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BULLETIN



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MSHA

Mine Safety and Health Administration

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February 1979



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Idle and Abandoned Areas

Today we want to discuss idle and abandoned areas and some of the hazards that might develop in these areas. Nearly every coal mine has working places, entries, sections, or large parts of the mine that are idle and often abandoned for long periods of time. Many such areas are kept well ventilated, examined regularly, and maintained in safe condition. Others, often because they are far distances from active workings or for other reasons, are not visited and examined regularly. Hazardous conditions have developed and have been responsible for a number of serious accidents.

Most of us take for granted that track haulageways are ventilated with intake air and that it is safe to operate electrical equipment on these haulageways to the end of the track. Because we take for granted that track entries having a perceptible movement of air near the mouth of the entry are ventilated properly, we often take electrical equipment to the end of the track without checking when the area was last examined.

Many times, because of large roof falls within the abandoned area, or because of pressure on stoppings which crush out or partly crush a stopping, and for a variety of other reasons, the intake air is short-circuited and does not travel to the other end of the track. Consequently, gas liberated in the area will accumulate and occasionally will collect on track haulageways. Operation of the electrical equipment on the track in such an event ignites the gas and results in local or occasionally in widespread explosions. In many instances, the person operating the equipment and coworker are burned and/or killed.

Furthermore, where idle and abandoned areas are travelable and persons enter therein for any reason, they do leave the track haulageway and have, on occasion, gotten into serious trouble. Many serious incidents have been recorded, showing that, in general, idle and abandoned areas are not examined as carefully or as thoroughly as active workings and that hazardous conditions developing therein are not always found.

Distribution: Underground coal-mining operations

We all know that the same effort is not made to maintain idle and abandoned areas in as safe a condition as is done in active workings.

The Federal Mine Safety and Health Act of 1977, Subpart D, Part 75.314, "Idle and Abandoned Areas," shall be inspected for methane, oxygen deficiency, and other dangerous conditions by a certified person with means approved by the Secretary as soon as possible, but not more than 3 hours before other persons are permitted to enter or work in such areas.

There have been times, and there will be others when it is necessary to travel into an idle, abandoned area for supplies; equipment; or some other reason. It is essential to take suitable safeguards before entering and traveling in the area. Some of the precautions are:

1. A thorough examination for gas and other dangerous conditions should be made before power wires into and in the area are energized.
2. Travel in the area should always be on foot to make such examination; where it might be necessary to leave track haulageways or intake air, frequent gas tests should be made.
3. Never enter such areas alone. Be certain a person with authority knows of your plans and the approximate time you expect to return.
4. If, for any reason, you are required to remove a check curtain or other ventilation control, be certain the curtain or control is replaced as soon as possible.
5. If a dangerous condition is observed, you should retreat immediately to safety and notify the proper authorities of the condition. Do not expose yourself to unnecessary dangers.

THERE ARE FAR TOO MANY WAYS FOR US TO BE INJURED IN OUR REGULAR WORKING PLACE WITHOUT TAKING CHANCES OF BEING INJURED IN IDLE AREAS; THEREFORE, IF YOU MUST TRAVEL INTO ABANDONED AREAS, BE CERTAIN THAT YOU TAKE THE PROPER PRECAUTIONS AND PROCEDURES.



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Hand and Portable Power Tools

Both manually operated and power-driven handheld tools are widely used in mining, but many accidents and injuries have resulted from their improper maintenance and use. Prevention of accidents from the use of all hand and power-driven portable tools is an important part of a safety program.

Many operations accomplished in the past with simple hand-tools are now mechanized; however, because of the rising cost of labor and the slowness of manual labor, portable power-driven tools have replaced many hand operations. As a rule, when power-driven tools replace hand operations, new hazards are introduced, which must be combatted. The personnel must be retrained for the change from hand to mechanical work. Electricity furnishes the power for most small tools and, of course, its use introduces the common hazards of electricity, especially the shock hazard.

Failure to observe one or more of the following safe practices accounts for most of the tool injuries:

1. Choosing the right tool for the job--examples of unsafe practices are: Using a file for a pry, a wrench for a hammer, or a pick for a sledge.
2. Keeping tools in good condition--chisels with mushroomed heads, sledges with cracked handles, and dull saws and cutting tools should not be used.
3. Using tools in the right way--screwdrivers applied to objects held in the hand, two hardened-steel tools struck together, and failure to frame-ground electrical tools are causes of serious injuries.
4. Keeping tools in a safe place--many injuries have been caused by tools falling from overhead, carrying tools in pockets or work clothing and, leaving tools on ledges or travelways.

