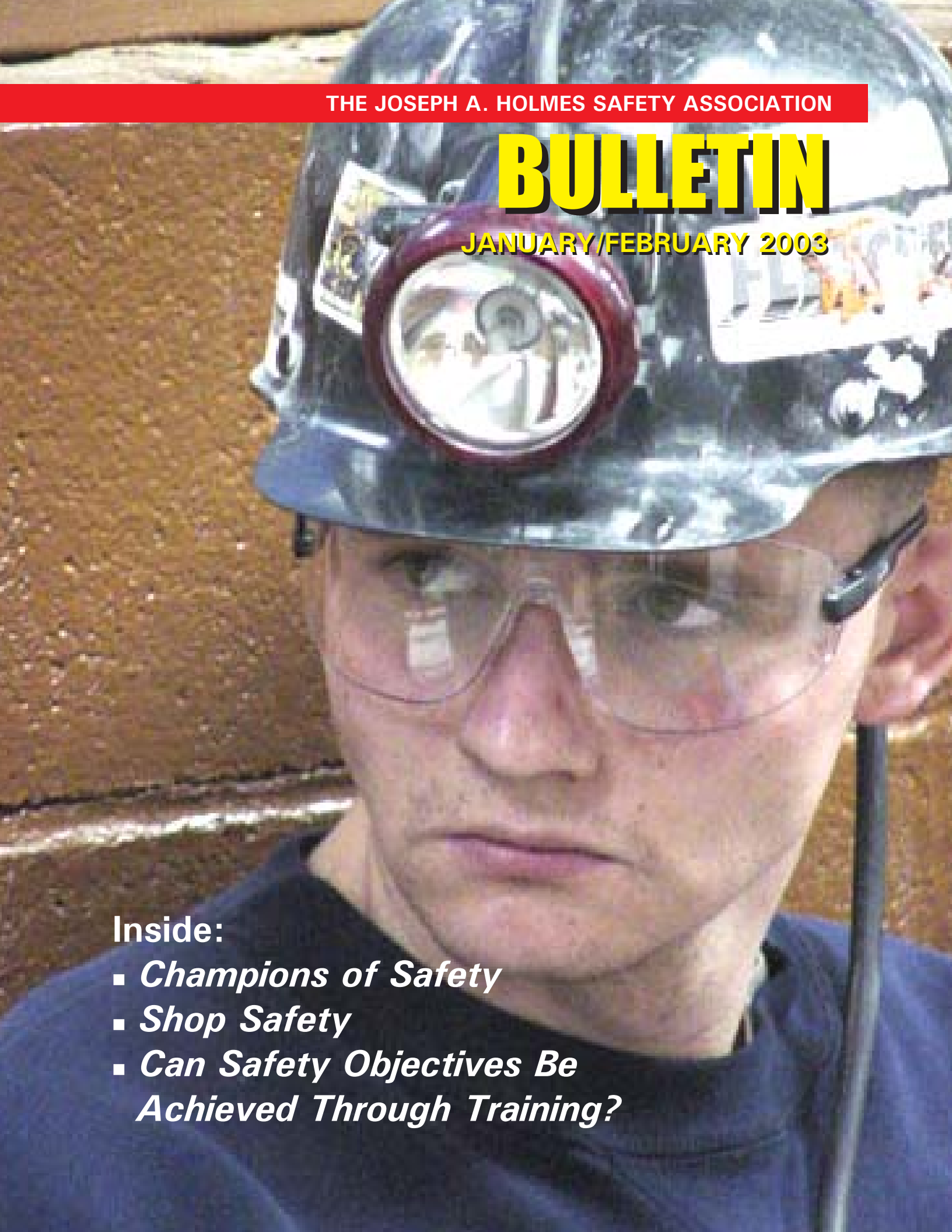

THE JOSEPH A. HOLMES SAFETY ASSOCIATION

BULLETIN

JANUARY/FEBRUARY 2003

Inside:

- *Champions of Safety*
- *Shop Safety*
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Contents

The Joseph A. Holmes Safety Association Bulletin contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters, and other health and 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. For information visit the MSHA Home Page at www.msha.gov.

Please Note: The views and conclusions expressed in Bulletin articles are those of the authors and should not be interpreted as representing official policy or, in the case of a product, representing endorsement by the Mine Safety and Health Administration.

Cover page: Photograph on the cover taken at the Newton Mine, Marmet, West Virginia, by the AVMDB Graphics Section. If you have a potential cover photo, please send an 8"x10" print or digital image on disk at 300 dpi resolution to Donald Starr, Joseph A. Holmes Safety Association Bulletin, National Mine Health and Safety Academy, 1301 Airport Road, Beaver, West Virginia 25813-9426.

Feature Story

Champions of Safety in the Mining Industry

The Sentinels of Safety program is jointly sponsored by the Mine Safety and Health Administration and the National Mining Association. The purpose of the Sentinels of Safety competition is to recognize the mines which have the best safety records in the country.

Awards are presented to operations in eight different types of mining: underground coal, surface coal, underground metal, underground nonmetal, open pit, quarry, bank or pit, and dredge. The mines' outstanding safety record is recognized by a bronze trophy.

The Sentinels of Safety trophy, created in the 1920s by Begni Del Piatta, an Italian sculptor, portrays a woman holding a child. The base has an engraved plate showing the type of mining and the winning mine's name. The winning mines keep the trophy for a year after which they receive a replica trophy as a memento of their achievement.

The winners for 2001 are:

Underground Coal Group – Deep Mine #30, Paramont Coal Corporation, Dante, VA; 175,582 hours worked.

