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 of groups of mine and plant workers during on-the-job safety meetings. For more 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, represent endorsement by the Mine Safety and Health Administration.

Cover Art: From the Steidle Collection, College of Earth & Mineral Sciences, The Pennsylvania State University, University Park, Pennsylvania; Oil on masonite 58x40 inches, “Miners in a Lift, 1947-48, by Henry Vrnum Poor (1887-1970). This painting was in preparation for a fresco in the Old Main Building on the campus of The Pennsylvania State University. 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, WV 25813-9426.
Doyle Fink Honored for 28 Years of Dedicated Service to the Nation’s Miners

Doyle Fink will be retiring January 3, 2002, after more than 28 years of dedicated service to our Nation’s miners. Doyle was honored by his peers at the District Managers Conference Meeting in November 2002 at the National Mine Health and Safety Academy, Beaver, West Virginia.

Mr. Fink has been an active member of the Joseph A. Holmes Safety Association throughout his 28-year career. He has served as an officer in the organization since 1998. He currently holds the position of President of the Holmes Safety Association Executive Counsel. Although retiring from MSHA, he will remain active in the Association. He will continue to serve his term as President until June 2002. He will preside over the Joseph A. Holmes Safety Association business meeting in conjunction with the South Central Health and Safety Conference in March 2002, and the Joseph A. Holmes National Conference in June 2002.

Mr. Fink began his career in the mining industry in 1964 after completing four years of overseas duty as an MP (Military Police) with the United States Army. He worked in an underground iron ore mine for over nine years, operated by a joint venture between Bethlehem Steel and St. Joe Lead Company.

As a miner, Mr. Fink had a great respect for the Federal mine inspectors and the work they did to ensure the safety of miners. He decided to pursue a career with what was then called the U.S. Bureau of Mines.

Mr. Fink was appointed to a metal nonmetal mine inspector position in 1973. In 1977-78 he worked on the committee responsible for writing the first Health Manual. Also, he was also an instructor on the transition of the new Act, teaching 26 one-week classes to both MSHA and industry personnel.

Mr. Fink’s commitment to safety and his leadership qualities were quickly recognized. He soon was promoted to supervisory mine safety and health inspector and held that position in six field offices. In 1983 he was promoted to the position of Sub-district Manager in the South Central District. At this time he coordinated and held the first Health and Safety Conference. This conference has con-
tinued for 20 years and has evolved into a joint effort with MSHA and the University of Texas. It has become widely anticipated and attended by the mining industry with attendance reaching over 460 at the last conference.

In 1986 Mr. Fink was appointed Chairperson of the committee tasked with rewriting the Special Investigations Policy and Procedure Manual. He was promoted to the position of Assistant District Manager for the South Central District in 1988 and to District Manager of that District in 1995.

Mr. Fink has dedicated 28 years of his life as a servant of the people. His goals have always been to help improve the health and safety of miners. His accomplishments throughout his career are a testament to his achievement of those goals.

The Holmes Safety Association is one of the nation’s largest safety associations dedicated to the promotion of health and safety for miners, related industries, and families of both. Over 450,000 employees of mining and connected industries are represented by the association.

The mission of the association is to promote effective management of safety and health in mining and related industries by providing a forum of government, industry, and labor to develop solutions through communication, education, and recognition of safety excellence.

The local Chapter of the Holmes Safety Association is the Lonesome Pine Council. Quarterly meetings are conducted to fulfill the mission of the association. The final quarterly meeting of 2001 was held on November 8. Virginia operations received Sentinels of Safety certificates for working in excess of 30,000 employee hours without a lost-time injury or fatality. Awards were presented to two individuals for working 30 years underground without a lost-time injury. Carroll J. Hill has been employed by an underground mine since July 24, 1967, and Joe H. Wagner has been employed since January 21, 1971. Also, new officers were inducted for 2002, and winter alert hazards were discussed.

Anyone involved with the mining industry is invited to attend these meetings. Persons interested in participating in the meetings should contact Kimra Collier at (276) 679-0230.
Paramont Coal Corporation Wins National Safety Award

The Sentinels of Safety Award was first announced by President Herbert Hoover while he was Secretary of Commerce. It is the oldest established Award for occupational safety. MSHA and the National Mining Association annually honor mining companies in various industry categories for having the greatest number of employee work hours without a lost workday injury. To qualify, a mine must accumulate 30,000 or more employee work hours without incurring a lost-time injury or fatality during the year.

