BULLETIN

HOLMES SAFETY ASSOCIATION

E PLURIBUS UNUM

SAFETY EFFICIENCY

MINERAL INDUSTRIES

HOLMES SAFETY ASSOCIATION MR. JACK SAFETY

February 1991

HOLMES SAFETY ASSOCIATION OPEN-PIT PETE

February 1991

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

KEEP US IN CIRCULATION

The Holmes Safety Bulletin contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters and other safety-related topics. This information is provided free of charge and is designed to assist in presentations to groups of mine and plant workers during on-the-job safety meetings.

To report monthly chapter meetings, please use the postage-paid report form (please DO NOT use staples) located in the centerfold of this Bulletin and return to the Holmes Safety Association.

Welcome New Members

NAME	CHAPTER NO.	LOCATION
Ames Construction	10060	Phoenix, AZ
Ames Construction	10061	Kearney, AZ
Webnic Construction Services, Inc.	10062	Morgantown, WV
Mountain States Fence Company	10063	Salt Lake City, UT
K-L Media	10064	Watsontown, PA
Butte - Silver Bow (Maintenance Shop)	10065	Butte, MT
Sequoyah County District #1	10066	Muldrow, OK
Sequoyah County District #2	10067	Vian, OK
Sequoyah County District #3	10068	Sallisaw, OK
Tempest Coals, Inc. (Mine No. 1)	10069	Feds Creek, KY
Bronco Mining, Inc. (Mine No. l-A)	10070	Mouthcard, KY
Campbranch Coal	10071	Whitesburg, KY
JMS Enterprises	10072	Whitesburg, KY
Corbin Coal Company, Inc.	10073	Phelps, KY
Canada Coal Company, Inc.	10074	Kimper, KY
COM Inc.	10075	Gold Hill, CO
Tonyan Bros., Inc. (Spring Lake)	10076	Spring Grove, IL
Double S Mining, Inc. (Barbara Lynn #1)	10077	Lizemore, WV

Conveyor belts

By Jerry Herndon, Instructor of Ventilation
National Mine Health and Safety Academy

Many mine fires can be eliminated if proper belt-slippage protection is maintained. Such protection also prevents loss of production from extended shut downs, and saves replacement of expensive belts. Unfortunately, many belts are not equipped with slippage switches or the effectiveness of the switches is destroyed by being improperly adjusted or short-circuited. Some authorities believe that the slippage, especially for rubberbelts, should not exceed 25 percent of normal working speed. However, conditions such as belt width, length, speed, and load could affect the safety range.

Another protective device that offers similar advantages is the sequence switch that can be used where a cross conveyor discharges onto another belt and where a belt feeder dumps onto a tailpiece. Besides preventing loss of production and expensive belting, switches can be installed to prevent a loss of labor at the head of the cross belts by indicating that a surge or obstruction such as a timber or large rock has blocked the chute. The sequence switch could operate warning signals or lights installed in the belt heading to permit workers to perform such tasks as rock dusting, shoveling coal spillages, and timbering away from the beltdrive. When an audible or visible indicator is working, the workers would know to return to the belt head and perform remedial measures necessary to get the belt back in operation.

Belts are required to be inspected each shift. It is recommended that a mine section map be given to each belt examiner. When the examiner is unable to correct unsatisfactory conditions, the map can assist him in giving specific directions to others concerning such things as worn out rollers. It must be stressed that if serious conditions are observed, repairs should be made at once. This inspection should eliminate the hazards associated with belt haulage and permit damaged or bad splices to be repaired on shift or between shifts. In order for a belt to be repaired on shift, it is extremely important that good communications be maintained between the repairman and the section foreman or others who may be affected. All belts should be checked at least twice a shift for the condition of the splices. The belt drive and the tailpiece should be lubricated often. A good rule is to have zoner type lubrication installed on the head drive so that each belt attendant can grease safely each shift. A shuttle-car operator utility man, or the section mechanic could be assigned to grease the tailpiece on the section. The heads and tails of cross belts could be greased when the workers are traveling to or from their sections. When the belt cleaner is cleaning up spillage, the employee could be assigned either part of or the whole belt to lubricate. If only part of the belt is assigned (say left side or 500 feet of both sides) to be lubricated, it will be necessary to keep records (maybe at head piece) to prevent waste from over-greasing or damage from nongreasing or overgreasing.

The manufacturers of the belt structure should be contacted for their recommended lubrication schedule. It is easy to overgrease the anti-friction bearings re-

sulting in the rollers stalling, especially the bottom rollers. Sometimes over-greasing will break the seals which keep dirt out of the bearing. Consequently, unless other information is available, do not grease the belt rollers more than twice a year.

Many times it is necessary to operate interlocking conveyors separately. A normally open pushbutton switch will provide a means for bypassing the sequence control circuit and will insure that the control circuit is restored to normal when the pushbutton is released.

The head drives for some of the belts are major sources of belt wear. When the belts run forward, the sides rub against the belt frames and rub against the horizontal support on the discharge end. When bottom rollers are not used at the discharge end of the headpiece, wear is introduced. The installation of bottom and top training idlers before the belt enters the head drives and tailpieces would, in many observed instances, pay for itself in less than one week.

Installing training idlers cannot be emphasized enough. Belts continue to get torn up at a cost of over ten dollars a foot with subsequent production delays. The use of automatic devices is strongly advocated to maintain proper alignment of the belts on both carrying and return sides to prevent damage from edge wear on the belt and possible ignition of combustible materials by friction.

Since many belt fires have been attributed to electrical equipment, it is imperative that such equipment be installed and maintained properly. Electrical circuits should have short-circuit and overload protection. Cables should have adequate carrying capacity and be installed on insulators. Wherever cables enter metal enclosures of electric switch gear and motors, the proper packing glands, fittings, connectors and clamps should be utilized. Beltheads should be frame-grounded to protect against electric shock and fire hazards. Inspection covers should be provided for the motors and a fire wall should be built around all the resistors.

Experience has shown that adequate firefighting facilities are necessary to prevent serious damage when fire occurs. The fire protection required for many belts is not furnished and or is inoperative. The use of plastic plugs on steel pipe has rendered fire protection useless at some mines. Other means need to be incorporated to keep the exposed threads clean. Some belts are not regularly cleaned and the sprays for allaying dust at the beltheads do not work. The elimination of all unnecessary combustible material around the belt drive is recommended. Usually belt lines only have scrapers at the head and tailpieces. However, more scrapers may be necessary.

In summary, if conveyor belts and their auxiliary equipment are installed properly, examined frequently, and maintained, not only will belt fires be eliminated, but costly delays and repairs will be reduced.

Holmes Safety Association Monthly Safety Topic

Fatal fall of ground accident

GENERAL INFORMATION: A 50-year-old mine foreman, with 32 years of mining experience, was fatally injured and a 48-year-old miner, with 26 years of experience, was seriously injured when they were struck by falling material from a fall-of-ground at a gold and silver mine.

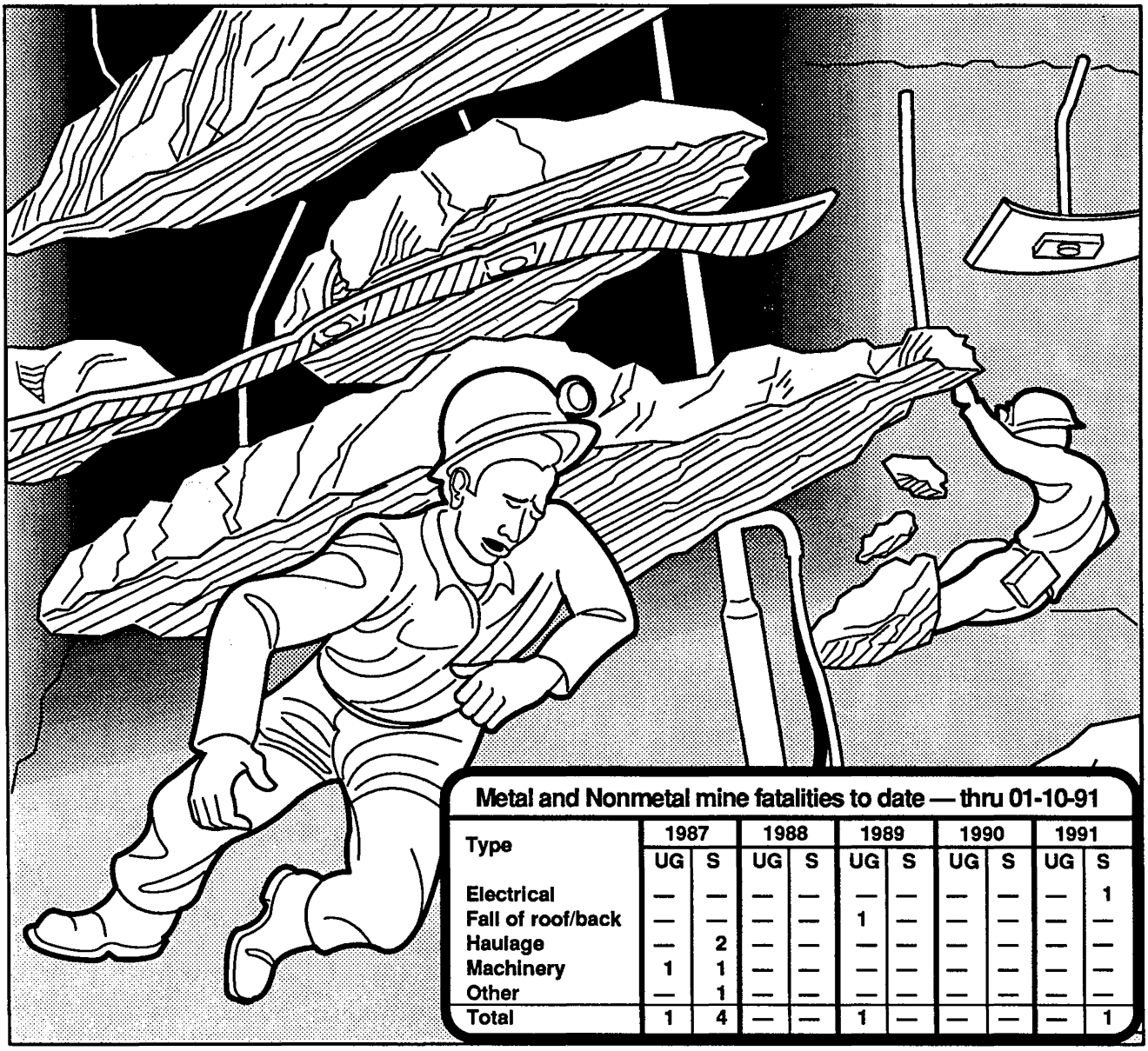
DESCRIPTION OF ACCIDENT: The mine foreman (victim) and two miners (one was injured) began their normal shift at the project at 7:00 a.m. The three-man crew began the shift by fueling the compressor and obtaining materials for roof bolting. The crew then proceeded to install collapsible vent tubing to provide more ventilation at the face. The face and back of the drift were checked for loose ground with scaling bars. No loose ground was detected at that time.