Surface Coal Group – Black Thunder Mine, Thunder Basin Coal Company, LLC, Wright, WY; 1,247,939 hours worked.

Underground Metal Group – Young Mine, ASARCO, Inc., Strawberry Plains, TN; 223,890 hours worked.

Underground Nonmetal Group – Weeping Water Quarry, Martin Marietta Aggregates, Weeping Water, NE; 130,287 hours worked.

Open Pit Group – Phelps Dodge Sierrita, Inc., Phelps Dodge Mining Co., Green Valley, AZ; 454,936 hours worked.

Quarry Group – Imerys Gantts Quarry, Imerys Carbonates LLC, Sylacauga, AL; 212,051 hours worked.

Bank or Pit Group – Arena Plant, Hanson Aggregates South Central, Altair, TX; 132,565 hours worked.

Dredge Group – Briggs Plant, Fordyce Ltd., Victoria, TX; 228,816 hours worked.

Dave Lauriski, Assistant Secretary of Labor for Mine Safety and Health praised the winners as they received their awards. He said, the "Sentinels of Safety award winners demonstrate that the mining industry can be a safe industry – and is in fact safer than many people realize. Few people know the exemplary manner in which work is done in mines like these. He went on to say that the "Sentinels of Safety winners demonstrate what it takes to achieve an injury-free work record. It is a demanding effort. This achievement demanded, first of all, recognition of safety as a value. Then it demanded planning. It demanded knowledge, experience and skill. It demanded daily and hourly vigilance. And it demanded teamwork by everyone, management and miners. The result deserves our respect and honor for the achievement and all that went into it."

For more information on the Sentinels of Safety program, visit the MSHA website at http://www.msha.gov/awards/2002sebt/sentinelrules.htm

Shop Safety

By: Steve Hoyle

Shop safety is an important part of any mining operation. A shop is a busy area with many potential hazards that could lead to accidents. Examples of some shop-associated accidents include: slips, trips and falls, being caught between or struck by moving equipment, or being struck by falling objects. You can probably think of lots of other possible hazards or dangerous conditions.

Studies show that hazards change almost daily in a shop setting. Why is this? Well, when you think about it, just about every day, a shop crew

- Works on various kinds and pieces of equipment
- Uses different tools and
- Performs diverse tasks

What can you do to reduce hazards and prevent accidents at your shop?

Housekeeping

Safety begins with housekeeping. Take some time to look around the shop at your mine. What do you see?

- Are floors solid?
- Are floors clean and dry?
- Are tools and equipment lying around?
- Is there trash or debris all over the place?
- Is material stored as soon as it is received or is it left lying around in the shop or on the loading dock?
- Can miners possibly be cut by sharp edges, nails, or fasteners?
- Are hazardous materials, compressed gas cylinders, and other flammable materials properly stored?
- Is fire fighting equipment accessible?
- Are power cords in good shape?

Did you see any of these problems at your operation?

Here are some ideas for dealing with these problems. You may wish to review procedures in safety meetings at your mine.

ALWAYS

- Be sure miners know where and how to report potentially dangerous conditions.
- Make sure miners know about hazardous materials that are used in the shop, their potential dangers, and how to deal with them.

- Clean up spilled fluids and materials right away.
- Properly dispose of trash and debris.
- Keep fire fighting equipment in good condition and accessible.
- Have available the right kind of fire extinguishers for the conditions in your shop.
- Store material so it can't fall on people.
- Remove cutting hazards.

By the way, does everyone have necessary personal protective equipment? Do they know how to use it? Do they use it?

Here are a couple of questions for you to think about. Do you know if the extinguishers in your shop are charged and ready for use? Do you know if the miners have been trained in how to operate fire extinguishers correctly?

NEVER

- Leave tools and equipment in aisles, on floors, or tossed in a corner or on a shelf. Your mother was right – pick it up, and put it back where it belongs!
- Use faulty electrical cords

Materials Handling

Safe materials handling techniques can go a long way toward reducing accidents in the shop. At your operation:

- Are the miners trained in safe lifting and carrying procedures?
- Do miners know how to operate safely the materials handling equipment that they use?
- Do miners demonstrate safe work practices?

(See next page)

If your shop has:

- A conveyor system, do miners know how to work safely around it?
- Cranes, hoists or other lifting devices, do miners know how to work safely around them? Have they been trained in safe rigging and handling techniques? Do they stay away from suspended loads?
- A loading dock, do miners know what to do when they are loading or unloading vehicles? Do they block vehicles against movement?

How can we deal with materials handling problems?

ALWAYS

- Use appropriate personal protective equipment.
- Lift with your legs; not with your back.
- Get help moving heavy or awkward loads.
- Take small steps when carrying a load.
- Face the unloading point – lower the load slowly – bend your knees.
- Make sure equipment operators have training they need.
- Use the right tools for the task.
- Keep away from moving or operating equipment unless it's part of your job.
- Stay away from suspended loads.
- Routinely check to see that machine and conveyor guards are in place.
- Watch for sliding, flying, or falling material.
- Clean up the work area after a job.
- Dispose of trash and debris properly.

NEVER

- Go beneath suspended loads.
- Walk under cranes or forklifts.
- Ride on or crawl over or under a conveyor.
- Wear loose clothing or jewelry around machinery.
- Exceed design limits for tools and equipment.

Materials Storage

Here are some hints for safe materials storage in the shop.