The 2000 Sentinels of Safety Award first place winner in the underground coal group was Paramont Coal Corporation’s Deep Mine #21. Personnel at the mine worked 151,753 consecutive employee hours without any lost-time injuries or fatalities.

On November 6, 2001, management from Paramont Coal Corporation went to Washington, DC for an awards ceremony that included Secretary of Labor Elaine Chao and Assistant Secretary of Labor David Lauriski.

Deep Mine #21 received a bronze trophy which portrays a mother and child greeting a father on his safe return from work. The trophy is retained by the winning company for one year and is then transferred to the new winner the following year. The trophy hasn’t been received by a Virginia operation since 1997.

Personnel from MSHA and the DMME presented a certificate to the employees of Deep Mine #21 on October 31 and November 1, 2001, at the mine site.
When the Fourth of July comes each year, we get to set off large amounts of explosives (called fireworks) without having to follow all of the federal regulations necessary in using explosives during the year in rock quarries and mines. But professionals in the explosives industry are still determined to eliminate injury and fatality where explosives are used, with safety and expertise becoming a priority.

With over 14 MILLION pounds of explosives used in the United States every day, and with one stick of dynamite producing over a million pounds of energy, just imagine what 150 of
requires every newly hired miner to receive 24 hours of site specific training. Employees with no mining experience must complete a 4-hour introductory session before beginning work, followed by 20 hours of closely supervised training within 90 days, with everything documented and recorded appropriately. Persons with at least 12 months of mining experience are considered to be experienced, but still must have 8 hours of refresher training every year.

Part 62, the Occupational Noise Exposure Standard, requires hearing protection whenever noise levels exceed 85 decibels. This can be accomplished by obtaining a sound dosimeter from a company like Ideal Supply, Inc., and using ear protection. MSHA has a very detailed program to follow that will help initiate and incorporate these regulations. After explosive supplies are delivered, loaded and connected, all remaining items must be returned to storage magazines and then secured appropriately. When the B.I.C. has “walked the shot” and the crew is sent out to block all access roads, he makes the connection at the point of initiation (p.o.i.), and

(See next page)
then goes to the blaster’s safety shed (a great distance from the loaded site). He then signals the supervisor of his readiness and when certain of site security and safety, the signal is blown, detonating the explosives. After waiting for all flyrock and fumes to dissipate, he gives the “all clear” signal, and the site is then inspected and mucking out can proceed.

Using explosives dates back to the year 1242 when Friar Roger Bacon demonstrated how black powder could be used to “blow stuff up”. When Alfred Nobel introduced dynamite in 1867, things really became “energetic” to the point where by 1950, over one billion pounds were being used annually, just in the United States alone.

After the DuPont Company introduced the ANFO (Ammonium Nitrate Fuel Oil) blasting agent to the industry in 1935, dynamite use shrunk significantly to the point where it has been replaced as a primer with products such as S.E.C. Detagel hexamine nitrate slurry primers and E.B./Trojan cast boosters. With non-electric caps and shocktube replacing electric caps and wire, and blasting machines replacing a fuse that you light with a match, the science of explosives has become more technical with safety and professionalism a priority. Because explosives are needed to move the earth (for making roads, bridges and tunnels) and to make crushed rock (for roads, locations and variety of other things), it’s not hard to understand why it’s so important to be totally committed to their safe use and professional application.

A vital link in the process of explosives engineering, design and application is the ability to effectively communicate with all parties involved—from driller to blaster to foreman to company man. The days of “cutting corners” and “just getting by” are gone. Strict adherence and attention to detail is mandatory and must be of the utmost concern for all that are involved in this industry. If you are, let us know and we’ll be happy to get to know you.
Bucket Repair

One of the eleven fatalities in the anthracite industry during the 1993-1999 period occurred to a contract welder performing repair work.

Serious injuries also occurred when front-end loaders were being used as elevated work platforms and also used to stabilize or put pressure on a crack area.

In most cases, the miners involved were experienced in these tasks and probably used similar work practices in the past.

