HOLMES SAFETY ASSOCIATION

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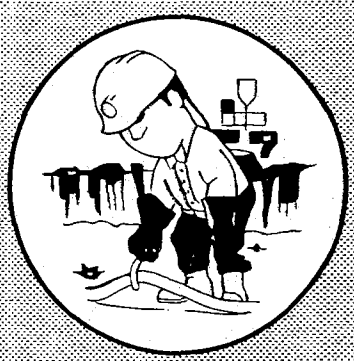
SAFETY EFFICIENCY

MINERAL INDUSTRIES



United States Department of Labor

MSHA

Mine Safety and Health Administration

CONTENTS

August 1979

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

✪✪✪ UPDATE ✪✪✪

Health and Safety Training and Retraining of Miners

Over the past several months, MSHA has received numerous inquiries regarding application of the miner training regulations to specific types of circumstances and categories of personnel present at mine sites. Individual responses have been provided to these inquiries. This bulletin represents a synopsis of the official MSHA interpretation with respect to how the agency intends to implement these regulations in particular instances. Interpretations from sources other than MSHA should be disregarded if they conflict with the information given here. Inquiries on individual cases should be directed to the local training centers.

To reiterate MSHA's intentions regarding hazard training where it is required, the training should be:

1. Mine specific, that is, explain the hazards the person may encounter at a particular mine;

2. Generally conducted at the specific mine each time a person enters a different mine.

It is contemplated that this should not generally require classroom instruction and may often consist of an instructional sheet distributed to the worker containing a "checklist" of hazards.

Construction Workers

1. Surface construction workers and shaft and slope workers will be covered under Subpart C of Part 48. This Subpart has not yet been proposed or promulgated. Until Subpart C becomes a final rule, there is no requirement that these construction workers receive any training, including hazard training.

2. Workers performing construction or repair of underground facilities while the mine is operational are covered by Subpart A of Part 48, Training and Retraining of Underground Miners, and must be trained accordingly.

Distribution: All mining operations

Students

1. Students on a field trip are not covered by the regulations. However, it is expected that they will be accompanied by experienced miners and will be provided appropriate safety equipment.

2. Students who are not purely short-term visitors but whose work may require their presence at the mine for more than one day must receive hazard training.

Scouts

Boy Scouts, Girl Scouts, and members of similar organizations who visit the mine are not covered by the regulations. See Students, above.

Employees of Equipment Manufacturers

1. Employees who are short-term visitors to the mine and whose activity is limited to observation of equipment in use are not covered by the regulations. It is expected that such persons will be accompanied by experienced miners at all times.

2. Employees who are on the mine site in a service or maintenance capacity must receive training. If the specific job will not entail extended exposure to hazards at the mine, they need only receive hazard training. If the job assignment of a service or maintenance worker exceeds five consecutive days at a particular mine, comprehensive training must be given -- either new miner training or newly employed experienced miner training, as appropriate.

3. Manufacturers' field representatives, such as sales representatives and delivery personnel, must receive hazard training as a minimum. If they are regularly exposed to mine hazards, they must receive comprehensive training - either new miner or newly employed experienced miner training as appropriate.

Fishermen

Fishermen are not covered by the regulations as long as their activities are not related to and do not affect the mining operation.

Pickup and Delivery Drivers

Persons coming onto mine sites to pick up mined materials or to deliver supplies and who do not leave their vehicle are not subject to the training regulations. If they leave their vehicle and are exposed to mine hazards, they must receive hazard training.

Labor, Management or Government Officials

1. Labor, management, or government officials visiting the mine site are not subject to the training regulations.

2. Contractors doing work for the government which requires their presence at the mine to observe conditions or to collect information must receive hazard training.

Other Visitors

Short-term visitors to mine sites, such as artists or rock collectors, are not covered by the regulations. However, it is expected that they will be accompanied by experienced miners and will be provided appropriate safety equipment.

August 1979

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Beat The Heat!

How hot does it have to get before the heat begins to get you down? Experts say that when it goes above 86 degrees, workers are apt to slow down.

And, do you know that whether you live in Dallas or St. Paul, you can expect hundreds of daytime hours each year when the mercury goes surging past that 86-degree mark! Now, instead of just talking about the weather like most folks do, let's do something about it.