ALWAYS

- Make sure all storage racks and shelves are secure and in good condition.
- Stack materials on a flat base.
- Put heavy objects close to the floor.
- Use proper equipment or stand on a ladder while placing or removing items that are above your head.
- Watch for splinters, nails, sharp edges, or loose fasteners.
- Be careful around plastic or metal strapping; it can snap without warning.
- Protect your hands, eyes, feet and the rest of your body – Use appropriate personal protective equipment.
- Pay attention to your surroundings – watch out for people in the area.

NEVER

- Leave loose packing materials on the floor.
- Stack items so high they block sprinklers.
- Pile materials close to sources of heat or electricity.
- Place items so they stick out into aisles.
- Stand under or beside loosely piled materials.
- Lift more than you can carry.
- Carry more than you can see over.

Summary

Your mine's shop can be a safer area if you make sure that all who work at your mine know and recognize shop-related hazards, and know and understand safe work procedures for dealing with these hazards.

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Can Safety Objectives Be Achieved Through Training?

By David T. Couillard, CMSP

Training is an essential tool for preventing losses from unsafe work, but it is not the magic key to solve every problem. Safe production also requires commitment and leadership from management, work place design that reduces exposure to hazards, clearly communicated rules and policies, and enforcement that is firm, fair, and consistent.

Training, not surprisingly, works best to solve problems caused by a lack of knowledge or skill. Preparing effective training requires us to:

- Clearly define what trainees must know and do;
- Develop measurable performance objectives;
- Teach lessons based on the objectives;
- Provide trainees opportunities to practice; and
- Evaluate knowledge of skills achieved as specified in the objectives, both through feedback and testing during the training period, and later through appraisals by supervi sors on the job.

Training to achieve safety objectives is difficult if safety is a value that is not shared by everyone. Workers who have been trained to perform their jobs safely, but at the same time believe that safety rules are annoying and made to be broken, are likely to disregard their training and put themselves and others at risk.

For example, mobile equipment operators certainly know how to buckle their seat belts, but many of them fail to do so. While operators often claim that the belts are uncomfortable, the real reason for their failure to buckle up is usually that they just don't want to. They have never developed the habit of buckling up, they may never have had an accident, and they may also believe that they would be safer jumping from their vehicles in an emergency than staying in their cabs.

Training can be part of the solution to the seat belt issue, but the objective must be focused on changing the attitudes of equipment operators rather than improving their buckling skills. Lessons with the frank intent to persuade them to change their beliefs about seat belt use can involve role plays, accident case histories, discussions, and testimonials from accident survivors.

Training by itself, however, will never solve this problem. Seat belt use needs to be a condition of employment. Management needs to clearly communicate this policy and enforce it – and it needs to apply to everyone. The quickest way to sabotage safe production is to let management break the rules with impunity.

Another thing that safety training cannot always overcome is work place design. The photograph shows two side-by-side load-out bins. A truck is parked beneath one of them, facing the camera. A conveyor directly behind the bins requires truck drivers to back under the bins to load material. Tape across the entrances to the two load-out areas is there to mark the scene of a fatal accident.

The truck driver died after being run over by a truck that backed into the space under the other load-out bin. The victim was standing

Photo of the side-by-side load-out bins.

outside his truck on the driver's side to activate controls to release material from the bin. He had spent more time than usual outside the truck because material inside the bin had bridged and was not flowing properly.

The plant operator had gone up the walkway access level of the bin to find out why the material had bridged. The victim was standing between the two loading bays when the plant operator saw the other truck backing under the other bin. The plant operator yelled for the victim to watch out, but the right rear dump bed struck the victim. The driver continued backing until he felt the tire hit a bump. He then pulled forward, got out of the truck, and found the victim lying on the ground.

Both truck drivers, the plant operator, and other employees had all received safety training that probably included information about mine traffic hazards and blind spots. But the training had not prevented the accident.

What would have? Perhaps a monitoring system, such as closed-circuit TV, to allow the plant operator to observe trucks being loaded; radios to facilitate communication between the plant operator and truck drivers; and a means for the plant operator to remotely activate and shut off the flow of material. With such a system in place, drivers would not have to leave their trucks during the loading process.

Another potential solution would be to reposition the conveyor to allow trucks to be driven forward to and through the loading bays. The necessity for drivers to back under the bins and leave their trucks to load material created a constant danger of getting caught in another driver's blind spot.

A few years ago, a front-end loader operator at a sand and gravel pit was asked how safety training had helped him to do his job better. After some reflection he said, "It's made me more aware of other people working around me, and the effect we have on each other. Like, I won't load a truck if the driver's not in the cab, and I won't move the loader until I know where that truck driver is."

The front-end loader operator had learned about hazards from his training, and management's commitment to designing a safe work place and enforcing safety rules had made him more inclined to act on that knowledge. So, while training is not the key to solving every safety problem, it is an essential tool for preventing accidents. People need the knowledge and skill to do their jobs safely, but they also need a physical and social environment that encourages them to apply their knowledge and skill to ensure safe production.

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"Thank God and Hard Hats"

by Sherry Day

Photo courtesy of Sherry Day

Mike's hard hat

Mike started working on strip jobs when he was 19 years old. He was raised by his grandparents, who always encouraged him to work hard. Mike also takes pride in keeping his equipment clean. Years ago, when he worked for the Addingtons, the inspectors would show up, and Mike would always receive jackets or stickers for safety and keeping his drill clean. Mike never missed work when he was working on the strip jobs, leaving early and coming in late.

As a young wife, I felt very upset when Mike didn't wear his wedding band to work. However, he explained to me how dangerous it was to wear it. Mike told me about a friend he had who almost lost his finger when his ring got caught on something.