Control, inspection, maintenance, repair, and instruction in the proper use of hand and portable power tools are necessary to establish and maintain safe tool practices and to overcome the hazards involved. Good performance records should result from observing the following:

1. Using the right kind of tools, whether company- or employee-owned. Supervisors should help employees to select the right tool(s) for each job.
2. Establishing good inspection and maintenance procedures. Employees should be properly trained in maintaining and repairing the tools that they use.
3. Training employees in the correct use of tools and providing high standards of supervision.
4. Providing enough racks, boxes, and sheaths for storing and carrying tools safely; setting up storage controls; and insisting that the workers use the facilities provided.

Tools should not be carried in the hands when ascending or descending a ladder, stairway, or structure requiring the use of one's hands. The free use of both hands is needed in climbing. Tools should be handed from one worker to another and never thrown. Tools not in use should be laid aside in a protected and secure place to avoid being tripped over or falling on persons below.

Generally, in all operations where one metal tool strikes another or where the cutting action of the tool causes particles to fly, eye protection is needed by the tool user and nearby workers who might be injured by flying material.

Sometimes the need for safety goggles is overlooked on such jobs--as cutting wire cable, hand drilling, chipping, driving or removing rail spikes from ties, and removing nails from scrap lumber.

Dust respirators should be worn on buffing, grinding, or sanding jobs, which produce harmful dusts.

Electrical shock is the chief hazard from electrically powered tools. Common accidents are: Flash burns, falls caused by minor shock, and shock resulting in death. Ordinarily these are caused by improper grounding, failure of insulation, or careless handling.

Guards may be adapted to certain power tools (grinders, drills, saws) whether powered by compressed air or electricity.

Pneumatic-impact tools, such as riveting hammers and drills, should be equipped with an automatic cutoff and a clip or tool holder. In addition to safety goggles, the operator should wear safety shoes. Uncoupling a drill from an air line before "bleeding" the line is a common cause of injury.

When a crowbar is needed, use a crowbar and not a makeshift substitute, such as a piece of pipe or a short length of rail.

Jacks should be set on solid footing to avoid slipping either from the footing or the load. Handles should be removed from jacks when not in use.

The screwdriver is probably the most used and abused of handtools. The practice of using screwdrivers for punches, wedges, pinchbars, or pries should be discouraged. A broken handle, bent blade, or dull or twisted tip may cause the screwdriver to slip out of a slot and cause a painful injury.

The handles of all shock tools, such as sledge hammers, riveting hammers, carpenters hammers, and other percussion tools should be securely wedged and suitable for the head.

SELECT THE RIGHT TOOL, USE IT SAFELY, KEEP IT IN GOOD CONDITION, AND WEAR SAFETY GOGGLES WHEN USING HAND OR POWER-DRIVEN TOOLS.

February 1979



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Session LXI

Federal Mine Safety and Health Act of 1977

Sections 303(d) and 303(e)

Preshift and Onshift Examinations

During this session we would like to discuss Sections 303(d) and 303(e) of the Act, Subpart D, or Sections 75.303, 75.304 of the Code of Federal Regulations, which deals with preshift and onshift examinations.

The preshift section contains detailed requirements which must be made within 3 hours immediately preceding the beginning of any shift and before any miner in such shift enters the active working of a coal mine; certified persons designated by the operator of the mine shall examine such workings and any other underground area of the mine.

This is one of the most important parts of the Law, in that you can be reasonably assured that before you enter your work area, a proper examination has been made. The mine examiner (fire boss, section foreman, etc.) is required to examine every working section in the workings and shall make tests in each working section for accumulations of methane and also make tests for oxygen deficiency. He shall examine seals and doors, examine and test the roof, face, and rib conditions in the working section; examine active roadways, travelways, and belt conveyors on which men are carried, approaches to abandoned areas, and accessible falls in such section for hazards; tests by means of an anemometer or other approved device to determine whether the air in each split is traveling in its proper course and in normal volume and velocity; and examine for other hazards and violations of the mandatory health or safety standards.