Of course, you cannot put a shade on the sun or whip up a cool rain when things get too hot, but there are some things you can do to make those dog days more bearable.

Here are some simple ways to beat the heat--

Drink plenty of liquids, so you will have plenty of moisture available for sweating. Remember, evaporation of perspiration off the skin is the main feature of the human body's built-in cooling system.

Avoid alcohol and ice water. Instead drink cool water and citrus fruit juices. Eat vegetables and easy-to-digest foods.

Increase your salt intake to replace the salt lost through sweating. Should the body lose too much salt, heat sickness may result.

Dress for the heat. Wear loose clothing that lets the air circulate.

Remember, when the temperature rises, people do not get hot on the outside alone. They get burned up inside too. The heat makes them more irritable and critical. They get hot under the collar and feel the need to blow off steam. The excessive heat makes it hard to concentrate on the work at hand and results in an increased sense of fatigue. As you might expect, these emotional effects of heat are not good for safety. They result in a worker being more prone to accidents.

When the temperature goes up outside, make a special effort to keep your temper down inside. Avoid things that may irritate you. <u>You can beat the heat by playing it cool.</u>

(Underground and surface operations)

August 1979

Session XXXVII

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

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

Ground Control

Subpart K

In today's session we will continue our discussion of the Safety Standards of Subpart K. We will begin with drilling. Equipment that is to be used during a shift shall be inspected each shift by a competent person.

1. Equipment defects affecting safety shall be reported.

2. Equipment defects affecting safety shall also be corrected before the equipment is used.

3. When a drill is being moved from one drilling area to another, drill steel, tools, and other equipment shall be secured and the mast placed in a safe position.

4. When a drill helper is used, his location shall be made known to the operator at all times during the moving of a drill.

Regulations to be complied with during drilling operations are:

1. While in operation, drills shall be attended at all times.

2. Persons shall not drill from positions that hinder their access to the control levers, from insecure footing or staging, or from atop equipment not designed for this purpose.

3. Persons shall not be on a mast while the drill bit is in operation, unless a safe platform is provided and safety belts are used.

4. Drill crews and others shall stay clear of augers or drill stems that are in motion. Persons shall not pass under or step over a moving stem or auger.

5. In the event of power failure, drill control shall be placed in the neutral position until power is restored.

6. When churn drills or vertical rotary drills are used, drillers shall not be permitted to work under suspended tools;

Distribution: Surface coal-mining operations

when collaring holes, inspecting, or during any operation in which tools are removed from the hole, all tools shall be lowered to the ground or platform.

Safety standards pertaining to collaring holes are:

1. Starter steels shall be used when collaring holes with hand-held drills.

2. Persons shall not hold the drill steel while collaring holes, or rest their hands on the chuck or centralizer while drilling.

Other safety standards are:

1. Drill holes large enough to constitute a hazard shall be covered or guarded.

2. Persons operating or working near jackhammers or jackleg drills or other drilling machines, shall position themselves so that they will not be struck or lose their balance if the drill steel breaks or sticks.

3. Air shall be turned off and bled from the air hoses before hand-held air drills are moved from one working area to another.

August 1979

Session LXIII

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Federal Mine Safety and Health Act of 1977

Section 303(h)

Part 75.307 of the Code of Federal Regulations

Methane Examinations at the Face

We are continuing our discussions on the various types of examinations that are required to be made under the Federal Mine Safety and Health Act of 1977.

In this session we would like to discuss the examinations that are made for methane during the working shifts. This section of the Law states that, before electrical face equipment is energized at the start of each shift, tests for methane must be made at each working face by qualified persons. If 1.0 volume per centum or more of methane is detected, electrical equipment shall not be energized, taken into, or operated in, such working place until the air therein contains less than 1 percent of methane. Also contained in this provision is the requirement that examinations for methane shall be made during the operation of such equipment at intervals of not more than 20 minutes during each shift, unless more frequent examinations may be required if justified by the amount of liberation of methane during mining operations.

The preshift examination requires that an examination for methane be made 3 hours prior to the beginning of each producing shift in each working place. It has been proven that mine conditions change rapidly and a methane buildup could occur within the 3-hour time period that may elapse between the preshift examination and the time of arrival on the section at the beginning of the coal-producing shift.