Mike was in a serious accident in 1993 at the UK #2 Job Site of Addington. He was sitting in his drill, drilling beside the highwall. While drilling, a rock fell from the highwall, hitting Mike's cab and pinning him inside the drill. This resulted in head injuries (fractured skull) and shoulder injuries. It became a nightmare for me and my two little children at that time. I believe God gave Mike a second chance but his safety habits sure helped. Mike had his hard hat on, so I give thanks to God and hard hats my children still have a dad!

Mike is still drilling for Easy-buck Corp. (but not on strip jobs anymore), and is the foreman over two big drills at Walker and Hinkle quarries. Mike says that someday he wants to teach safety. For now he is always preaching to his men about safety, telling about his experience of how wearing his hard hat helped save his life.

HISTORY

LESSONS FROM THE BUFFALO CREEK DISASTER

by Cliff Lindsay, Steve Hoyle, and John Fredland

What Happened?

This year is the 31st anniversary of one of the most devastating mining related disasters in U.S. history. On February 26, 1972, a series of coal waste dams located on the Middle Fork of Buffalo Creek in Logan County, West Virginia, failed, killing 125 people in the communities downstream of the dams.

Fine coal waste added to water = black water

A mixture of water and fine particles= slurry

Waste disposal at the site began in the late 1940s as a dry refuse pile. It had been converted into an impounding structure by 1962 to handle deposition of fine refuse, as required by the recently enacted Clean Water Act.

From 1962 to 1972, three dams were built in series in the valley. Each upstream dam was built several hundred yards upstream of the previous dam. When the pool behind Dam No. 1 filled up with fine waste, Dam No. 2 was built right over the top of the waste. This process was repeated with the third dam (Dam No. 3) built over Dam No. 2's slurry pool.

A series of three "filtration" dams were built in the valley between 1962 and 1972. These dams were intended to leak and serve as filters. Black water was pumped into pools behind the dams. The dams filtered the deposits so that relatively clear water could run out their downstream face. None of the structure's outlet works (spillways or decants) were designed or constructed in accordance with any engineering standards. The builders simply end-dumped and shoved loosely compacted layers of coarse refuse across the valley. It was a recipe for disaster as the trio of dams was woefully inadequate to handle runoff from large rainstorms.

WHAT IS AN ACRE-FOOT?

300 acre-feet of water would be: "one acre of area covered by water to a depth of 300 feet", OR "300 acres of area covered by water a foot deep"

Several inches of rain had fallen on Logan County since February 24. By early Saturday morning, February 26, slightly less than 50 feet of fresh water filled the pool of Dam No. 3 above its impounded sediment. The pool was within three feet of the crest of the dam, and ominous cracks appeared. These cracks were a clear indication of the saturation and subsequent destabilization of the structure, but no evacuation order was issued. Dam No. 3 failed at 8:00 a.m., releasing its millions of gallons of water into Dam No. 2.

(See next page)

Dam No. 2 gave way, quickly followed by Dam No. 1, each failure adding more millions of gallons of burden to the monstrous wave of water bearing down on the unsuspecting residents of the countryside and towns below.

It took a little more than 15 minutes. A floodwave of nearly 130 million gallons of water and other material (a total volume estimated to be between 300 and 400 acre-feet) roared down the Buffalo Creek valley at a velocity estimated to be 20 feet per second for its initial three miles.

The floodwave destroyed houses and mobile homes, uprooted trees, and swept topsoil, huge rocks, trucks and cars downstream. Although its velocity gradually decreased as it traveled down the valley, the floodwave caused death and destruction as far as 15 miles downstream of the dam.

The toll was great — 125 people died, and another 1100 were injured. About 550 homes were destroyed, and another 900-plus homes were damaged. Total property damage was estimated at $50 million in 1972 dollars. Today, the property damage would be about $250 million.

Are there dams like Buffalo Creek still in existence?

Since 1972, no one has been killed due to the failure of an impoundment on mine property. There has, however, been at least one partial or near failure every year. Some of these failures were "near misses" as they came very close to causing fatalities. These near misses occurred from a variety of factors such as problems with foundations, decant pipes, and pool perimeters with underlying old mine works. Partial failures have led to hefty fines for environmental damage, and sizeable clean-up costs.

'High-hazard dam'
A dam that would probably cause loss of life if it failed.

Large "high hazard" dams are used at mine operations for waste disposal and for fresh water supply. Some of the impoundments associated with these dams can store many *thousands* of acre-feet of water, sediment, or slurry – up to *10 to 20 times* the volume of material released in the Buffalo Creek disaster.