Safe work procedures must be established and followed at all times.

Due to their large size, heavy equipment such as dozers, front-end loaders, and cranes are frequently used to move and position the buckets during the repair.

REMEMBER:

■ Once positioned, secure the bucket with legs or supports to prevent its accidental movement.
■ Secure the spreader bar and chain, if attached when the bucket is positioned and secured, to prevent its shifting should the bucket shift when the ground settles or frozen ground thaws.
■ If working alone, provide communication to other workers and check in at regular intervals.
■ When multiple miners are working on a single bucket, establish an on-site communication system to eliminate accidental flash exposure to the eyes.

Article from Best Practice Series BP-56
One of the eleven fatalities in the anthracite industry during the 1993-1999 period occurred during operation of a crane in close proximity to energized high-voltage lines.

The victim was positioning an outrigger when the crane operator rotated the boom toward the energized lines. Although the boom swing was stopped, the momentum carried the swinging block and wire rope into all three phases.

To prevent yourself from becoming the next statistic:

- Avoid crane operation in proximity of energized circuits.
- Deenergize the circuit if possible.

Weekly Examination

Checklist for 30 CFR 75.364 to Aid Mine Examiners
(See 30 CFR 75.364 for Complete Text Before Making Compliance Decisions)

(a) Worked-out areas.
(1) At least every 7 days, a certified person shall examine the deepest penetration of nonpillared worked-out areas, measuring methane and oxygen at locations approved in the mine ventilation plan and determining if the air is moving in the proper direction in the area. Air quantity measurements shall also be made where the air enters and leaves the worked-out areas, unless an alternate method is approved in the ventilation plan.
(2) At least every 7 days, a certified person shall evaluate the effectiveness of bleeder systems as follows-
(i) Measurements of
methane, oxygen, and air quantity and a test to determine if the air is moving in the proper direction where air enters the worked-out area.

(ii) Measurements of methane, oxygen, and air quantity and a test to determine if the air is moving in its proper direction shall be made immediately before the air enters a return split of air. 

(iii) At least one entry of each set of bleeder entries used as part of a bleeder system under 75.334 shall be traveled in its entirety. Measurements of methane and oxygen concentrations and air quantities and a test to determine if the air is moving in the proper direction shall be made at the measurement point locations specified in the mine ventilation plan to determine the effectiveness of the bleeder system.

(iv) An alternative method of evaluation for (a)(2)(i) & (iii) above may be approved in the ventilation plan.

(b) Hazardous Conditions. At least every 7 days, an examination for hazardous conditions shall be made by a certified person at the following locations:

(1) In one entry of each intake air course(s) in its entirety.

(2) In one entry of each return air course(s) in its entirety.

(3) In each longwall or shortwall travelway in its entirety.

(4) At each seal along return and bleeder air courses and at each seal along intake air courses not preshifted.

(5) Each escapeway in its entirety.

(6) Working section(s) not preshifted during the previous 7 days.

(7) At each water pump not examined during a preshift examination conducted during the previous 7 days.

(c) Measurements and tests. At least every 7 days, a certified person shall-

(1) Determine the volume of air entering main intakes and each intake split.

(2) Determine the volume of air and test for methane
• in the last open crosscut,
• in the return of each split of air immediately before it enters the main returns, and
• where the air leaves the main returns.

(3) Test for methane in the return entry nearest each set of seals immediately after the air passes the seals.

(d) Hazardous conditions shall be corrected immediately. If the condition creates an imminent danger, everyone except those persons necessary to correct the condition shall be withdrawn to a safe area.

(e) The weekly examination may be conducted at the same time as the preshift or on-shift examinations.

(f) The weekly examination is not required during any 7 day period in which no one enters the mine. Except for certified persons required to make examinations, no one shall enter the mine if a weekly examination has not been made within the previous 7 days.

(g) Certification. Initials, date, and time of the certified person shall appear at enough locations to show the entire area has been examined.

(h) Recordkeeping. After a partial or complete weekly examination, a record of hazardous conditions, locations, corrective action taken, and the results and location of air and methane measurements shall be recorded.

Note: Additional text of the regulation not included in this article may be relevant for compliance decisions.