The phrase, "before electrically operated equipment is energized," applies to any electrical circuit inby the breaker station, power distribution center, or other source located in the working section. This is also interpreted to mean that such equipment must be deenergized during idle periods, such as between shifts unless the equipment is attended.

Examinations for methane can be made by qualified persons. There are normally machine operators or others who are qualified

Distribution: Underground coal-mining operations

to use methane detectors. A methane detector must be used as the primary device for making these examinations. Tests for methane made with a flame safety lamp are not acceptable as valid gas tests. Tests for oxygen deficiency can be made with a permissible flame safety lamp or other approved device.

This is a very important part of the Law and requires participation and involvement by all of us to assure that methane does not build up to a dangerous concentration.

August 1979

ABSTRACT FROM FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Fatal Haulage Accident

General Information: A truck driver was killed when the haulage truck he was operating overturned and pinned him underneath. The victim had a total of 6 years mining experience; 2 years of this time as a truck driver. The vehicle involved in the accident was a 1973 model, 35-ton-capacity, end-dump, Euclid truck which was equipped with rearview mirrors on both sides, safety belts, and had no known safety defects.

At the time of the accident, stripping of material was being performed as a preliminary to the construction of an inclined conveyor system into an old quarry. The material was being removed from the top of the southeast highwall, hauled by truck about 0.2 mile and dumped along the southwest highwall.

There were numerous large boulders at the actual dumping site. The ground surface was wet and soft due to freezing and thawing.

Description of Accident: After a short safety meeting, at which dumping safety was discussed, the victim drove his truck from the shop parking lot to the stripping area. He hauled two loads of material to the dump without any known difficulty. However, on his third trip, he apparently changed his routine and stopped at the entrance to the dump area, turned around and backed about 120 feet into the edge of the previously dumped material. The right rear wheels of his truck rolled up onto a large boulder. The truck became unbalanced and turned over on its left side.

The victim had been observed backing his truck with the left door open and looking back into the dump area from the door on the morning of the accident and on several previous occasions. It was thought that he was doing this on the occasion of the accident and failed to see the large boulder. It was also speculated that he was backing at a faster than normal speed because of the soft ground conditions. The victim either fell or jumped from the truck and the truck fell on top of him. Evidence indicated that the provided seat belt was not being used.

Distribution: Surface mining operations; noncoal

The bulldozer operator working in the dump area saw the overturned truck, stopped his dozer and ran over and saw the condition of the victim. He left the area to obtain help. The ambulance arrived in a few minutes along with the rescue squad who examined the victim but could not find a pulse. The victim was moved to the hospital and pronounced dead by the county coroner.

Cause of Accident: Direct cause of the accident was failure on the part of the victim to see the boulder which caused the truck to overturn. A contributing factor was the driver backing while looking out of the open door rather than using the rearview mirrors. A further contributing factor was the failure of the victim to use the provided seat belts.

August 1979

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WORKING AROUND STORAGE BINS - PART 1

We would like to talk briefly about another important function. This job is not relatively new and has serious problems, some more pronounced than others.

Each year a number of workers die in storage bins. Some of these employees are new on the job, but often they are supervisors or employees with several years experience. Each worker who dies in a storage bin probably has some time to think and panic helplessly knowing he will die by suffocation. It is a terrible way to die.

Familiarity with hazardous locations breeds contempt for the hazards, and innocent-looking storage bins are no exception. Storage bins are killers. They will go on killing unless, starting today, they get the respect they demand in return for your life.

In order to help you stay alive, I will talk about some of the ways people have been killed by storage bins. Some of the hazards may be things you have not considered. In talking about the product inside bins, I will use the word material instead of sand or clay or ore or coal. It does not much matter what is inside--it all works about the same.

Employees have bet their lives and gone inside storage bins when nobody else knew where they were. Those employees bet their lives that they could get in and out safely--some of them lost the bet. They suffocated when someone else, who did not know they were inside, dumped material in on top of them, or pulled them and material out through the bottom, or material caved in on them. Often the body of a worker inside does not come all the way out through the draw hole at the bottom. The legs may protrude while the body blocks the opening. The hole often has to be cut larger so the body can fall free.

Anytime the lives of people are at stake, it is serious business. Let's take a good look at storage bins and conditions associated with them.