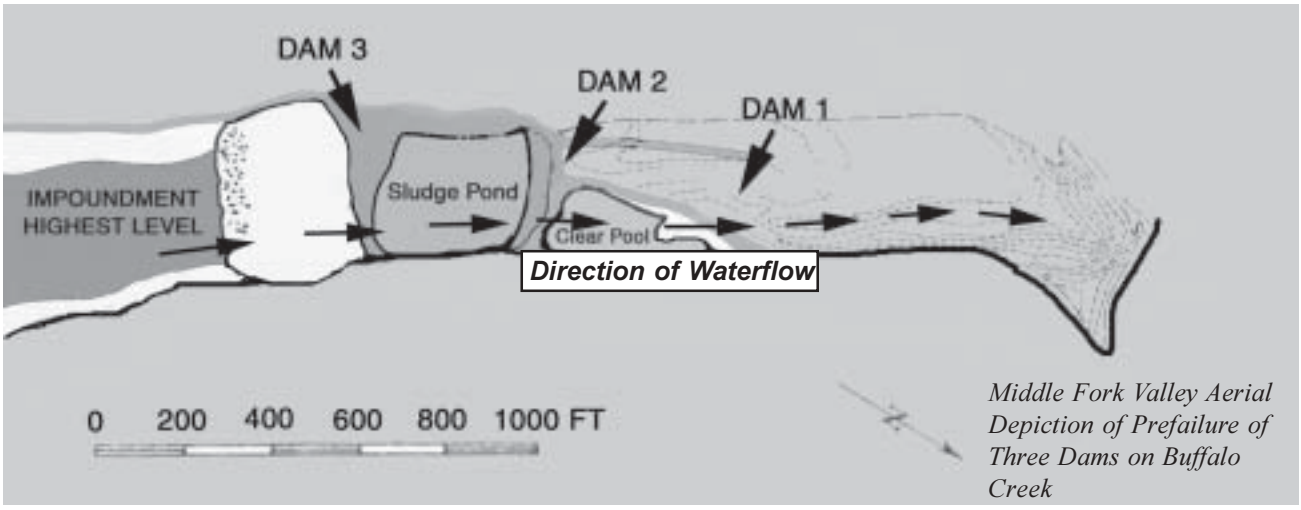
A high hazard dam can be a major liability to a mining company. Consequently, these dams must be respected. Competent engineers who are knowledgeable about current, prudent practice in dam design must develop the plans for large, high hazard dams. Once these plans receive approval, every detail and specification must be followed during construction in order to ensure a safe impoundment. Monitoring of the construction is best accomplished by knowledgeable field representatives of the design firm.

During the life of a dam, it must be inspected at regular intervals by qualified inspectors. Such inspections are an important line of defense, allowing early detection and correction of any problems as they occur. If critical problems are detected, evacuation of persons in accordance with a comprehensive Emergency Action Plan can avert a disaster.

WHAT HAS BEEN DONE TO PREVENT SUCH A DISASTER FROM HAPPENING TODAY?

Immediately following the failure at Buffalo Creek, a Task Force, consisting of representatives from the Bureau of Mines and the U.S. Geological Survey, was formed to study coal waste hazards. Under the direction of the Task Force, the cause of the Buffalo Creek failure was analyzed, an inventory of coal waste impoundments was compiled, and emergency inspections were conducted to identify other potentially hazardous sites. Many coal waste impoundments had to be either modified, or closed down, to eliminate hazardous conditions. This work revealed the inadequacies that existed at that time in the safety of many of the dams constructed by the coal mining industry.

To address this problem, two of the main actions taken by the U.S. Bureau of Mines (the Federal mine safety agency at that time - now MSHA) were to strengthen the regulations governing the construction of dams by coal



Middle Fork Valley Aerial Depiction of Prefailure of Three Dams on Buffalo Creek

Topographical Map Created for 'Analysis of Coal Refuge Dam Failure', Vol. Feb 1973.

mining companies, and to develop in-house technical expertise on impoundment safety.

What changes were made to impoundment regulations?

In 1972, there were no Federal safety regulations requiring that dams on coal mine property be constructed in accordance with approved engineering plans.

The Buffalo Creek disaster ushered in the requirement [77.216(b)] that detailed plans be submitted to and approved by the District Manager before any construction begins on an MSHA-regulated coal impoundment. The approved plan has to be followed to construct a regulated dam.

In addition:

- these dams must be inspected frequently, [77.216-3(a)]
- information on the dams has to be regularly submitted [77.216-4]
- special care has to be exercised if a potentially hazardous condition develops [77.216-3(b)]
- dams have to be abandoned in accordance with an approved plan [77.216-5]

Updated Federal regulations on the construction of dams on coal mine property were promulgated in 1975. The new regulations required that by May 1, 1976, all dams of any significant size or hazard potential have an engineering plan submitted to the District Manager for approval. From then on, before any dam that would fall under the regulations could be constructed, an approval for the design plan would have to be issued by the District Manager. Other requirements in the new regulations included the following:

- Companies had to designate a 'qualified person' in accordance with 30 CFR 77.216-3(a)(4) to inspect the impoundment every seven days for appearances of structural weakness or other hazardous conditions.
- The qualified person had to receive training and pass a test to demonstrate the ability to recognize hazardous conditions, as defined in 77.216-3(g).
- All instruments (such as the "piezometers," which indicate the saturation level inside the dam) had to be read at least every seven days.
- The company needed to establish a plan for the actions to be taken in the event a potentially hazardous condition developed involving the impoundment.
- A registered professional engineer had to certify each year that the impound-

(See next page)

ment was constructed, operated and maintained in accordance with the approved plan.

HAVE THERE BEEN ANY OTHER DEVELOPMENTS?

MSHA Coal Mine Safety and Health, inspectors receive training on what happened at Buffalo Creek, and on what potentially hazardous conditions to look for when inspecting impoundments. Additionally, engineers with background in dam safety have been added to District staffs, and the position of Impoundment Specialist was created. Impoundment Specialists received more in-depth training on dam safety and proper impoundment construction methods. Their primary job is to inspect the impoundments to check for potentially hazardous conditions and to ensure that construction was done according to the site's engineering plans.