As the crew began setting up the two jacklegs for roof bolting the mechanic arrived with extra supplies which he unloaded. He then began working on a drill machine in the surface portable shop. The roof bolting continued underground with the victim bolting a support mat on the left side of the drift near the face while the injured miner installed bolts on the right side of the same mat set. Another miner assisted both men in the bolting.

At 8:20 a.m., the victim, assisted by another miner, began installing the next set of bolts on the left side. The third member of the crew continued to complete the bolting on the right side of the original set. At this time the miner assisting the victim turned to obtain a bolt set from the left rib when he noticed a small rock fall from the right side of the drift and stepped back to get a closer look at the back. He could not detect any other movement but had a feeling that he should proceed towards the portal. He yelled "Let's get out of here!" and ran towards the portal. When he reached a point near the portal he heard the fall-of-ground. He stopped and turned around but could only see the two bolting machines still standing. The other two miners could not be seen. At this time he heard the injured miner yell that his leg was broken. He answered and continued to the surface to seek help and obtain the stretcher and first-aid supplies. He contacted the mechanic who obtained the stretcher and headed towards the portal. He then backed the pickup truck to the portal and made up some wooden splints. The two then proceeded underground checking the back as they proceeded. They rendered first aid to the injured miner which included applying splints to both legs and securing him on the stretcher basket. Before and after rendering first aid they were unsuccessful in locating the victim.

They carried the injured miner from the mine and placed him in the back of the pickup. The mechanic drove the pickup, with the two miners in the back, to the mill security office at about 8:40 a.m. The ambulance call was made immediately and the injured miner was placed in the office to keep him warm until the ambulance arrived.

The mine superintendent arrived at



Metal and Nonmetal mine fatalities to date — thru 01-10-91

Type	1987		1988		1989		1990		1991	
	UG	S	UG	S	UG	S	UG	S	UG	S
Electrical	—	—	—	—	—	—	—	—	—	1
Fall of roof/back	—	—	—	—	1	—	—	—	—	—
Haulage	—	2	—	—	—	—	—	—	—	—
Machinery	1	1	—	—	—	—	—	—	—	—
Other	—	1	—	—	—	—	—	—	—	—
Total	1	4	—	—	1	—	—	—	—	1

the mill security office within moments of being notified of the accident. He then asked the mechanic and the uninjured miner to return to the portal to wait for the mine rescue teams to be assembled for recovery work. The superintendent entered the mine with the miner and checked for stability while searching for the victim.

Additional rescue personnel arrived at the scene at about 11:00 a.m. and recovery operations were begun. The work continued throughout the day to remove tons of caved material from the drift. The victim was located about 5:15 p.m. about 18 feet from the face. The victim was pronounced dead and removed from the mine at 5:25 p.m.

CONCLUSION: The direct cause of the accident was the failure of the bolt/mat support installation to maintain the vein structure in the drift back.

Contributing factors were the presence of water, which created possible hydraulic and lubricating conditions, and the failure of the vein structure above the anchor zone of some of the bolts, causing mat separation.

What holds up the top of a hill?

That is a very important question for people whose occupation involves cutting into, making, blasting, and tearing down hills. The answer is, the top of a hill is held up by the bottom of that hill. Both the things you do in mining and such natural phenomena as weathering and gravity alter the stability of the hills around you. These human and natural forces are certain to cause movement of rock, soil, and other material. So, the ground *will* move; from a safety standpoint, your concern is how much and how fast.

You can see evidence of ground movement by just looking around your quarry. Layers, or beds, of different types of rock visible in your highwall might occur at angles from horizontal to vertical, depending on the various geological and mechanical forces present. Common sense tells you that beds dipping toward you are more hazardous than beds dipping away from you.

Take a close look at the rock in those beds. Cracks or breaks in the rock are called *fractures* by geologists, and large areas of fractures are called *faults*. Fractures and faults are definite signs of ground movement. As I said earlier, two natural forces that influence this movement are *weathering* and *gravity*.

Weathering is the disintegration and decomposition of rocks and minerals as a result of mechanical and chemical action. Water is a major cause of mechanical weathering, particularly during cycles of freezing and thawing. Following are some important facts to remember about water:

☐ When water freezes to ice, its volume is increased by about 9 percent.

☐ Ice expanding in a confined space exerts a great deal of pressure on surrounding surfaces, up to 30,000 pounds per square foot.

☐ Water seeping into cracks may freeze, expanding the crack. Later, more water may percolate into the now larger cracks and if this larger volume of water freezes, the crack is again enlarged. Repetition of this process can eventually cause separation or structural failure.

☐ Frozen ground can be held together by ice and later become unstable when the ice melts.

☐ Water can provide a lubricating property between particles and cause an otherwise stable material to become unstable.

☐ Water in the right proportion can strengthen a material, but too much or too little water can weaken it.

☐ Water influences chemical weathering of such water soluble minerals as salt, limestone, and marble. Water combined with carbon dioxide forms carbonic acid, which is capable of dissolving many compounds more readily than pure water. Minerals susceptible to carbonation include calcium, potassium, sodium, and magnesium.

Growing plants also contribute to weathering. Roots extending along fractures or bedding planes exert pressure similar to ice in a crack. The growing root size fulfills the role of added moisture. Overturning and uprooting of trees in windstorms and in machine operations further contribute to breaking or dislodging rock.

While weathering causes rock to break, gravity causes it to fall. To keep it from falling on you, learn to recognize signs of gravity movements.

Creep is a term used to describe slow movement of soil down a slope. Water accelerates creep by lubricating soil particles and adding weight. Signs of creep

include a wrinkled appearance on the slope's surface; bumps or lobes of material on the surface due to increased rates of movement in wetter areas; distortion of structures built on the surface; and vegetation growing at "funny" angles. Where roads are built in creep areas, you might notice a "stone line." This is an area where stones are dragged along by moving soil, usually marking the boundary between moving and stationary material.

As water is added to a creeping slope, a mud flow might result. Mud flows are rapidly moving streams of mixed soil and water that are capable of transporting large objects, such as house size boulders, trucks, tractors, or even locomotives.

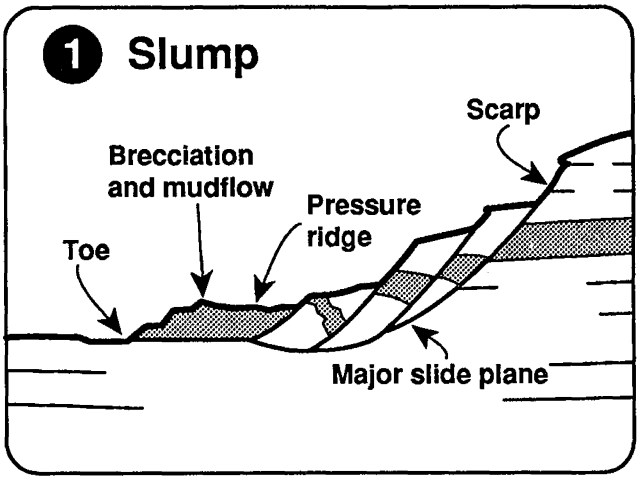
Rock falls or *soil falls* occur when material drops from a slope at nearly the velocity of free fall. You need to be particularly alert to the potential for rock falls whenever you're near a highwall or a stockpile. One sure sign that rock falls are possible is if you see rock fragments (sometimes called *talus* or *scree*) at the base of a slope. Other signs include fractures in the wall rock; bowl-like pieces broken loose from seemingly stable in-place boulders; beds dipping toward you; removal of support from any overhanging rock (what holds up the top of a hill?); recent freezing and thawing cycles; areas of overgrowth or creep above the working area; "corners" between working faces; and severe slope angles.

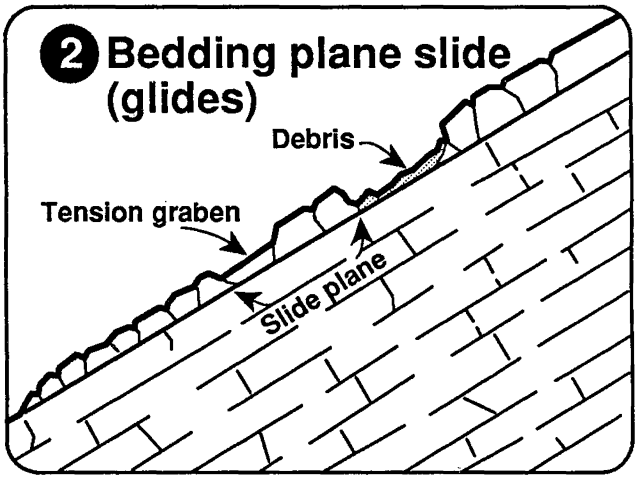
When large volumes of rock and soil detach from the surface and fall rapidly down a slope, the event is commonly referred to as a *landslide*. Two major categories of landslides are *glides* and *slumps*. In glides, material slippage is dominantly *planar*, such as when a large mass of rock becomes separated from the surrounding rock and slides out and down along the surface of an inclining bedding plane. Factors that might cause glides are beds dipping toward you; water saturation from rain, snow, freezing, and thawing; vibration from machinery and blasting; and high working faces.