Belt conveyors on which coal is carried shall be examined after each coal-producing shift has begun. If such examiner finds a condition which constitutes a violation of a mandatory health or safety standard or any condition which is hazardous to persons who may enter or be in such area, he shall indicate such hazardous place by posting a "Danger" sign conspicuously at all points which persons entering such hazardous place would be required

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to pass and shall notify the operator of the mine. Upon completing his examination, the mine examiner shall report the results of his examination to a person designated by the operator to receive such reports at a designated station on the surface before other persons enter the underground areas of such mine work in such shift. Each examiner shall also record the results of his examination with ink or indelible pencil in a book approved for such purpose.

Another equally important section of the Law concerns the onshift examination. The Act requires that at least once during each coal-producing shift, or more often if necessary for safety, each working section must be examined for hazardous conditions by a certified person. All unsafe conditions that are found are to be corrected immediately. If a condition creates an imminent danger, all persons are to be withdrawn from the affected area until the danger is abated (except those persons necessary to correct the condition). The examination shall include tests for methane and oxygen deficiency.

The examinations required by this provision are intended to protect you from hazardous conditions which may develop during any coal-producing shift. The term "coal-producing shift" means any shift during which one or more of the following operations are performed: cutting, blasting, loading, or the hauling of coal from the face areas, regardless of whether the coal is dumped at a tippie.

The following criteria are to be followed when a proper onshift examination is made:

1. The examination as required by this provision should be made by a certified person.
2. Tests for methane should be made with a permissible methane detector, and tests for oxygen deficiency should be made with a permissible flame safety lamp or other approved device.
3. Areas to be examined should include all roadways, travelways, working places, approaches to abandoned areas and pillar lines, machinery, and enough of the surrounding areas to assure the safety of the miners.
4. If, during an examination, conditions indicate that hazards exist and are imminent or a violation of the mandatory health and safety standards exists and if the hazard cannot be eliminated immediately, production activities should cease until such hazard is abated.

5. If a condition exists that creates an imminent danger, all persons shall be withdrawn from the area affected, except those necessary to correct the hazard.

6. The results of these examinations shall be recorded in a book on the surface.

This examination is very important in that frequent examinations and tests are necessitated due to rapid changes in your work area. You should inform your supervisor if any hazards or law violations are observed. Hazards and violations of the Law can lead to an accident.

SAFETY IS THE ETERNAL VIGILANCE FOR THE WELL-BEING OF YOURSELF AND YOUR COWORKER!

Outline

- A. Preshift examination (fire boss)
 - 1. Must be made within 3 hours of working shift
 - a. Examine all working sections
 - (1) For methane and oxygen deficiency
 - b. Examine doors and seals
 - c. Examine and test roof, face, and rib conditions
 - d. Examine active roadways, travelways, and belt conveyors which carry workers
 - e. Examine approaches to abandoned areas and accessible falls
 - f. Test airflow
 - 2. Hazardous conditions found
 - a. Must be reported
 - b. "Danger" sign posted
- B. Examinations after coal-producing shift
 - 1. Belt conveyors carry coal
- C. Onshift examinations (certified person)
 - 1. At least once during coal-producing shift

2. More often, if necessary for safety
3. Correct immediately all hazardous conditions
4. If imminent danger, withdraw all persons
 - (a) Except those necessary to correct condition.
5. If hazard cannot be corrected, all activity should cease
6. Test for methane and oxygen deficiency

D. Coal-producing shift

1. Any shift in which cutting, blasting, loading, or hauling coal from face area

E. Recording

1. Preshift
 - (a) Examiner places initials, date, and time at all places examined
2. Onshift
 - (a) Examiner record results in book on surface

F. Purpose

1. Find any hazards due to rapid change in work area
2. Prevent accidents
3. Safety

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Session XXXIV



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Mandatory Safety Standards, Surface Coal Mines And Surface Work Areas of Underground Coal Mines

Ground Control

Subpart K

Section 77.1000

In today's session we will begin our discussion of Subpart K - Ground Control. We know working in the vicinity of the highwall or spoil pile creates a hazard which is inherent to surface coal mine operations.

Investigation of this hazard revealed that highwall falls, or material falling from the highwall or spoil piles, usually resulted in a fatality. The statistical analysis of accident reports showed that 13 percent of surface mining fatalities and less than one percent of nonfatal accidents were related to highwall hazards. The hazards associated with exposure to the highwall should increase in the future, as new equipment and mining techniques make it economical to strip deeper coal seams, creating higher highwalls. highwalls.