In Technical Support, "Mine Waste Branches" were established in 1973 within both the Pittsburgh and Denver Technical Support Centers. The Branches were staffed by mining and civil engineers with training and experience in dam safety. The early work of the Branches involved performing field investigations of existing coal waste impoundments and assisting in the development of the new Federal impoundment regulations. A set of "Design Guidelines" was developed to assist impoundment designers by setting out accepted design criteria for hydrology, hydraulics and geotechnical issues. Technical Support engineers also presented "Impoundment Inspection Training" all over the coal fields so that coal company personnel could become qualified to perform impoundment inspections. In 1978, the "Mine Waste Branches" were expanded to full "Divisions" within Technical Support.

Since 1977, on a nearly annual basis, MSHA has conducted an "Impoundment Specialist Training Seminar" for all MSHA personnel involved in the impoundment program. Through presentation s, by guest and in-house presenters, the seminar is used to review proper inspection methods, discuss impoundment-related problems that have arisen over the previous year, cover technical issues involving dam safety and plan approval, and share information on new construction products and other developments in impoundment safety.

What's involved in the review of an impoundment plan?

Prior to approval, impoundment plans receive a detailed review by engineering personnel, either in the District Offices, or, more commonly, in Technical Support. The purpose of the reviews is to ensure that approved plans meet accepted engineering practice for the construction of safe impoundments. Impoundments with high hazard potential, that is, those located where loss of life or serious property damage is likely in the event of a failure, are designed for the following conditions:

Probable Maximum Flood (PMF): The PMF is the runoff that would occur as a result of the maximum amount of rainfall in a given area. The maximum rainfall, for different lengths of time, varies across the country. In the Beckley, West Virginia area, for example, the probable maximum precipitation for 72 hours is approximately 42 inches of rain. So a high hazard potential impoundment in the Beckley area would be designed to handle the runoff from this much rainfall without the reservoir level rising any closer than within three feet of the crest of the dam, without the spillway discharge causing significant erosion of the dam, and with the embankment having an adequate margin of safety against slope instability at the full reservoir level.

Maximum Credible Earthquake (MCE): This is the maximum level of ground shaking that would be expected at the impoundment site from an earthquake. The level of shaking varies across the country. A high hazard potential coal waste impoundment would be designed to remain stable under the level of earthquake shaking that may occur at its location.

In addition to checking the safety of the

impoundment under these extreme events, the proposed design plan is reviewed to ensure the following:

- Sufficient borings are drilled to investigate the condition of the foundation;
- Adequate testing is conducted to determine the engineering properties of the foundation and construction materials;
- Appropriate engineering analyses are conducted to demonstrate that each component of the impoundment, i.e., the embankment, foundation, spillway, decant pipe, erosion protection, etc., meets acceptable engineering standards for impoundment safety;
- Complete construction specifications are provided; and
- Adequate provisions are included for monitoring and inspecting the impoundment, to ensure that it is constructed according to the plan and that it performs as anticipated.

Additionally, because of recent problems involving slurry impoundments breaking into old mine workings, the issue of underground mining near impoundments receives special attention in the design and review of impoundment plans. Sound engineering measures must be included in the plan to compensate for the potential effects of any nearby mine workings.

What is MSHA's impoundment program today?

In April 1998, a Peer Review was performed of MSHA's impoundment safety program. A Peer Review had been recommended by the Interagency Committee on Dam Safety (ICODS) in their 1996 biennial review of the status of Federal dam safety agencies. The Peer Review was completed by a team of four experienced dam safety engineers; one from the Corps of Engineers, one from the State of North Carolina, one representing private consultants, and one representing dam owners. The overall findings were that MSHA has a well-qualified and dedicated impoundment safety staff, and an acceptable impoundment safety program.

Today, every coal waste impoundment is inspected at least twice a year by MSHA inspectors. The purpose of the inspections is to check for any signs of instability, monitor compliance with the provisions of the approved plan, and evaluate work-site safety practices. Other inspections normally occur to observe critical construction phases, to deal with potential problems, or to check the condition of the site after a heavy rainfall. In addition, Technical Support engineers visit impoundment sites to assist District personnel in these activities, or to gain information needed in the review of a design plan. The MSHA inspections are in addition to the examinations performed every seven days by the coal company's qualified person.

Every plan for the construction of a new impoundment, or the expansion of an existing impoundment, is reviewed by MSHA engineers to help ensure that the plans meet at least minimum accepted engineering standards for dam safety. As slurry impoundments are expanded in size, it's more important than ever that the lessons from Buffalo Creek, and the more recent lessons from problems with slurry breakthroughs, be applied.

Since the impoundment regulations were promulgated in 1975, there have been no incidents of dam failures at coal waste impoundments. The goal of MSHA's impoundment program continues to help ensure that:

- the impoundments constructed by the coal industry are designed to accepted dam safety standards;
- special problems, such as the presence of mine workings near impoundments, are dealt with using sound engineering approaches;
- construction is carried out according to the approved plan; and
- an event like the Buffalo Creek failure never happens again.

(See next page)

If you have questions, or need information or assistance, contact: Kevin K. Wu, Ph.D. P.E., Chief, Mine Waste and Geotechnical, Engineering Division, Pittsburgh Safety & Health Technology Center, at 412-386-6903.

Events

Columbia Maintenance Services Recognized for Safety Record

Columbia Maintenance Services, Black Beauty Mining, Inc., ID No. 12-02076, was presented an award for injury free workhours.

Maintenance work has a higher precentage rate for accidents than most jobs due to the type of work.

These miners had worked seven (7) years, 187 days, from April 1, 1994, to March 6, 2002, a total of 224,709 man-hours without a lost work-day injury.

When asked what they did to have such a great safety record, the miners said, "We use the 'Buddy System.'"