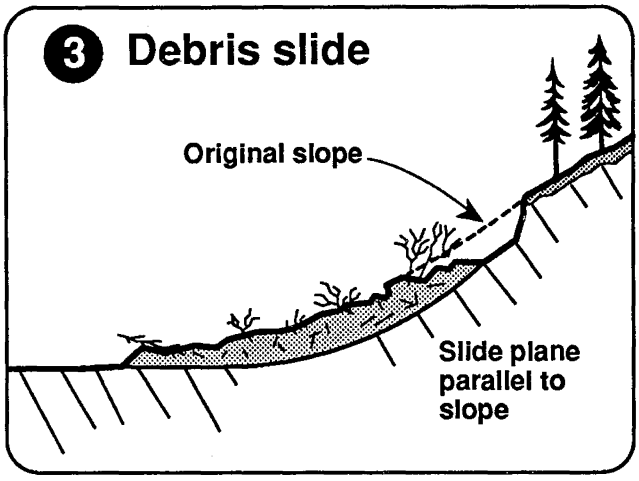
The motion of slippage in slumps is rotational, usually along a concave up-slip plane. The upper portion drops down, leaving some previously below the surface material suddenly exposed at the point of separation. This newly visible ground is called a *scarp*. At the same time, ground at the lower portion of the slump bulges up. Any time material at the base of a slope is removed, slumping becomes more likely (again, what holds up the top of a hill?). Also, homogeneous material, such as that found in stockpiles, is particularly susceptible to slumping. Other potential causes of slumps are slopes with poor drainage patterns or that contain excess water; areas of known unstable rock or soil; the appearance of cracks and minor scarps on a hillside or stockpile; periods of inclement weather; additions of weight (buildings, trucks, piles of material) near the lip of a slope; and actions which increase the slope angle.

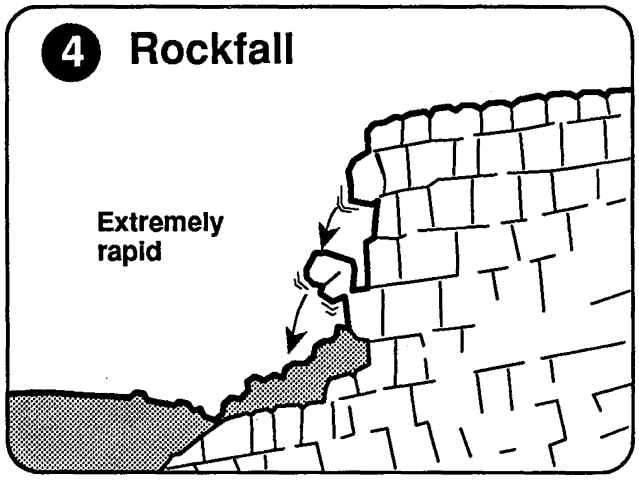
Now that you're more familiar with the ways ground can move, here are a few tips on how you can avoid getting hurt by it:

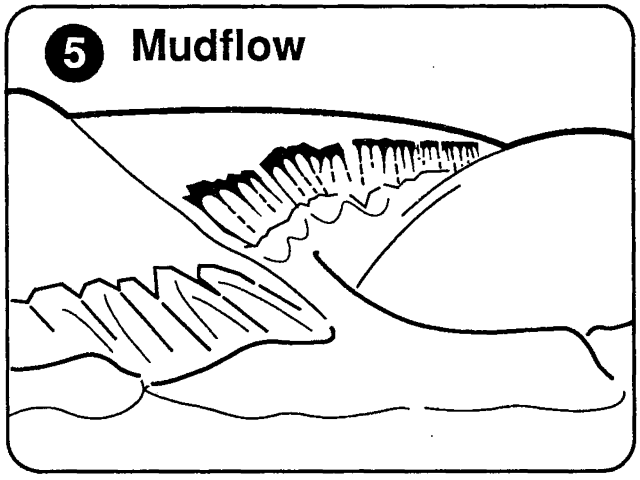
1. Natural forces are sometimes too powerful to control, so avoid working in inherently unstable areas. For example, cutting a road at the base of a hill alongside a riverbank is just asking for trouble.
2. Make sure you have adequate protective equipment, but don't let it give you a false sense of security. Operators of front end loaders equipped with falling object protective structures (FOPS) who thought they could safely work under overhangs have been killed by boulders smashing through windshields.
3. Build benches to keep down the size of your highwalls. Bench width should be 1-

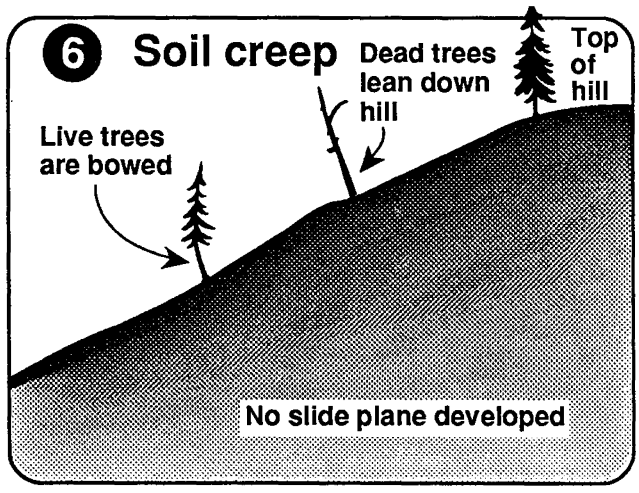












1/4 times the length of the largest machine and bench height should be as tall as the smallest machine's width. Berms on benches should be the same height as that of the mid-axle of the largest vehicle using the road.

4. Clear away all overgrowth a minimum of 15 feet from the lip of the highwall. Falling trees can kill as easily as falling rocks.

5. Don't get between your equipment and the highwall or stockpile. If you operate

a powered shovel or front end loader, make sure that the place you're sitting is always positioned away from the working face when you pivot the machine. And if you drive a truck, never get out of it during loading operations.

6. Maintain a safety angle of repose on stockpiles, usually somewhere between 35 and 40 degrees. Moisture content and freeze/thaw cycles affect the angle, as does the percentage of fines in the material, because fines carry the bulk of the moisture. As mentioned previously, slumping is an ever-present danger with a stockpile, especially when material is being removed at the toe. Many trucks have gone down with slumping piles after their drivers misjudged the safety factor and attempted to dump from the top. A safer way is to dump material back from the edge, then push it over with a dozer or loader. Or, you might consider dumping at the bottom and pushing down potentially unstable material from the top with track mounted equipment. Stocking at the bottom not only keeps the truck away from hazardous areas, but also add material to support the slope.

7. Finally, remember what holds up the top of a hill the next time you work around a highwall or a stockpile. That knowledge could save your life.

Cal Quarryman's Safety Newsletter, March 1985

Supplement available

The ***Supplement to the 1990 Catalog of Training Products for the Mining Industry – 1991*** contains a wide variety of new training materials and products for the mining industry. For your free copy of this supplement, write or call:

National Mine Health and Safety Academy
Attn: Business Office
P.O. Box 1166
Beckley, WV 25802-1166
(304) 256-3257 or FTS 930-3257

Training schedule

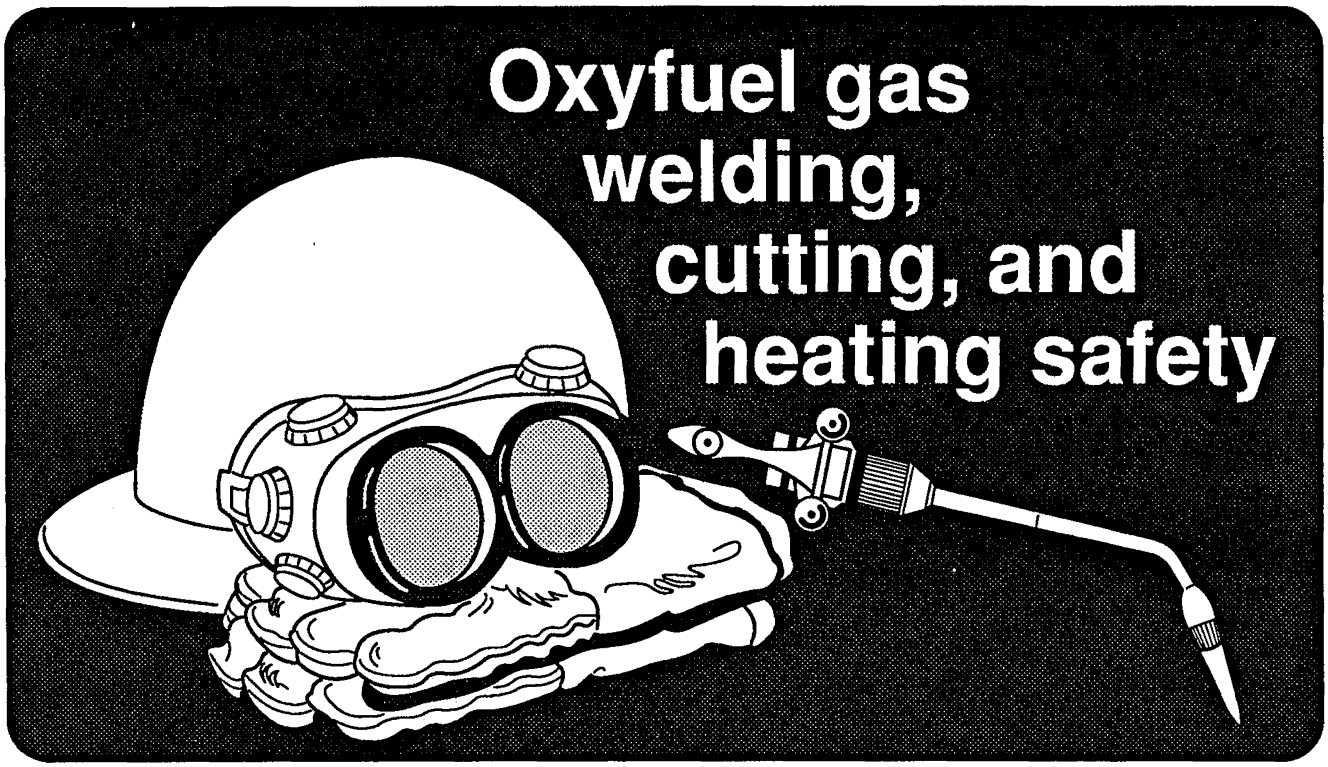
The Education and Training Division of the Office of the Arizona State Mine Inspector will conduct annual refresher first aid and CPR training classes as required by the Code of Federal Regulations CFR 30, Parts 48, 56 & 57 or Cyanide Safety training classes.

