Administration

HOLMES SAFETY ASSOCIATION

United States Department of Labor
MSHA
Mine Safety and Health Administration

MSHA, Holmes Safety Association
Education and Training
P.O. Box 25367
Denver, Colorado 80225

OFFICIAL BUSINESS

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

FIRST CLASS MAIL