If we are preforming a task, sometimes we don't recognize all of the hazards, we get tunnel vision and only see the job to complete. Other workers in the area not neccessarily connected to the job, may be able to recognize the hazards by looking at the "big" picture. The workers tell the person about the hazards of doing the job in that manner. So the job is completed in a safe way.

The Award was presented at the 2nd Quarter Indiana District Council Meeting held in Vincennes, Indiana.

David Whitcomb, Assistant District Manager, District 8, presented the award to John Saylor, General Manager at Columbia Maintenance Services.

Employees of Columbia Maintenance Services

Joseph A. Holmes Safety Association
Proposed Rezoning

Current Regional Map

Proposed Regional Map

6th Annual Post 5 Mine Rescue Contest

The 6th Annual Post 5 Mine Rescue, First Aid and Bench Contest was held at West Virginia University on August 14 and 15, 2002. Hosts for the contest were the National Mine Rescue Association Post 5, West Virginia University Mining Extension Service, District 3 Mine Safety and Health Administration, and the West Virginia Office of Miners' Health, Safety and Training.

Twelve mine rescue teams from West Virginia, Pennsylvania and Alabama competed on the first day with the top six teams advancing to the finals. The second day of competition had six mine rescue teams, six first aid teams and 15 benchmen.

The results of the contest are as follows:

Preliminary Mine Rescue

1st Place – Consol Coal PA Coal Co. – Bailey Mine

2nd Place – RAG Cumberland Resources, LP – Cumberland Mine

3rd Place – Eastern Associated Coal Corp. – Southern Appalachia

First Aid

1st Place – Eastern Associated Coal Corp. – Southern Appalachia

2nd Place – Eastern Associated Coal Corp. – Southern Appalachia

3rd Place – Eastern Associated Coal Corp. – Federal No. 2 Mine

Bench

1st Place – Larry Hedrick – U.S. Steel Mining Co., LLC – Pinnacle Mine

2nd Place – David Blankenship – Eastern Associated Coal Corp – Southern Appalachia

3rd Place – Randy Bombach – Consol Energy – Enlow Fork Mine

Combination

1st Place – Eastern Associated Coal Corp. – Southern Appalachia

2nd Place – U.S. Steel Mining Co., LLC – Pinnacle Mine

3rd Place – Eastern Associated Coal Corp – Federal No. 2 Mine

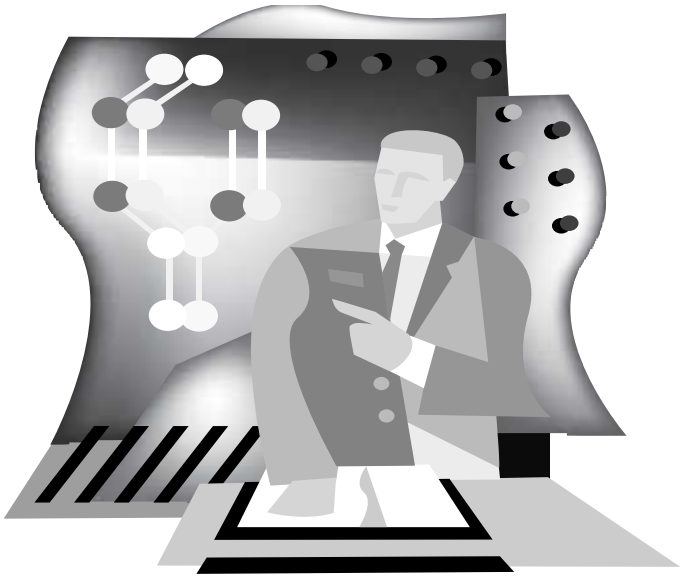
Mine Rescue

1st Place – Eastern Associated Coal Corp – Southern Appalachia

2nd Place – U.S. Steel Mining Co., LLC – Pinnacle Mine

3rd Place - Consol Energy – Enlow Fork Mine

2002 TRAM Training Materials Competition Winners



The 2002 TRAM Conference/National Mine Instructors Seminar was held at the National Mine Health and Safety Academy October 15-17. The training materials competition is an important part of the conference. It is open to health and safety training developers from academic institutions, the mining industry, and states and other government agencies. This year, contestants submitted more than 40 entries in a variety of print and electronic formats.

Industry entrants receiving Certificates of Participation were: E.V. Williams, Inc., Hutchinson Salt Co., Horizon Resources, Martin Stone Quarries, Inc., Maynard H. Cox, Mississippi Lime, Morton Slat, TXU Mining (Monticello Mine), and Valley Quarries. The following state and other government groups received certificates of participation: Colorado Division of Minerals and Geology, Nevada Division of Industrial Relations (Mine Safety and Training Section), North Carolina Department of Labor, and the West Virginia Office of Miners' Health, Safety and Training.

Prize winning entries for programs related to metal/nonmetal mining were: the MSHA Compliance Handbook produced by Michigan Technological University; a Safety Handbook for Vermont's Mining Industry prepared by the Associated General Contractors of Vermont; and the Virginia Division of Mineral Mining's haulage program, Drive Safety Home.

Coal prize winners were the Surface Apprenticeship Program produced by West Virginia University's Mining Extension and Outreach group; Walter L. Houser Coal Company's Auger Mining Safety Program, and Hazard Alert Live Tomorrow (HALT) program developed by the Virginia Division of Mines.

Winning entries in the general mining area were: Appalachian Tech (Jasper, Georgia) computer-based training programs "Escape from a Fire," and "Hazard Recognition", Phelps Dodge Sierrita Inc for their Pit Driving Safety training material, and the Florida Department of Environmental Protection's video on Fall Protection in the Mining Industry.