Under the general provisions of the training requirements, the educational staff of the Arizona State Mine Inspector's office is offering additional courses which address many specific hazards. These include such topics as:

1. Job Safety Analysis
2. Vehicle safety and seat belts
3. Transportation of explosives
4. Back injury prevention
5. Front-end loader safety
6. Heavy equipment operation
7. Hazardous chemicals
8. Hazard communication standards–Miner's Right to Know
9. Boiling liquid expanding vapor explosions–LPG hazards
10. CPR and emergency response planning
11. Cardiovascular disease and the effects of nutrition
12. Training plan development
13. Contractor training
14. Substance abuse
15. Mine gases and ventilation
16. The Employee's Living Problems (Supervisor's Guide)

Each training class will be designed to meet specific needs and concerns.

Upon completion of the course, each participant will receive a 5000-23 training certificate, valid nationwide. Full certification for all underground miners and mine rescue training is also available.

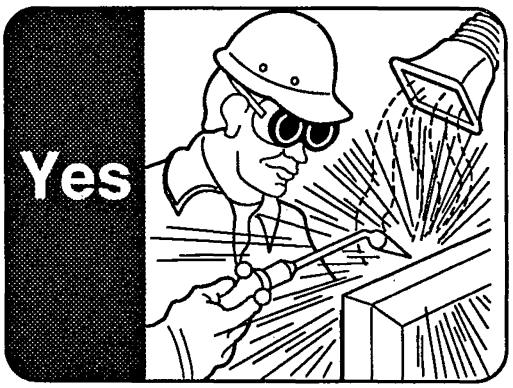


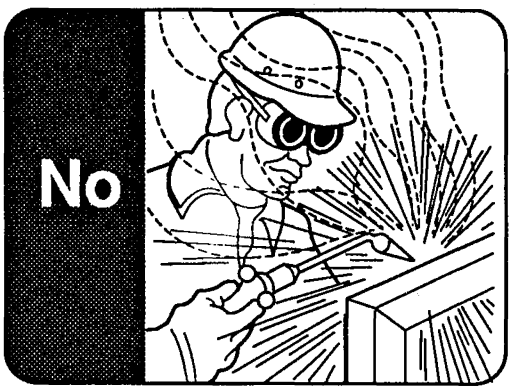
As in most trades, welders are exposed to certain hazards. Hazards exist with all welding and allied processes. Welding is safe when safe practices are followed.

This article is a brief outline of precautionary measures that will help avoid hazards of gas welding and allied processes.

Read and understand the manufacturer's instructions and your employer's safe practices.

Your safety director or supervisor should be consulted when specific questions arise.





Fumes and gases can be dangerous to your health

Keep your head out of the fumes.

Don't get too close to the flame. Use corrective lenses if necessary and stay a reasonable distance away from the flame.

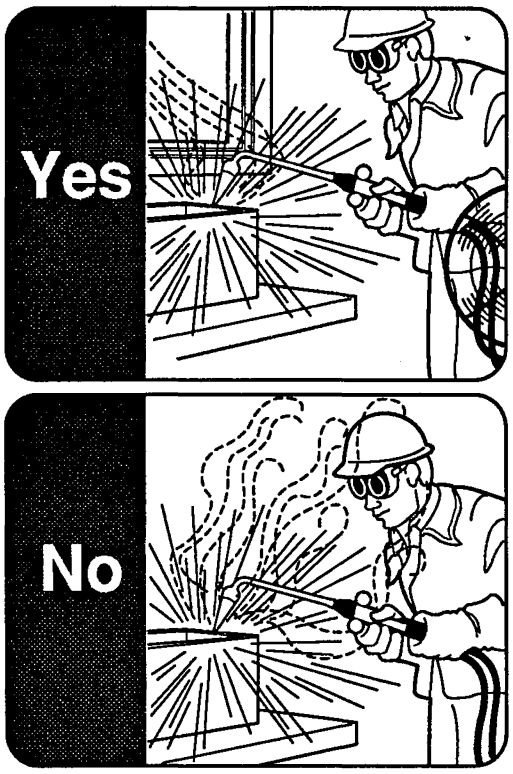
Read and obey the warning labels that appear on welding materials and equipment.

Use enough ventilation or exhaust at the flame, or both, to keep fumes and gases from your breathing zone and the general area.

In a large room or outdoors, natural ventilation may be adequate if you keep your head out of fumes.

Use natural drafts or fans to keep the fumes away from your face. Position yourself so that drafts blow across your face and not from back to front, or front to back.

If you develop unusual symptoms, see your supervisor. If symptoms persist, see a physician. Perhaps the welding atmosphere and ventilation system should be checked.



Some ventilation suggestions

In confined areas, ventilation must be adequate to keep airborne contaminants below allowable limits and to prevent insufficient or excess oxygen in the atmosphere.

Smoke extractor system. For any welding process, equipment exists for exhausting the fumes at the source.

Do not use oxygen for ventilation. Avoid oxygen enriched atmospheres.

Wear correct eye, ear, and body protection

Protect your eyes with properly fitting goggles and with proper grade of filter lens.

Protect your body from welding spatter and heat effects with flame-resistant protective clothing, flame-resistant apron, gloves, leather leggings and high boots, as needed.

Protect others from spatter and glare with protective screens or barriers.

In some areas, protection from noise may be necessary. Be sure protective equipment is in good condition. Wear safety glasses in work area at all times.

Additional precautionary measures

Fuel gases can explode and cause fires. Oxygen makes fires burn faster and hotter

Be sure to read the cylinder label.
Be sure to call 'oxygen' by name and not 'air'.
Be sure to call 'fuel gases' by name and not 'gas'.
Be sure to store cylinders in accordance with NFPA Standards and local fire codes.
Be sure to maintain hoses, torches and equipment in good condition.
Be sure to follow the manufacturer's operating procedures.

Be sure to use acetylene and liquified gas cylinders with the valve end up.

Be sure to clean and crack the cylinder valve outlet before connecting a regulator.

Do not use cylinder color or shape to identify contents.

Do not transport cylinders with regulators attached, except when secured on a cylinder cart.

Do not mix or transfill gases from one cylinder to another.

Do not exceed pressures recommended by the equipment supplier.

Be sure to keep oil, grease, and combustible dusts away from oxygen.

Be sure to secure gas cylinders in use and in storage.

Be sure to open oxygen cylinder valves slowly.

Be sure to purge oxygen gas equipment before lighting.

Protect all gas cylinders from excessive heat, cold, mechanical shock, and arcs.

Be sure cylinders can never become part of an electrical circuit.

Remove all potential fire hazards from welding and gas storage areas.

Always have fire fighting equipment ready for immediate use and know how to use it.

Special situations

Do not weld or cut containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

Do not weld or cut painted, plated, or coated parts unless special precautions with ventilation have been taken. They can release toxic fumes or gases.

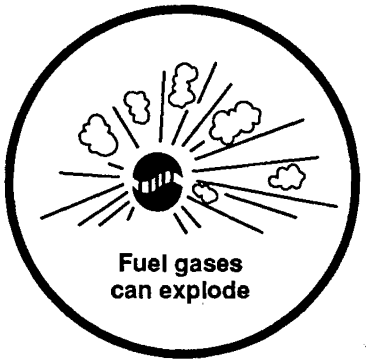
Confined space operations require special attention to ventilation as well as entry and exit procedures.

Cooperating for safety

Cooperation between management and employees is vital to the success of every company.

By working together toward the common goal – safety in welding – everyone wins!

Welders and their supervisors should have adequate safety training.