Section 77.1000 - Highwalls, pits, and spoil banks; plans. Each operator shall establish and follow a ground control plan for the safe control of all highwalls, pits, and spoil banks to be developed after June 30, 1971, which shall be consistent with

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prudent engineering design and will insure safe working conditions. The mining methods employed by the operator shall be selected to insure highwall and spoil-bank stability.

The operator shall file a copy of such plan and revisions thereof with the Coal Mine Health and Safety District or Sub-district office for the district or subdistrict in which the mine is located.

The plan should include sufficient information; example:

1. Name, identification number, and location of mine
2. Name and address of company
3. Name of principal officer in charge of health and safety at the mine
4. List of equipment used in pits, on highwalls, and spoil banks
5. A sketch may be used, showing the following information:
 - a. Name of coalbed or coalbeds.
 - b. Height of coalbed--if more than one coalbed being mined, thickness of strata between coalbeds
 - c. General characteristic of the strata; average height of highwall; proposed angle of highwalls and spoil banks
 - d. Width and height of benches if used
 - e. Type of drilling and blasting; proposed angle of boreholes

- f. Methods used to control loose materials from the highwall where necessary
- g. Haulage roads into and out of the mine
- h. Minimum and maximum slope of ground to be stripped; topographical maps may be used if applicable

Outline

- A. Section 77.1000 - Highwalls, pits, and spoil banks; plans
 - 1. Hazards of highwalls
 - a. Highwall falls
 - b. Material falling from highwalls or spoil piles
 - 2. Highwall accidents usually result in fatalities
 - a. Thirteen percent of surface mining fatalities
 - b. Less than one percent of surface mining nonfatal accidents
 - 3. Future increased dangers expected
 - a. Possibility to strip deeper seams
 - (1) New equipment
 - (2) Economical mining techniques
 - 4. Ground control plan
 - a. Be consistent with prudent engineering design
 - b. Will insure safe working conditions
 - c. Mining methods employed
 - (1) Insure highwall and spoil bank stability
 - 5. Operator shall file copy of plan
 - a. Coal Mine Health and Safety District or Subdistrict office
 - 6. Example of suggested information to be included in plan

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ABSTRACT FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC



FALL-OF-GROUND ACCIDENT

General Information: An underground driller was fatally injured in a fall-of-ground accident. One hundred forty-one of the 187 employees worked underground.

Mining is by the room-and-pillar method. Drilling is done with two-boom D.P.M., two-drill mobile Joy jumbos.

The accident occurred while the victim was either observing loose ground in the roof or attempting to take down loose ground with a shovel while standing on the Joy D.P.M. jumbo.

Description of Accident: According to the shift foreman, the victim was to indicate the location of loose ground in the drift on the way to the face, and the foreman was to scale the loose ground. This procedure was followed; and the victim, who was approximately 500 feet ahead of the foreman, stopped and climbed on top of the engine cowl of the jumbo drill to either observe the roof or to pull down loose ground. While the foreman was scaling, he noticed the victim's cap lamp flash a light across the drift. The foreman assumed that the victim was indicating loose ground at that point and continued scaling. He then noticed that the Joy jumbo had not moved and could not see the victim's cap lamp light. He went to see what was wrong and found the victim hanging onto the air and water lines under the 36-inch ventilation tubing. The foreman tried to get the victim to lie down, but the victim complained of severe pain in his back and said his legs felt numb.

The foreman made the victim as comfortable as possible and proceeded to the shaft for assistance and to call for a cage and an ambulance. The victim was placed in a basket and transported on a utility truck to the shaft. An ambulance was waiting when he was brought to the surface. He was taken to the hospital where he died. There was a fracture of the pelvis, and death was attributed to pulmonary embolus secondary to fracture of the pelvis.

Cause of Accident: The direct cause of the accident was the failure to detect, scale down, or to support loose ground.

Distribution: Underground mining operations - noncoal

Recommendations: Ground support shall be used if the operating experience of the mine, or any particular area of the mine, indicates that it is required. If it is required, support, including timbering, rock bolting, or other methods shall be consistent with the nature of the ground and the mining method used.

Men should be trained in the proper methods of testing for, taking down, and supporting loose ground.