What if an employee is <u>not</u> authorized to go inside a storage bin? If something happens so the bin is not operating as it should, what should the employee do? One thing he cannot do is to worry about personally getting production flowing again.

(For surface and underground operations - noncoal)

There are only two safe alternatives: 1) follow company policy in such cases, or, if no procedure has been established; 2) get hold of an authorized person as quickly as possible.

How can a company make sure that this will be done? Well, one thing they can do is lock the door to all bins and make certain that only authorized people have keys.

Okay, what if an employee is authorized? For openers, it would be best if no one ever went inside a storage bin. Certainly, a single authorized employee is not enough. No fewer than two authorized employees are required for safety. The Mine Safety and Health Administration has a mandatory standard which requires a safety belt, life line, and a second worker in attendance for entrance to a storage bin. A worker should not be authorized until he understands the need for the standard. Also, your company should--if they want to keep you alive--establish a procedure to inform all other employees who could--by any stretch of the imagination--be apt to pull the bin or dump anything into it.

Part 2 will follow next month describing the hazards of storage bins, hoppers, and surge piles.

August 1979

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

PART 2 - LIFTING AND HANDLING MATERIAL

In our previous safety message, we listed some of the "dos" and "don'ts" of safe lifting and handling material. Today we will continue our list.

Mistakes	Correct Actions
1. Failure to grasp load in proper place for size or shape of load.	Inspect the object to decide how it should be grasped.
2. Failure to grip load securely.	Grip object firmly.
3. Failure to consider the time the grip would have to be maintained.	Consider the distance the load must be carried so that you can rest if necessary rather than lose your grip.
4. Shifting grip after lifting load.	Rest the load on a support while shifting grip.
5. Twisting the body instead of turning whole body when changing directions.	Lift the object to carrying position and turn your whole body.
6. Failure to lift gradually, jerking load.	Lift load gradually and do not tug or jerk at a heavy load.
7. Failure to properly place object when setting it down.	Place an object so that it will not fall off its support or roll over.
8. Failure to reverse proper lifting procedure when setting load down.	Reverse the lifting procedure essentially in lowering an object to the floor or ground.
9. Trying to "show off" to someone by lifting a heavy load.	Use common sense. Be a show-person, not a "show off."
10. Failure to have a leader call signals in group lifting.	In group lifting, appoint a leader to give signals and follow their instructions.

Mistake	Correct Action
11. Too much difference in size of persons lifting the load.	Team up with a person of similar size.

August 1979

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Jackleg-Drill Operator
Part III

Today we will bring to a close our discussion on the hazards and safety precautions while working and running jackleg drills.

Some mines have an apprentice training system. Trainees are sent to different locations in the mine to learn jackleg drilling and other work performed by underground miners. Some contract miners believe that this system is not equitable where they are concerned. For example, they must give the trainee a percentage of their contract pay, and training the new operator slows down their contract operation. They believe, in effect, that as contract miners, they are paying the company to provide training to new employees hired by the company. It would seem more equitable to them if the company would pay an additional sum to them for providing training. Other mines provide training classes in drilling and other work. However, at present, most workers have learned their skills through observing experienced miners, and through actual operation of equipment.

One miner believed that text books of general scope should be available to miners. The books should provide basic information on a miner's skills and functions. Much of the material would have to be designed for individual locations. Information on reading ground is something that is more art than science and can be learned only from experience at particular locations. Some professional miners believe that their wide scope of skills are not properly recognized outside the mining community.

Most experienced miners believe the jackleg drill is a well-designed tool for the work it is required to do. However, it was suggested that leg design be changed so that the leg housing would push against the ground instead of the small stinger. Where the housing was against the ground, the leg would push the drill up from the housing. The present housing is against the drill and the leg pushes down. With the relatively larger housing on the muck, it would not sink in and get stuck as the present leg sometimes does.

Maintenance on jackleg drills was considered generally good. The only problems cited were those where drills were not adequately repaired because (apparently) drill repairers were not told what repair was needed. A tag system could correct that problem. Also, control valves were sometimes put on in reverse. When that occurred, a machine would lower when the lever was pushed in the direction that should extend it.