Oxygen-acetylene safety guide

1. Blow out the cylinder valve before attaching the regulators to the cylinders.

2. Release the adjusting screw on the regulator before you open the cylinder valve.

3. Stand to one side of the regulator before opening the cylinder valve.

4. Open the cylinder valve slowly.

5. Do not use or compress acetylene in a free state at pressures higher than 15 lbs. per sq. inch.

6. Purge your oxygen and acetylene gas passages individually before lighting the torch.

7. Light the acetylene before opening the oxygen valve on the torch.

8. Never use oil on regulators, torches, fittings, or equipment in contact with oxygen.

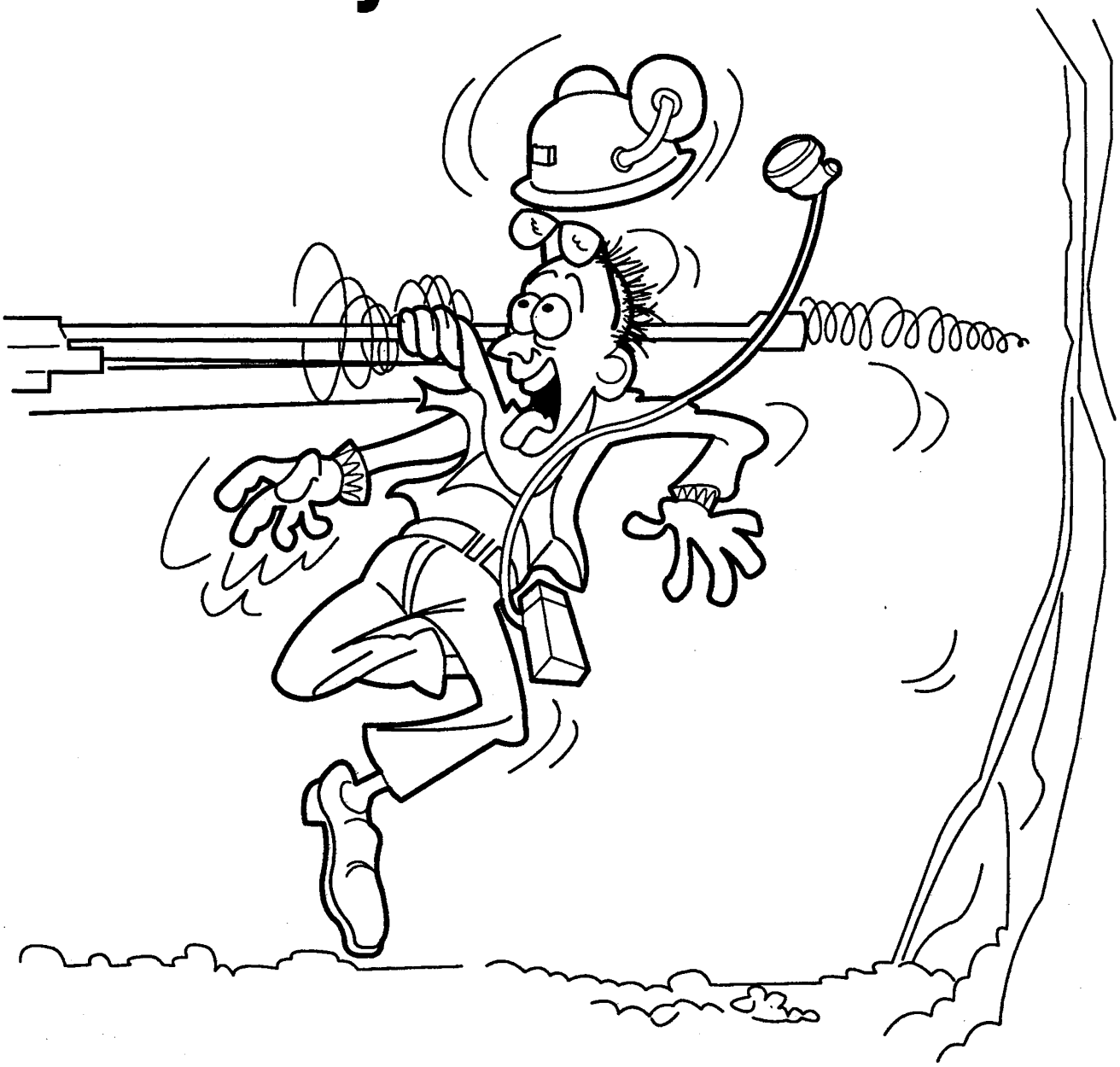
9. Do not use oxygen as a substitute for air.

10. Keep your work area clean of anything that will burn.

For further information refer to American National Standard Z49.1, "Safety in Welding and Cutting," available from the American welding Society, 550 NW LeJeune Rd., Miami, Florida 33126.

Requirements of the OSHAct are given in Title 29, Code of Federal Regulations, Section 1910 Subpart Q (Occupational Safety and Health Administration Document 2206), available from U.S. Department of Labor, Washington, D.C. 20210, and the booklet "TLV's, Threshold Limit Values...," American Conference of Government Industrial Hygienists, 6500 Glenway Avenue, Bldg. D-5, Cincinnati, OH 45211.

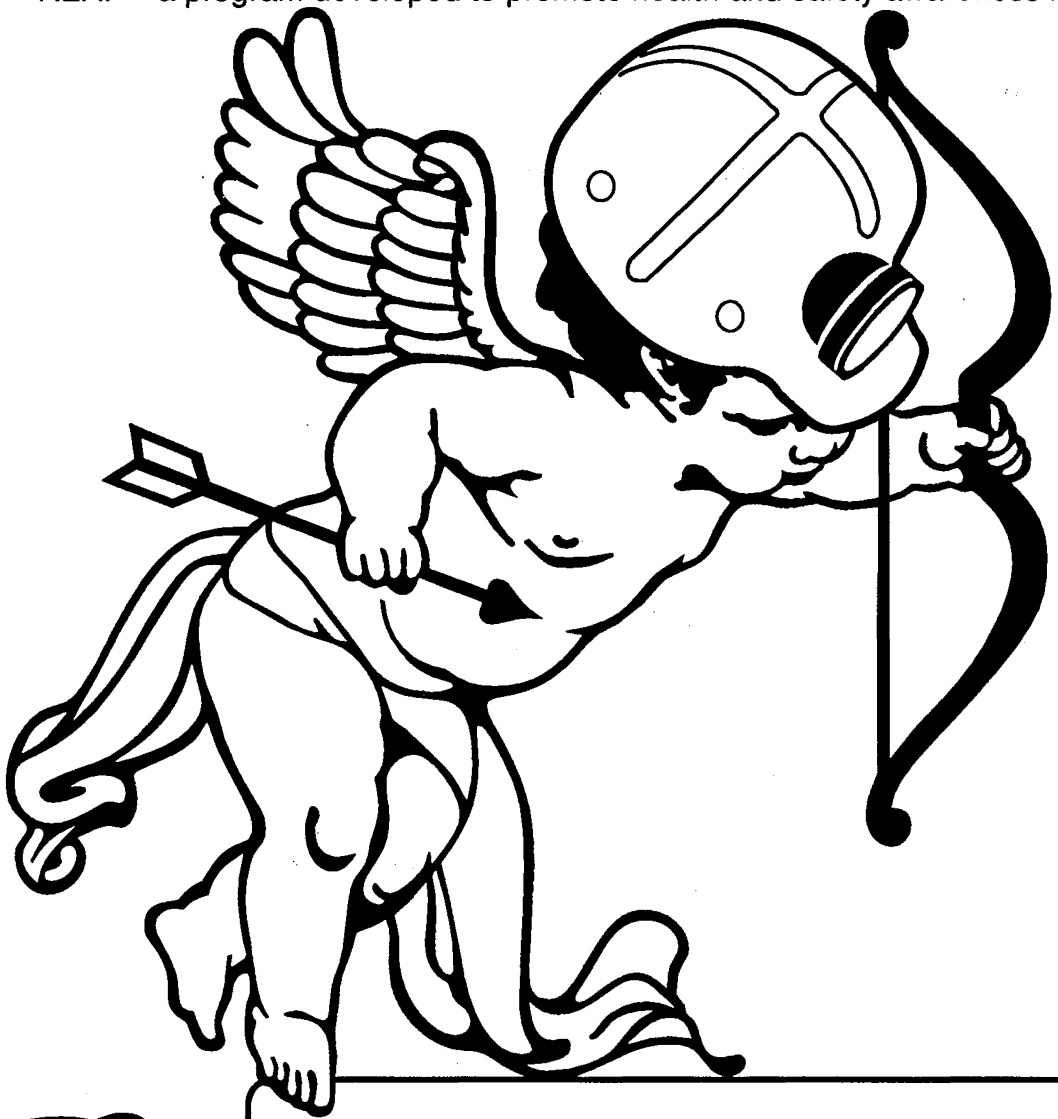
Wearing loose clothing can be hazardous to your health!

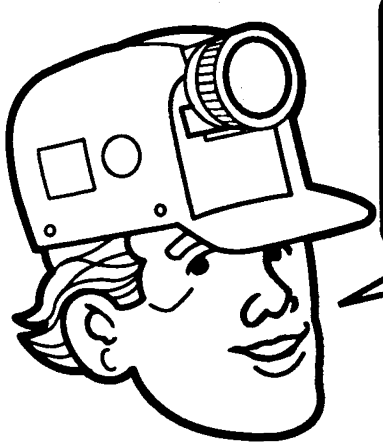


From a poster of the Mines Accident Prevention Association, Ontario, Canada

Roof Evaluation—Accident Prevention

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





Your valentine wants you to work safely and stay out of... the Death Zone!

MINERS: Credit for this month's safety slogan goes to: a concerned MSHA employee. Please send your suggestions to: MSHA, Educational Policy & Development, 4015 Wilson Blvd., Graphics Room 533A, Arlington, VA 22203-1984. Phone: (703) 235-1400

February 1991

Please fold in thirds before mailing

5000-22
(Rev. 12-78)

United States Department of Labor
MSHA
Mine Safety and Health Administration

Holmes Safety Association
Meeting Report Form

Fold here ▶ ◀ Fold here

For the month of	
TOTAL meetings this month	
TOTAL attendance this month	
Chapter number	(See address label, if incorrect, please indicate change)

NOTE: We must have your correct chapter number to give you credit for your HSA meetings

Signature	
Telephone no.	
Title	

1. Fill out 2. Fold and *TAPE!* 3. Free mail in

DO NOT USE STAPLES *— The U.S. Postal Service says they jam the automatic sorters. Sharply creased folds will mail without tape*

NOTE: Be sure our address shows on the other side (no staples please)

Fold here ▶ ◀ Fold here

MSHA, Office of Holmes Safety Association
Educational Policy & Development
4015 Wilson Boulevard
Arlington, Virginia 22203-1984

Regional Metal/Nonmetal mine rescue contests for 1991

The Southwestern Invitational Mine Rescue Contest

This contest is sponsored by the New Mexico Mine Rescue Association, and will be held on April 12 & 13, 1991. The contest is open to all teams. For details contact Mr. Buddy Web, President, New Mexico Mine Rescue Association, WIPP Project, Westinghouse Electric Corporation, P.O. Box 2078, Carlsbad, New Mexico 88220. Telephone number (505) 887-8228.

The Stillwater Mine Rescue Contest

The contest is sponsored by the Stillwater Mining Company and will be held in Red Lodge, Montana on July 27, 1991. It is open to the first 16 teams. For details contact Mr. Danny Kleinhasselink, Safety/Training Foreman, Stillwater Mine, Stillwater Mining Company, HG 54, Box 356, Nye, Montana 50961. Telephone number (406) 328-6400. Danny is the Contest Chairman for this event.

The Western Regional Mine Rescue Contest

The contest is sponsored by Homestake Mining Company and will be held in Lead, South Dakota. Contact Mr. Roland Wilson, Director, Health and Safety, Homestake Mine, Homestake Mining Company, P.O. Box 875, Lead, South Dakota 57754. Telephone number (605) 584-1020.