The Grand Prize winner (for the second consecutive year) was the Virginia Division of Mines for their HALT program.

EVTAC Mining Honors Maintenance Mechanics for Outstanding Safety Record

Submitted by David Couillard

On Friday, September 6, 2002, the EVTAC Mining lunch room in Eveleth, Minnesota, was the setting for an informal ceremony recognizing the mine's maintenance mechanics for working 216,000 employee hours over a two-year period without a lost time injury.

In addition to coffee and doughnuts, the employees listened to safety talks and congratulatory messages from both company and MSHA representatives. Terry Browning, Director of Employee Services, presented a plaque to the maintenance mechanics recognizing their achievement. Gene Anderson, General Supervisor – Maintenance, offered heartfelt thanks to the group for staying focused on eliminating "at risk" behavior that leads to accidents.

From MSHA, congratulatory talks were given by Russell Jarvi, Field Office Supervisor, Hibbing; David Couillard, Team Leader, Educational Field Services, Duluth; and Gary Cook, Supervisory Special Investigator, North Central District, Duluth.

Terry Browning, Director of Employee Services (left), presents plaque to Stan Capan, maintenance mechanic, recognizing Capan's work group for 216,000 injury free hours.

EVTAC Mining maintenance mechanics pose for a group picture following the ceremony. Stan Capan, who accepted the award for the entire group, is at the center, holding the plaque. At the far right, standing (blue shirt) is Gene Anderson, General Supervisor, Maintenance.

Gary Cook, MSHA (standing, white hard hat) addresses the maintenance mechanics. Terry Browning, Director of Employee Services, can be seen leaning against the vending machine as he listens to Cook's talk.

PHOTOS

Photo Gallery

Photo provided by Jon Montgomery, EFS (East)

Scheduled Safety Conferences and Meetings

Arkansas Mine Safety and Health Conference

February 20-21, 2003

Clarion Resort on the Lake
4813 Central Ave.
Hot Springs, AR

Reservations: 1-800-432-5145
Rates: $60.00 single (plus tax)
$70.00 double (plus tax)

Mail registration to:

Todd Thornton
Martin Marietta
P.O. Box 339
Helena, AR 72104

If you have questions, contact:
Bonita Stocks
Phone: (501) 682-5420
Email: bonita.stocks@mail.ar.us

Scheduled Safety Conferences and Meetings

Three Day
Surface Haulage Safety Seminar
March 4-6, 2003
National Mine Health and Safety Academy
1301 Airport Road
Beaver, West Virginia 25813

The U.S. Department of Labor's Mine Safety and Health Administration (MSHA) will conduct a free of charge, three day Surface Haulage Safety Seminar, March 4-6, 2003, at the National Mine Health and Safety Academy in Beaver, West Virginia.

The response and participation at recent safety seminars indicate that MSHA, State agencies, industry, and other related groups believe this to be a good medium to exchange mine related information. These seminars and workshops also establish good basic methods that can be used to develop effective safety programs with the purpose of having an impact on Haulage accidents.

All interested persons are invited to attend. Persons interested in preregistering may do so by calling Kim Spencer, (304) 252-3252. Prospective participants may obtain further information concerning the seminar by contacting Wayne Lively (304) 256-3301 at the National Mine Health and Safety Academy.

Scheduled Safety Conferences and Meetings

South Central Joint Mine Safety and Health Conference

March 11-13, 2003

Sheraton New Orleans Hotel
500 Canal St.
New Orleans, LA

Mail registration to:

The University of Texas at Austin
Professional Development Center
Texas Mine Safety and Health Program
P.O. Box 7518
Austin, TX 78714-7518

Reservations: 1-800-253-6156
Rates: $139.00 single (plus tax)
$164.00 double (plus tax)

If you have questions, contact:
Judy Tate
Phone: (214) 767-8423
Email: Tate-Judy@msha.gov

Joseph A. Holmes Safety Assoication 2003 Joint National Meeting

"HAND IN HAND FOR MINE SAFETY"

TRAM (Training Resources Applied to Mining)
Mine Safety Institute of America
National Association of State Mine Inspection Agencies

June 16-19, 2003

Reno, Nevada
Silver Legacy Resort & Casino

For additional Information, call: Judy Tate (214) 767-8423

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Contact Person: _____ Phone No: _____

Company Name: _____

Street/P.O. Box: _____ City: _____

State: _____ Zip: _____ E-Mail Address: _____

MSHA ID Number: _____

Type of Product: _____

Type of Operation: Coal _____ Underground _____ Surface Mill _____ Other _____

Name you would like to call the chapter being established:

_____

Name and organization of person assisting in recruiting this application: _____

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Signature of Applicant: _____ Date: _____

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E-mail: rhea-robert(@msha.gov

Please address any comments to:
Steve Hoyle
Joseph A. Holmes Safety Association Bulletin
DOL-MSHA
National Mine Health and Safety Academy
1301 Airport Road
Beaver, WV 25813-9426
Please call us at 304/256-3264
or Fax us at 304/256-3461
e-mail: hoyle-stephen@msha.gov

Reminder: The District Council Safety Competition for 2003 is underway - please remember that if you are participating this year, you need to mail your quarterly report to:

Mine Safety & Health Administration
Educational Policy and Development
Joseph A. Holmes Safety Association Bulletin
P.O. Box 9375
Arlington, Virginia 22219

U.S. Department of Labor (MSHA)
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