Distribution: Underground mining operations - metal and nonmetal

Hazards mentioned with regard to running jackleg drills included the following:

1. An operator should never stand in front of an operating drill to clean up or for any other reason.

2. Operators should not wear knit gloves that can be caught in the chuck. If an operators' hand is caught, the hand and arm will be wrapped around the chuck before the operator has time to turn off the drill. For the same reason, many miners do not steady the steel with a gloved hand because any jagged edges of drill steel could catch the glove and twist the hand around the steel. Also, for a similar reason, rings should not be worn, nor ragged clothing that can be caught by moving parts of the drill.

3. Miners must be alert to the possibility that drill steel can break. They must also stay in the clear of the suddenly extended leg when a steel breaks and the drill falls. Especially in ravelly ground, miners must insure that the steel does not bind, causing it to twist the machine. Where steel is locked in a hole, the entire machine can start to spin, wrapping up anything in its way.

4. A jackleg operator should not stand on the handle on the leg for more pressure or put excessive body weight on the drill. Extra weight can break the steel, bind the steel in the hole, or bow the steel which may cause the machine to heave the operator against the back. It is essential that jackleg-drill operators know that proper leg angle and leg pressure are the secret to operating a jackleg drill.

5. Jackleg-drill operators should, through the application of low air pressure in a safe location, determine whether the machine is operating properly. Reversed control valves are an invitation to the operator to get confused and move the machine down when he intended for it to go up, and vice versa. Reversed controls are especially hazardous in a raise.

6. Some machines have a twist handle for applying air to the drills and the handle is flat against the machine. This location of the handle can cause the operators' hand to be caught between the handle and the leg. Control handles should angle up from the machine for hand safety.

7. Most of the miners believed that hurrying to complete a shift and inexperience were the probable basic causes of most injuries.

The Last Word

August 1979

SAFETY IS A LIFETIME JOB

There can be safety programs for years. The plant can be covered with safety posters. Machinery can be safely guarded. We can all be shown the safe way to do our jobs. But none of these things will make us accident free if we don't want to be. It is up to us. We must accept responsibility for our own safety and not depend too much on machine guards and our fellow workers.

Nearly everything we possess is some way connected with our ability to earn a living. The plant safety program helps us to keep on guard so we can protect that ability. By working safely we give ourselves security.

Accidents cost our company money. They cost us workers money too. No compensation check is as big as a pay check. Just imagine how tough, how impossible it would be to pay bills, to educate children, to buy a home with nothing to rely on but compensation checks.

Accidents cause inefficiency too. You cannot have a smooth operating plant when accidents keep interrupting the flow of work, taking skilled and well trained people off the job.

The safety program helps us all stay on the job. That means more production and more job security.

Wrong Tune

One of the guests turned to a man by his side to criticize the singing of the woman who was trying to entertain them.

"What a terrible voice! Do you know who she is?"

"Yes," was the answer. "She's my wife."

"Oh, I beg your pardon. Of course, it isn't her voice, really. It's the stuff she has to sing. I wonder who wrote that awful song?"

"I did," was the answer.

HE SHOULD KNOW BETTER

A safety director was walking away from a shop after giving it a thorough inspection. He was looking over the notes he had made when he tripped and broke his arm. Lesson to be learned - reading and walking don't go together.

THE LAST WORD

America is the only country where it takes more brains to make out income tax returns than it does to make the income.

Why is it some girls will scream at the sight of a mouse and then climb in the car with a wolf?

A stingy husband, while out of town, sent his wife as a present, a check for a million kisses. The wife, a little annoyed, sent back a post card: "Dear Jim: Thanks for the birthday check. The milkman cashed it for me this morning."

"Dad, I'm in love with a girl."
"Son, you couldn't have made a better choice."

Little boys who are told they are getting too big for their britches must wonder about their mothers in stretch pants.

Wife to husband as they leave party: "Just because I'm a pound or two overweight - must you keep referring to me as a barrel of fun?"

We've finally figured out what doctors scribble on prescriptions to druggists: "I've got my $25--he's all yours."

By the time parents stop objecting because their children don't turn out the lights, they start objecting because they do.

GPO 851-985

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(Rev. 12-78)

United States Department of Labor
MSHA
Mine Safety and Health Administration

HOLMES SAFETY ASSOCIATION
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For the month of ______________

TOTAL meetings held this month __________

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