The Central Mine Rescue Unit and Bench Competition.

The contest is sponsored by the Central Mine Rescue Unit, Coeur d'Alene Mining District, and will be held in Wallace, Idaho on the third weekend in May, 1991. This is a closed contest. For details contact Mr. Robert McPhail, Director, Central Mine Rescue Unit, Coeur d'Alene Mining District, Box 1067, Wallace, Idaho 83873. Telephone number (208) 556-2225.

The University of Missouri at Rolla/Missouri Mine Rescue Contest.

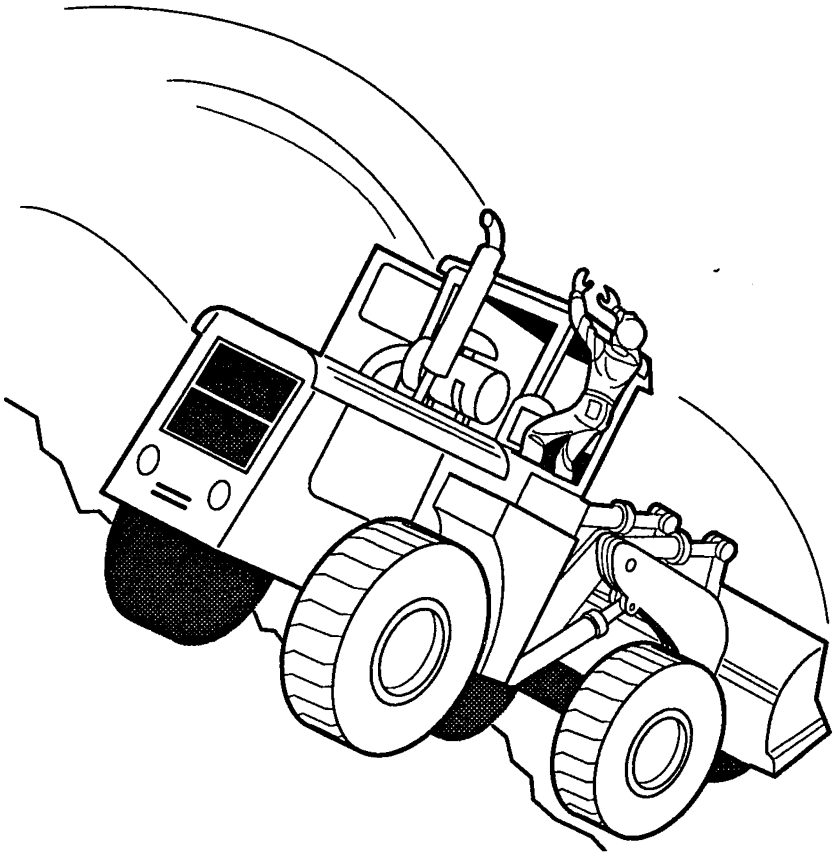
The contest is sponsored by the University of Missouri at Rolla and the Missouri Mine Rescue Association. This contest is open to the first 12 teams and will be held early in September of 1991. For details contact Mr. Clarence Barton, Safety and Loss Control Manager, Magmont Mine, Cominco American, Bixby, Missouri 65439. Telephone number (314) 626-4231.

The Kansas Shootout.

This mine rescue contest is sponsored by Kansas Small Mine Safety and the Hutchinson Community College and will be held in Hutchinson, Kansas on May 23, 1991. This contest is open. For information contact Mr. Lee Graham, Instructor/Coordinator, Kansas Small Mine Safety, Hutchinson Community College, 1300 North Plum, Hutchinson, Kansas 67501. Telephone number (316) 665-3493 or 665-3355. Lee Graham is the Contest Chairman for this event.

The Northern Invitational Mine Rescue Competition.

This contest is sponsored by the Northern Regional Mine Rescue Association and will be held in Berea, Ohio (close to Cleveland, Ohio) on June 15, 1991. This is a closed contest. AKZO Salt Company, Cleveland Mine, will host this event. For information contact Mr. John Buck, Contest Chairman, AKZO Salt Company, Cleveland Mine, P.O. Box 6920, Cleveland, Ohio 44101. Telephone number (216) 651-7200.



When the ROPS becomes worthless

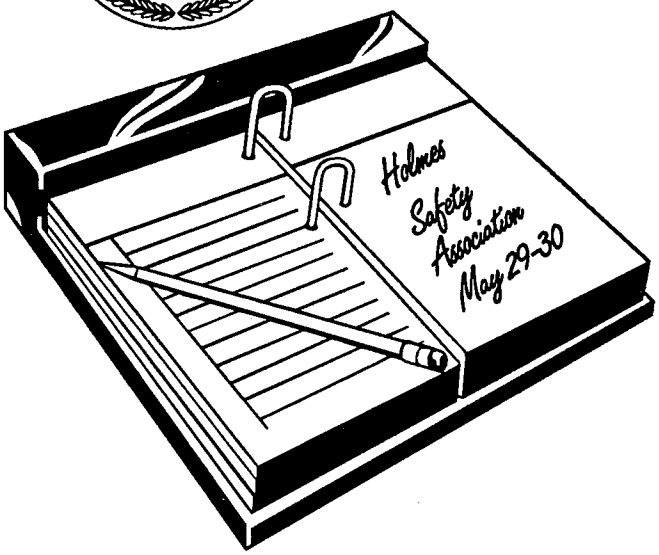
When that front end loader, excavator, dozer, scraper or haul truck was purchased, part of that purchase price included the rollover protection system. It also included the cost of a seat belt. These two safety items that were purchased have to be used together in order to accomplish what they were designed to do.

If you look back through your Fatalgrams at the powered haulage accidents, take special note of the recommendations in those fatal accidents involving rollovers. You will find, "Seat belts should be worn" or, "The use of seat belts should be required." When you read the abstract and form the picture in your mind of the accident sequence, its easy to see that the ROPS was worthless in protecting that operator who was thrown or jumped from the machine and crushed underneath or slammed around inside the cab and received a broken neck or fatal head injuries. One's conclusion should be; in order to be protected by the ROPS, wear the seat belt.

Powered haulage accidents accounted for 33% of all fatalities experienced over the last three years and 52.7% of these could/might have been prevented with seat belts, according to Mine Safety and Health Administration accident records. To insure that we are utilizing all our resources to prevent these powered haulage fatal accidents, we need to take a look at our surface operations and alert supervisors, miners and contractors of these fatalities that could or might have been prevented by the wearing of seat belts. The safest piece of self-propelled mobile equipment must still be operated with care and with a knowledge of its performance capabilities. This objective can be achieved by following a comprehensive safety and inspection program in conjunction with accident prevention.

Nebraska Mine Training Newsletter, Fall 1990

Mark your calendar



Holmes Safety Association
Joseph A. Holmes Safety Association

Annual Meetings

Pipestem Resort State Park
Pipestem, West Virginia

May 29-30, 1991

Plans have been finalized to hold the Holmes Safety Association National Council Annual Meeting at the ***Pipestem Resort State Park, Pipestem, West Virginia,*** on ***May 30-31, 1991.***

Resort room rates are:

Single	$40.00*
Double	45.00*
Small suite, single	52.00*
Small suite, double	57.00*
2-room suite, single	57.00*
2-room suite, double	62.00*
Large suite, single	66.00*
Large suite, double	72.00*

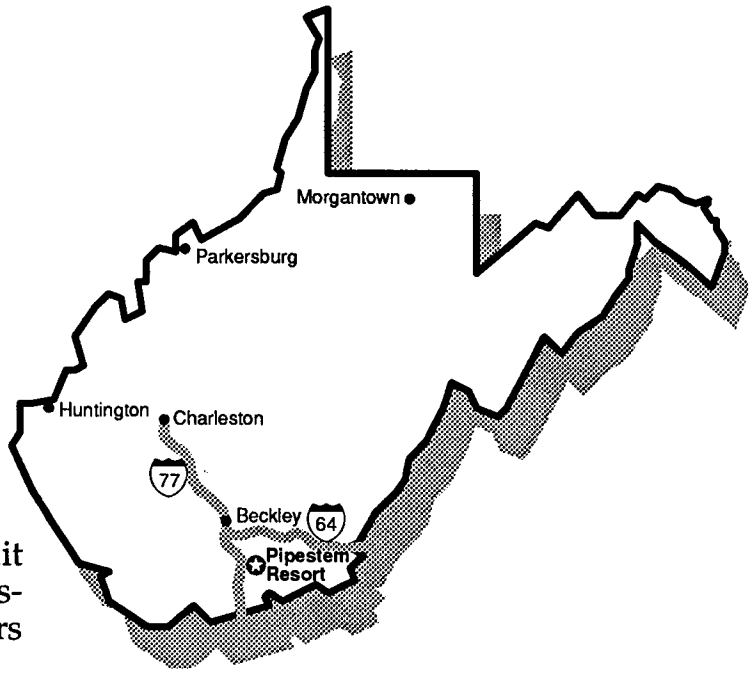
* Plus 9% state tax

Extra person in room – $6.00/night

Pipestem Resort accepts most major credit cards including American Express, Mastercard and Visa. It *does not* accept Diners Club.

Reservations must be made prior to April 29 and a deposit of the first night's lodging is required.

For reservations call toll free: 1-800-225-5982. Be sure to state that you are with the Holmes Safety Association.



West Virginia

America's best kept secret!

Holmes Safety Association Monthly Safety Topic

Fatal machinery accident

GENERAL INFORMATION: A 47-year-old pumper with 20 years of experience was drowned when the tractor he was operating in two to three feet of standing water suddenly tipped into the deeper end of a sump hole and submerged.

DESCRIPTION OF ACCIDENT: The afternoon shift began work at 2:30 p.m. The pit foreman gave out work assignments and routine duties commenced. At the start of the shift the foreman assigned the victim, a pumper, to prepare a pump for a new sump that had been dug at the south end of the pit. This sump had been dug with the dragline, across the pit lengthwise, by the previous shift. The sump was dug to collect water that was usually associated with mining in this end of the pit. The water had accumulated in this end of the pit in the past and was believed to have come from an old underground mine in a lower seam.