Miners shall examine and test the back, face, and rib of their working places at the beginning of each shift and frequently thereafter. Supervisors shall examine the ground conditions during daily visits to insure that proper testing and ground control practices are being followed. Loose ground shall be taken down or adequately supported before any other work is done. Ground conditions along haulageways and travelways shall be examined periodically and scaled or supported as necessary.

A scaling bar of sufficient length to place the user out of danger of falling material shall be provided where manual scaling may be required at a work place.

Picks or other short tools shall not be used for scaling when their use places the user in danger of falling material.

February 1979

MAKE

SAFETY

SHINE

AND

SEVENTH - NINE

SUBMITTED BY: Jerry Penbal, cone operator, Hazelton Shaft Breaker
(member of the Wyoming Valley District Council,
Holmes Safety Association)

Distribution: Underground and surface mining operations - coal and noncoal

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HOLMES SAFETY ASSOCIATION



You Gonna Just Stand There?

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coal and noncoal

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HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

F R O S T B I T E

Symptoms, Prevention, and Cure

If you venture out into bitter cold this winter without taking proper precautions, you may get frostbitten. What's worse, you may not even be aware of it until the condition is quite serious. Frostbite is the most common injury resulting from exposure to cold temperatures. It results when crystals form in the fluids and underlying soft tissues of skin.

Just before frostbite sets in, usually without painful symptoms, the affected skin is often slightly flushed and glossy in appearance. As it develops, the cold part changes to a white or greyish yellow and feels intensely cold and numb. Prevention is the best protection. Wear warm clothing and don't stay in the cold for long periods. Cover head, face, hands, and feet well. Keep clothing dry.

If symptoms appear, go indoors immediately. Protect frozen areas from further injury by covering with extra clothing, get a drink of warm, nonalcoholic beverage, rewarm the frozen part by immersing it in warm, not hot, water. Get medical attention immediately. Do not apply a heat lamp or hot water bottles. Do not bring the affected part near a hot stove or fire. Do not break any blisters that form. If the affected area is the feet, do not walk for several hours after thawing.

Distribution: Underground and surface mining operations -
coal and noncoal



HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

THE LAST WORD

"February"

In the old Roman calendar, February (from february, meaning "to purify"), the second month of the year had 29 days. It was robbed of a day to make August, named in honor of Emperor Augustus, as long as July, which had been named for Augustus' predecessor, Julius Ceasar. In leap year, February recovers its 29th day.

The 14th of February is St. Valentine's Day; a day dedicated, as everyone knows, to lovers and birds. Once more to find its origin we have to go far back in time before the Christian era. In ancient Rome, love feasts were celebrated in February, and at the feasts it was the custom for young, unmarried men and women to draw lots for their future partners. Later, Christian priests, finding that they could not stamp out the old heathen ways, dedicated the feasts anew to a Christian saint. They chose St. Valentine, not because he had any special connection with lovers, but simply because the date of his martyrdom, during the third century A.D., happened to fall in mid February, just when the love feast celebrations reached their height.

We do not have to draw lots to be partners in the promotion of safety; the preservation of our lives has forced us to be such. Partners, whether in marriage or in the promotion of safety, require patience and understanding for maximum success.

***** Sneaker *****

Comes the time to be on guard against that tricky, treacherous menace-- carbon monoxide gas. You can't see it, you can't smell it, and you may not even feel its effects until too late. Don't let it sneak into your vehicle and trap you during the winter.

Speaking of Safety

Accident prevention is thinking and acting safely, regardless of whether you are being observed, because it is good common sense.

The average taxpayer is rapidly becoming the first of America's natural resources to be exhausted.

If we keep going deeper in the hole, our national emblem may be the mole.

Every man is entitled to choose his own form of government--blonde, brunette, or redhead.

"Doc, tell me in plain language exactly what's wrong with me?"

"You're just lazy," the doctor replied.

"Now," said the patient, "give me the medical term to tell my friends."

----- QUIPS -----

Why worry about what other people think of you unless you have more confidence in their opinion than your own.



Make sure all parts of the exhaust system are in nonleak condition.

Better have a little ventilation in the vehicle at all times.

If you do begin to feel drowsy or dizzy, get a load of fresh air.

5000-22
(Rev. 12-78)



HOLMES SAFETY ASSOCIATION
MEETING REPORT FORM

For the month of _____

TOTAL meetings held this month _____

TOTAL attendance this month _____

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

(Signature)

(Telephone No.)

(Title)

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