This article taken from Best Practice Series, BP-55
The Bureau of Mines Safety Cars are almost legendary. These railroad cars were stationed in different mining areas across the United States. Bureau personnel traveled on the cars to provide first aid and rescue training at field locations. The cars also carried people and equipment to disaster sites to assist in rescue and recovery operations and to conduct accident investigations.

Over the years Bureau photographers documented the cars. This article is based on some of these old photographs and other Bureau-produced publications.

Where the Cars Were Located - 1931

In 1912, the Bureau had eight cars in service. They were based at Wilkes-Barre, Pennsylvania; Burnham, Colorado; Evansville, Indiana; Rock Springs, Wyoming; Seattle, Washington; Pittsburgh, Pennsylvania; Huntington, West Virginia; and Ironwood, Michigan.

In 1931, as shown on the map, 11 cars were in service. By 1939, eight of 10 cars were in storage because of budget constraints. Six were stored in Pittsburgh, one in Salt Lake City, and one in Denver.
Safety Car Diagram

Safety cars were what railroaders called “heavyweights.” They were built like battleships. Early Bureau of Mines safety cars (1910s and 20s) were wooden, but all of them were steel by the mid 1930s, except for the car in Alaska. Every bit of space counted and the car’s layout reflected this.

A safety car, according to a contemporary report, was made of “heavy steel designed for resistance to collision or overturning.” The car’s frame and vestibules (ends) were fabricated from “heavy steel castings and rolled steel shapes and plates.” The sides were made of corrosion-resistant steel. A safety car was set up to make it “so strong that there was little possibility of damage to its contents except in the heaviest of collisions.”

Diagram of Safety Car No. 1. Many safety cars had similar layouts.
Most safety cars had a crew of six. The car engineer was in charge. He was a mining engineer who supervised the crew, conducted disaster and safety investigations, and prepared reports of these activities. He also assisted in rescue and recovery work at accident sites, and in some cases directed these operations.

The foreman miner took care of all the car’s mechanical and special equipment. He made sure adequate supplies and materials were on the car at all times, and was responsible for all clerical work related to car operations. A foreman miner was also a trainer who presented classes on first aid, rescue and recovery, and use of self-contained breathing apparatus. The foreman miner was assisted by the first-aid miner. Other technicians who were part of the crew performed similar maintenance and instruction jobs.

The steward-chef handled housekeeping on the car. He also cooked and served meals, and broke down and made up sleeping berths for the crew.
Switchboard and Lighting Plant

Safety cars were self-contained. They had gas/electric lighting, electric refrigerator, air compressor, and dual hot water heating systems. The electrical system was set up so the car could run by itself, could use 110 or 220-volt a.c., or use local electricity when standing in a yard or deployed at a mine site.

Demonstration Room

The crew is charging Car No. 10’s Gibbs breathing apparatus while a quartet of canaries enjoy the sunshine.

The demonstration room was a classroom, workshop, and staging area for rescue crews. It had metal tables, lockers, drawers and cabinets for breathing apparatus, and the equipment needed to keep the apparatus charged and in good working order.
Office Compartment

A safety car had at least one office compartment between its sleeping and dining space. The office had a pair of desks, a typewriter, closet, and a couch that could be made into an upper and lower berth. A corridor ran beside the office to allow people to get from one end of the car to the other without disturbing those who were in the office.

Confidence

A group of Bureau of Mines engineers study a map. Work clothes and safety hats were different then.
Mealtime on Car No. 10

The steward-chef prepared and served meals. Here the steward-chef is in the background as the crew gets ready for dinner.

Safety Car Kitchen

The kitchen was at the end of the car. It was equipped for long trips and layovers at remote mining sites. Facilities included a range, coal bin, water tanks, sink, dry food storage, a work table, dish racks and ventilating fans. An electric refrigerator was in the vestibule beside the kitchen.

Here is Car No. 3’s steward-chef at work. Note the wooden grates on the floor. These could be removed for cleaning. The rail on the range was to keep pots and pans from sliding onto the floor when the car was moving.

(See next page)
Dining Room

The dining room was beside the office compartment on Car No. 11. It had an extension table, a folding table, chairs, china closet, bookcase and a couch that could be converted into sleeping space.