The foreman and the victim met at the south end of the pit and looked at the large sump, which was about twenty feet wide, forty feet long, and eight to ten feet deep. At that time, the sump contained little or no water. They also looked at the large electric pump which had been placed against the highwall about twenty feet north of the sump. The pump was built on a floating platform and its electric power supply cable and discharge hose had been hung over the highwall near the pump, but had not yet been connected. Since the water did not need pumping yet, the victim left the pit and drove to another area at the mine where he had other pumping duties.

At about 5:30 p.m., the foreman was told that the water was rising very rapidly in the south end of the pit. The water had already filled the sump and was overflowing. The foreman instructed the victim to return to the pit and begin pumping operations. The victim returned to the pit at about 5:45 p.m. and began connecting the power cable and discharge hose. He drove out to the location of the pump, which was now in water, on a dozer, which he routinely operated in the pit to position pumps. After connecting the power cable and discharge hose, he left the pit and drove his truck to the top of the highwall to energize the pump. At this time, the pump was standing in about one foot of water.

At about 6:45 p.m., when the victim energized the pump, the cable supplying power to the pump faulted. The foreman, located at the dragline on the spoil, observed a puff of smoke coming from the pump platform. He also noticed that the pump platform moved when the attempt to energize it was made. This indicated to the foreman that the pump platform was afloat. He left the dragline and joined the victim on the highwall. He told the victim what he had observed and instructed him to get another cable for the pump. The victim got another power cable for the pump and hung it over the highwall in the vicinity of the pump. He then proceeded to the pit to connect the cable to the pump.

When the victim arrived in the pit, the

water had risen to a depth of two to three feet across the entire south end of the pit. Also, the water pump, still against the highwall, was now floating in the water. At about 7:30 p.m., he again mounted the tractor located there and proceeded out into the water. The power cable that he had dropped over the highwall was on the south side of the pump. He trammed the tractor past the location of the pump and was attempting to turn toward the highwall to get to the power cable when the accident occurred. At this time, as the victim was turning the tractor, it slid sideways over the edge of the sump hole. The tractor rolled over on its side and was immediately submersed in the deep water.

The dragline operator was in the cab of the dragline located adjacent to the pit, when the accident occurred. He witnessed the accident, saw the tractor completely disappear beneath the surface of the water, and immediately radioed for help.

The foreman and the reclamation foreman, responded to the call and they immediately proceeded to the south end of the pit. When they arrived at the water, they could not see any sign of the tractor or the victim, only the pump floating in the water near the highwall. The reclamation foreman then waded out into the frigid water, feeling along with his feet for the edge of the sump hole. Reaching the edge of the sump, he swam out in the deep water. He quickly found the tractor lying on its side at the bottom of the sump. He was then joined in the water by the foreman. They each took turns diving attempting to find the tractor cab and the victim. When they located the water-filled cab, they opened the right side door and on successive dives, they entered the cab. They felt around inside the cab at the operator's seat and the controls, but they could not find any sign of the vitim.

Work was quickly begun to lower the water level in the sump. The dragline operator dug an adjacent sump hole, and the water level receded enough for the rescuers to see the right front portion of the tractor blade. Another tractor, which had been operating near the location of the dragline, was trammed over the spoil bank and down to the pit. The tractor was backed to the edge of the sump and a steel rope was fastened to the blade of the submersed tractor. The tractor then attempted to pull the victim's tractor from the sump. Due to the position of the victim's tractor and the depth of the sump, the larger tractor was not able to pull it out of the sump. However, the larger tractor was able to partially upright the victim's tractor, exposing part of the operator's cab. the reclamation foreman was then able to enter the cab where he found the victim face down in the water behind the operator's seat.

At about 7:55 p.m., the victim was removed from the cab and brought to the edge of the water. There were no vital signs found. Cardiopulmonary resuscitation (CPR) was immediately begun. The County Ambulance Service, which had been summoned to the scene, then promptly transported the victim to the Hospital. Hospital personnel worked with the victim for about ninety minutes and re-established a voluntary sustained heartbeat four different times. However, he was pronounced dead about 9:30 p.m., due to complications associated with his drowning.

CONCLUSION: The accident occurred because the tractor was being operated in standing water which had obscured the location of the water sump.

First aid

Cold stress, frostbite, and hypothermia

Preventive measures, symptoms and first aid

Miners can more easily protect themselves from the effects of cold stress than heat stress. Exposure to a cold environment, however, can cause health problems and serious injury.

The body mainly uses two protective mechanisms to limit the impact of cold stress. A **reduction of over five percent blood flow** occurs in the fingers and toes. This vasoconstriction results in a marked drop in the skin temperature to help prevent heat loss. When the vasoconstriction is no longer adequate to maintain a balance of the body's heat, an increase in metabolic heat production by **shivering** becomes important.

A worker's body temperature can be maintained with the proper insulation obtained from clothing. However, the cold insulating properties will greatly diminish when the clothes become wet from water or sweat during intensive physical work.

To prevent cold stress, several factors have to be considered—from the individual worker to the environment. Cold stress injuries can be limited or prevented by **acclimatization, water replacement, medical supervision, proper clothing,** and **training**. The cold environment can be controlled through **engineering controls, work practices, work/rest schedules, environmental monitoring,** and consideration of the wind-chill temperatures.

Acclimatization–Some degree of acclimatization may be achieved, but the physiological changes are usually too minor and require repeated exposure to uncomfortable cold environment to induce them. Miners at greater risk are obese workers, older workers, workers with circulation problems, and workers using certain medications and drugs.

Dehydration–Working in cold air causes significant water loss through the skin and the lungs. Warm, nonalcoholic drinks or soup should be available to replace calories and fluids. A well balanced diet and sensible intake of salt are needed.

Control measures–General spot heating, warm air jets, and radiant heaters can be used in certain work areas. Shielding the work area should be considered if the wind-chill factor at the job site falls below 30°F. Miners should be encouraged to use shelters regularly. Metal handles of tools and control bars need to be covered with thermal insulating materials.

Administrative controls–Schedule work during the warmest part of the day with a work/rest schedule to help reduce cold stress. In many cases the work can be moved to a warmer area. Work should also be arranged to minimize sitting still for long periods of time. An adequate amount of breaks for intake of liquids should be allowed.

Protective clothing–It is important to preserve the air space between the body and the outer layer of clothing in order to retain heat. The more air pockets, the better the insulation. The most important parts of the body to protect are the head, face, and feet. When the head is exposed, up to 40 percent of the body heat can be lost. Recommended clothing includes a set of long underwear (Please see HSA Bulletin of November 1990, page 27-28, for a lengthy discussion of clothing). Socks with a high wool content are advised as well as sweater and knit cap—in other words, layering is best. Hard hats are available with winter liners.

Hypothermia

General hypothermia is an extreme problem resulting from prolonged cold exposure and heat loss. The inner core of the body is chilled, and the body cannot generate enough heat to stay warm. The effects can be serious, with a combination of factors such as low temperatures, wind and rain at 30°-50°F, hunger, fatigue, and poor physical condition.

Frostbite

Frostbite is an actual freezing of the tissue. With added wind velocity, heat loss is greater and occurs rapidly. For example, at 30°F the body will feel cold, but at the same temperature with a 25 mph wind the air feels bitterly cold. (Several degrees of frostbite occur, ranging from superficial injury with redness and numbness, to deep tissue freezing, to deep cyanosis, to gangrene.)

General rules for treating frostbite

☐ Apply loose, soft, sterile dressings to affected area.

☐ Splint and elevate the extremity.

☐ Give the victim warm fluids containing sugar to drink if he or she does not have an altered level of consciousness.

☐ Do not rub, chafe, or manipulate frostbitten parts.

☐ Do not use hot water bottles or heat lamps.

☐ Do not place the victim near a stove or fire—excessive heat can cause further tissue damage.

☐ Do not allow the victim to drink coffee, tea, or hot chocolate—these substances will cause the blood vessels to constrict.

☐ Do not allow the victim to walk if the feet are frostbitten.

Wind-chill index

The air temperature alone is not sufficient to judge the cold hazard because the worker's loss of body heat is deceptive. Threshold limit values on the wind-chill index need to be reviewed for application to the particular work area. The wind-chill index is a combination of temperature and wind velocity. Using the index can be of value but does not take into account the body parts exposed, the level of activity, or the amount of proper clothing. The work practices of the miners and the control measures of the operators will significantly reduce the potential of injury and reduced production.

Frostbite – signs and symptoms

Signs and symptoms of frostbite are not always apparent to the victim. Since frostbite has a numbing effect, the victim may not be aware of it until told by someone.

Frostnip

☐ The affected area will feel numb

☐ The skin becomes red, then white during frostnip.

Cooling power of wind on exposed flesh expressed as an equivalent temperature (under calm conditions)

Estimated wind speed (mph)	Actual thermometer reading (°F)											
	50	40	30	20	10	0	−10	−20	−30	−40	−50	−60
	Equivalent temperature (°F)											
Calm	50	40	30	20	10	0	−10	−20	−30	−40	−50	−60
5	48	37	27	16	6	−5	−15	−26	−36	−47	−57	−68
10	40	28	16	4	−9	−24	−33	−46	−58	−70	−83	−95
15	36	22	9	−5	−18	−32	−45	−58	−72	−85	−99	−112
20	32	18	4	−10	−25	−39	−53	−67	−82	−96	−110	−124
25	30	16	0	−15	−29	−44	−59	−74	−88	−104	−118	−133
30	28	13	−2	−18	−33	−48	−63	−79	−94	−109	−125	−140
35	27	11	−4	−20	−35	−51	−67	−82	−98	−113	−129	−145
40	26	10	−6	−21	−37	−53	−69	−85	−100	−116	−132	−148
Wind speeds greater than 40 mph have little added effect.	Little danger for properly clothed person. Maximum danger of false sense of security.				Increasing danger Danger from freezing of exposed flesh.			Great danger				
Trenchfoot and immersion foot may occur at any point on this chart.												

Superficial frostbite

☐ As exposure continues, the skin becomes white and waxy.

☐ The skin is firm to the touch, but underlying tissues are soft.

☐. The exposed surfaces becomes numb.

Deep frostbite

☐ If freezing is allowed to continue; all sensation is lost, and the skin becomes a "dead" white, yellow-white, or mottled blue-white.

☐ The skin is firm to the touch as are the underlying tissues.

First aid treatment

Frostnip

☐ Place hand over frostnipped part.

☐ Place frostnipped fingers in armpit.

Superficial frostbite

☐ Remove the victim from the environment.

☐ Apply a steady source of external warmth.

☐ DO NOT rub area.

☐ Cover the area with a dry, sterile dressing (when dressing foot or hand, pad between toes and fingers).

☐ Splint if dealing with an extremity.

☐ Transport to the hospital.

As area thaws, it may become a mottled blue and blisters will develop.

Deep frostbite

☐ Leave it frozen until victim reaches the hospital.

☐ Dress, pad, and splint frostbitten extremities (when dressing injury, pad between fingers and toes).

☐ Transport the victim to the hospital.

☐ If a delay in transport, rewarming may be done at the site. Place the affected part in water bath of 100-105 degrees. Apply warm cloths to areas that cannot be submerged. An extreme amount of pain is associated with rewarming.

☐ Rewarming is complete when the area is warm and red or blue in color and remains so after removal from the bath. DO NOT rewarm if there is a possibility of refreezing.

Hypothermia

Hypothermia is a general cooling of the entire body. The inner core of the body is chilled so the body cannot generate heat to stay warm. This condition can be produced by exposure to low temperatures or to temperatures between 30 and 50°F with wind and rain. Also contributing to hypothermia are fatigue, hunger, and poor physical condition.

Exposure begins when the body loses heat faster that it can be produced. When the body is chilled, it passes through several stages:

☐ The initial response of a victim exposed to cold is to build a fire and to voluntarily exercise in order to stay warm. The fire can also signal rescuers if the victim is lost.

☐ As the body tissues are cooled, the victim begins to shiver as a result of an involuntary adjustment by the body to preserve normal temperature in the vital organs. These responses drain the body's energy reserves.

☐ Cold reaches the brain and deprives the victim of judgement and reasoning powers.

☐ The victim experiences feelings of apathy, listlessness, indifference, and sleepiness.

☐ The victim does not realize what is happening.

☐ The victim loses muscle coordination.

☐ Cooling becomes more rapid as the internal body temperature is lowered. Eventually, hypothermia will result in a coma. The victim will have a slow pulse and very slow respirations. If cooling continues, the victim will die.

☐ The victim of hypothermia may not recognize the symptoms and deny that medical attention is needed. Therefore, it

is important to judge the symptoms rather than what the victim says. Even mild symptoms of hypothermia need immediate medical care.

First aid treatment

☐ Get the victim out of the elements.
☐ Remove all wet clothing.
☐ Wrap the victim in blankets. Be certain the blankets are under as well as over the victim. Maintain the victim's body heat by building a fire or placing heat packs, electric heating pads, hot water bottles, or even another rescuer in the blanket with the victim. DO NOT warm the victim too quickly.
☐ If the victim is conscious, give warm liquids to drink.
☐ If the victim is conscious, try to keep the victim awake.
☐ CPR is indicated if the victim stops breathing and the heart stops beating.
☐ Get the victim to a medical facility as soon as possible.
☐ Remember to handle the victim gently. In extreme cases rough handling may result in death.

North Carolina Dept. of Labor, Mine and Quarry Division.

First Aid Book, MSHA, 1988.

U.S. Navy, NAVMED Bulletin 5052-29.

1991 coal states' mine health, safety, and training conference

The State of West Virginia and the Division of energy as host, wish to invite you to attend the 1991 Coal States Conference to be held from April 9 through April 11, 1991. The theme is "Safety is Lifetime Investment." Subjects will be categorized into three areas of interest to all persons involved directly or indirectly with the mining industry and the knowledge obtained will be of immediate benefit upon return to the job.

The Division of Energy, in cooperation with the Mine Safety and Health Administration, has developed Main Conference Sessions, Display Booths, and Workshops featuring knowledgeable presenters. Because of concurrent workshop sessions, participants can tailor this conference to meet their training needs whether they work for an organization employing 3 or 3,000 workers.

There will be a $50 registration fee. Each participant will receive conference material, refreshment breaks, and lunch on Wednesday. The conference will be held at the Charleston Marriott Town Center, 200 Lee Street East, Charleston, West Virginia 25301, phone (304) 345-6500. Reservations are listed under the Coal States' Conference.

We ask that you pre-register as soon as possible. Registration materials and checks made payable to the Coal States' Conference should be mailed to:

Sandy Gardner
Coal States' Conference
1615 Washington Street, East
Charleston, West Virginia 25311

Pre-registration is not mandatory. Anyone wishing to attend may register the morning of the conference. For further information about scheduled topics or registration, please contact Glen Gainer III or Tony Grbac at (304)348-3500 at your earliest convenience.

Safety: How do you make it work?

Stated very simply; safety in the workplace is most often a reflection of management's opinion of it; employee's attitudes only mirror management's attitudes, if management doesn't consider safety a high priority neither will they. When forced to chose between safety and production, most supervisors and workers will chose production because they know that's what the boss wants.

In order to overcome this, management has to make a clear statement that safety is as important as production and then back it up with actions and policies that prove it. The companies who have succeeded in moving rules and regulations off the printed page and into the daily working and living attitudes of its supervisors and workers have done so by initially emphasizing safety more than almost anything else until everybody understood their seriousness and then it was put on an equal level with production, scheduling, cost analysis, quality control etc.

To bring home their commitment to safety, senior management usually makes safety part of both the supervisors' and workers' performance evaluation. They also try to find someway to build accountability into the system. Some accomplish this through supervisor completed "safety audits" submitted monthly or bimonthly, in which he conducts a thorough inspection and critiques unsafe worker behavior or actions. Senior management also supplements this with their own safety inspections on visits to the job site. Recognition, awards, and prizes are often used as additional incentives. Many companies have a safety list which takes priority over regular maintenance scheduling if an employee's safety is at risk.

When safety is a key element in a company's policy accident rates and lost time hours can be reduced significantly, and the company's improved experience modification rate can cut insurance costs substantially. Some of the spin off benefits of an effective safety program are; it tells workers that management is genuinely interested in their well-being and because of that attendance, morale and productivity increase; it also helps the employer retain the best employees because everybody prefers working for someone who cares about them.

In summary, three key factors are essential for safety to work:

1) Commitment from top management felt and understood at every level of the company.

2) Communication from top to bottom about what is wanted, why and what the consequence will be good and bad.

3) Accountability—fix responsibility at each level and set up some simple ways of making sure that responsibility is being carried out.

"Management must care so strongly about safety, that eventually, for everyone in the company, concern for and belief in the safety program become second nature."

Albert T. Davis, Safety Manager., Walsh Const. Co.

The Last Word...

"If you want change, you have to put in your two cents worth."

"Previous appointment: A device used to get rid of a pain in the neck."

"Life is a grindstone. Whether it grinds you down or polishes you up depends on what you are made of."

"Adversity introduces a man to himself."

"Synonym: A word you use when you can't spell the other one."

"The older generation thought nothing of getting up at 6 o'clock in the morning. The younger generation doesn't think much of it either."

"The greatest test of strength is whether you can shoulder another's burden."

"A thousand words will not leave so deep an impression as one deed."

"Close your eyes to the faults of others and watch the doors of friendship swing wide open."

"If you want an accounting of your worth, count your friends."

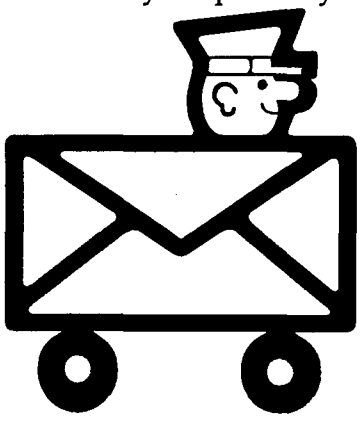
"Liberty is an important lady. If we convince her to abolish freedom for others she may do it for us."

NOTICE: We will welcome any materials that you submit to the Holmes Safety Bulletin. We cannot guarantee that they will be published, but if they are, we will list the contributor(s). Please let us know what you would like to see more of, or less of in the Bulletin.

REMINDER: The District Council Safety Competition for 1990 is underway – please remember that if you are participating this year, you need to mail you quarterly report to:

Mine Safety & Health Administration
Educational Policy and Development
Holmes Safety Bulletin
4015 Wilson Boulevard, Room 531
Arlington, Virginia 22203-1984

Phone: (703) 235-1400



Holmes Safety Association
Officers and Executive Committee
1990-1991

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President	Joe Main	DC	Labor
First Vice President	Ron Keaton	WV	Federal
Second Vice President	Thomas Ward	PA	State
Third Vice President	Dick Machesky	PA	Mgmt
Fourth Vice President	Joseph Forte	PA	Supplier
Secretary-Treasurer	Don Farley	WV	Federal

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

Joseph A. Holmes Safety Association
Awards Criteria

Type "A" Awards - For Acts of Heroism
The awards are medals with Medal of Honor Certificate.

Type "A" - For Acts of Heroic Assistance
The awards are Certificates of Honor.

Type B-l Awards - For Individual Workers
(40 years continuous work experience without injury that resulted in lost workdays)
The awards are Certificate of Honor, Gold Pins and Gold Decal.

Type B-2 Awards - For Individual Officials
(For record of group working under their supervision)
The awards are Certificate of Honor.

Type C Awards - For Safety Records
(For all segments of the mineral extractive industries, meeting adopted criteria)
The awards are Certificate of Honor.

Other Awards - For Individual Workers
(For 10, 20, or 30 years without injury resulting in lost workdays)
The awards are 30 years - Silver Pin and Decal, 20 years - Bronze Pin and Decal, 10 years - Decal bearing insignia.

Special Awards - For Small Operators
(Mine operators with 25 employees or less with outstanding safety records)
The awards are Certificate of Honor.

For information contact: Secretary-Treasurer, Joseph A. Holmes Safety Association (304) 256-3245