Sleeping Space in the Dining Room

The dining room couch could be made into an upper and lower berth for crew members.
Wellness

Four Phases to Quitting Smoking

Quitting smoking is a process which can be done in four phases:

1. Preparing to quit
   - list all the reasons you have decided to quit
   - list the barriers that have stopped you from quitting in the past
   - learn why you smoke
   - identify things that make you want to smoke
   - plan for change, such as lifestyle changes

2. Choosing your quit date
   - the most important day of your life
   - the day before you quit get rid of all your cigarettes, ashtrays and lighters

3. Coping with withdrawal
   - withdrawal symptoms are the toughest part of quitting and can include strong cravings, headaches and irritability
   - symptoms usually last 1-3 weeks
   - medications are available to help you cope
   - with help and support you can overcome withdrawal symptoms and quit for good!

4. Fighting slips and relapse
   - making changes in your life can help you stay free from smoking
   - it involves starting and sticking to healthy habits
   - the longer you go without smoking the better you will feel!

Quitting smoking can be a real challenge, but you don’t have to go it alone! Seek help from:
   - your health-care provider
   - family and friends
   - support groups for people trying to quit

Give it a try. Stop smoking, feel healthier and live longer.
**Sixth Mine Health and Safety Seminar**

**January 16, 2002**

Pennsylvania State University Miner Training Program will host the Sixth Mine Health and Safety Seminar on January 16 at the Days Inn and Conference Center, Allentown, PA. Co-sponsored by PA BDMS, MSHA, NIOSH, and industry, this year’s seminar will feature a competent person workshop on January 15. Contact Kathy Johnstonbaugh at 814-865-7472 for more information.

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**Joint National NASMIA, MSIA and JHSA Meeting Scheduled in June 2002**

The 2002 Joint National Meeting of the National Association of State Mine Inspection Agencies, Mine Safety Institute of America, and the Joseph A. Holmes Safety Association will be conducted June 3-6, 2002, in Virginia Beach, Virginia.

Make plans now to attend what promises to be one of 2002’s most exciting and informative mining industry meetings at a great location in the Southeast. More detailed information about program activities will be released by the Virginia Host Committee early in 2002.

Meeting accommodations will be at the Holiday Inn Sunspree Resort, 3900 Atlantic Avenue, Virginia Beach, Virginia 23451 (Telephone: 757-428-1711)

Watch for further details and register early!!!

**Call for Papers**

Anyone interested in making a presentation at the meeting should contact Richard Wood at (304) 256-3240. We are particularly interested in the following issues: Hazardous Communications; Workforce Issues/Aging Workforce; Compliance Issues; New Technology for Health and Safety; Power Haulage; and Human Behaviors (Factors). However, any topic which could contribute positively to miner health and safety will be considered. You will be asked to provide a paper by January 15, 2002.
Annual Arkansas
Mine Safety and Health Conference 2002,
February 13 - 14

Department of Labor would like to invite you to attend the Annual Arkansas Mine Safety and Health Conference on February 13-14, 2002.

The conference will be held at: Clarion Resort on the Lake, Hot Springs, Arkansas
The conference is a cooperative effort of the Arkansas Department of Labor, Federal Mine Safety and Health Administration, and mining industries in the state of Arkansas.

For more information on the conference, call Bonita Stocks at (501)682-4520, or e-mail: bonita.stocks@mail.state.ar.us
Mine Blasting Safety and Application Seminar
January 23-25, 2002

This seminar is designed for company managers, blasting engineers, blasters, State and Federal mine inspectors (coal and metal/nonmetal), and others involved with the planning, design, and the use of explosives in the mining industry. The most recent blasting techniques, trends, and developments will be discussed, as well as the ability to share ideas in small group sessions. There is no tuition fee.

Contents:

● Vibration Analysis/Seismographs/Efficient Blasting Techniques
● Storage of Explosives
● Handling and Use of Explosives
● Silica Dust and Toxic Gas Hazards in Blasting
● Blasting Agents and Emulsions

To enroll contact:

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Reminder: The District Council Safety Competition for 2001 is underway - please remember that if you are participating this year, you need to mail your quarterly report to:

Mine Safety & Health Administration
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Joseph A. Holmes Safety Association Bulletin
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