

Joseph A. Holmes **Safety Association**

# Bulletin

May/June 2002



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**MSHA & NSSGA Noise & Dust**  
**Monitoring Workshops**  
**An Award-Winning Program**

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**Cover: Photo layout and design by the Audiovisual Material Development Branch/Graphics, National Mine Health and Safety Academy.**

**Attention Readers:** If you have any photos that can be printed in the Bulletin (any size, black/white or color) or on the cover (8"x10" print or digital image on disk at 300 dpi resolution), please send them to Donald Starr, Art Director, Joseph A. Holmes Safety Association Bulletin, National Mine Health and Safety Academy, 1301 Airport Rd., Beaver, WV 25813-9426. We are always searching for articles and soliciting your opinions and suggestions. Please send these to Charlotte Richardson (same mailing address as Mr. Starr's) or email: richardson-charlotte@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, as representing endorsement by the Mine Safety and Health Administration.

Notice to our Joseph A. Holmes Safety Association Bulletin Readers

Correction: The February/March 2002, Joseph A. Holmes Safety Association Bulletin article "Seventy-Two Fatalities Have Occurred at Coal and Metal/Nonmetal Mining Operations Since January 2001", page 3, paragraph 3, should read as follows:

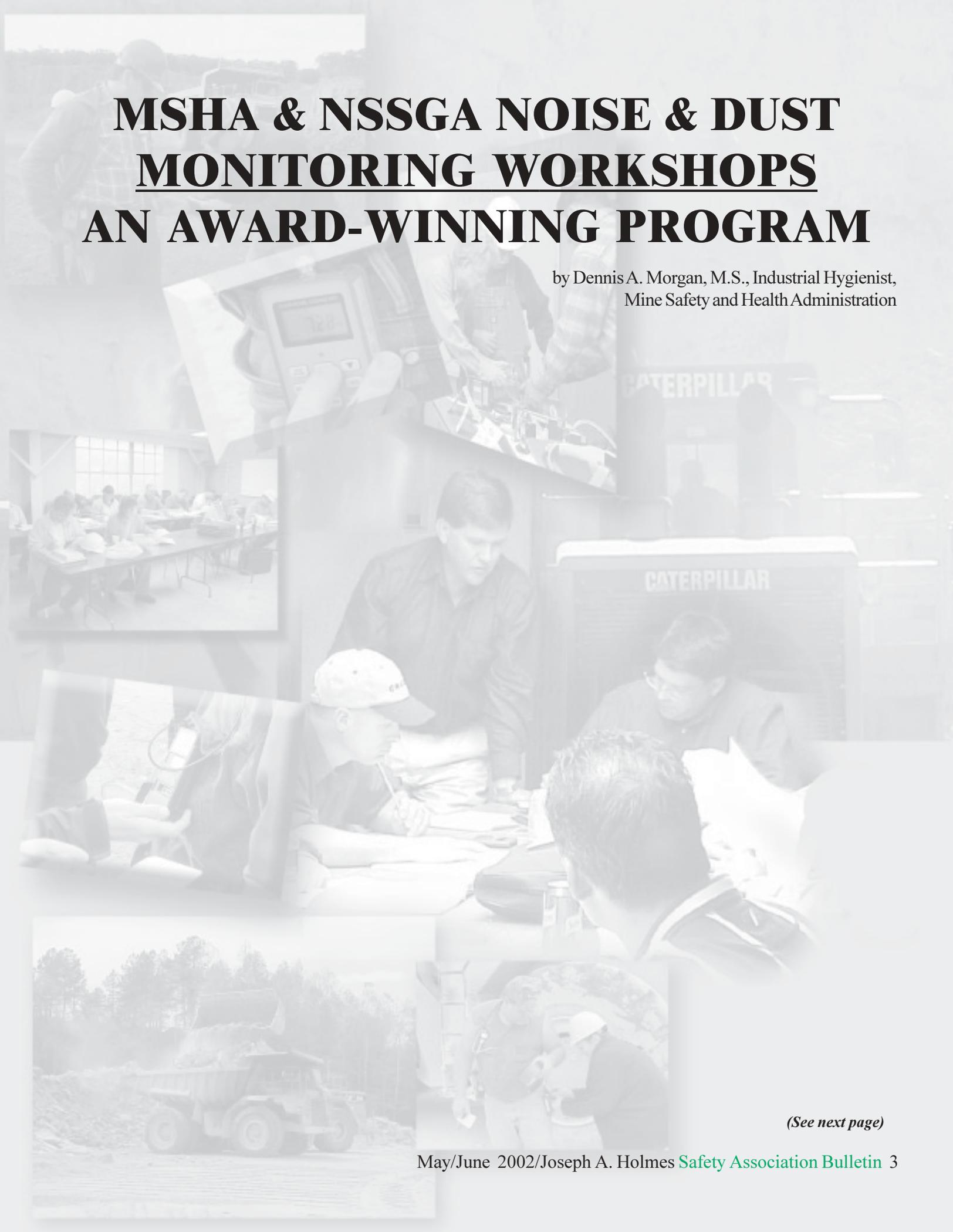
Metal/Nonmetal Mining

Fourteen of the fatalities were classified as powered haulage and four were classified as roof falls. Eight fatalities occurred at sand and gravel operations and six occurred at limestone operations. Eight fatalities occurred underground and twenty-two occurred on the surface.

We are sorry for any confusion this may have caused.

# **MSHA & NSSGA NOISE & DUST MONITORING WORKSHOPS AN AWARD-WINNING PROGRAM**

by Dennis A. Morgan, M.S., Industrial Hygienist,  
Mine Safety and Health Administration



*(See next page)*



*A day in the classroom prior to doing sampling at Pennsylvania Lime.*

## **HISTORY**

Dust diseases and hearing impairment are two of the most common occupational illnesses among the 350,000 miners, both in coal and metal and non-metal mines, in the U.S. Miners who drill through quartz rock have an elevated risk of developing silicosis, a disabling, and often fatal, lung disease. Another significant health risk exists when miners are overexposed to hazardous noise levels over a working lifetime. Thousands of miners have suffered from hearing loss caused by overly noisy mining equipment.<sup>1</sup>

Silicosis and noise-induced hearing loss are preventable. Routine monitoring of dust concentrations and noise levels, followed by the implementation of control technologies when needed, is among the most effective ways to protect miners from silicosis and hearing loss.

<sup>2,3</sup>

Many mine operators do not have the resources to hire environmental or health and safety consultants to perform industrial hygiene sampling at regular intervals. Consequently, work-

ers may be exposed to unknown levels. As the Mine Safety and Health Administration saw more cases of silicosis and hearing loss, (MSHA) the agency placed a greater emphasis on operator monitoring programs. Mine operators must protect workers by implementing an effective monitoring program, identifying which miners are at risk, and performing industrial hygiene sampling to characterize exposures in the work environment.

Mine Safety and Health Administration (MSHA) and National Stone, Sand, and Gravel Association (NSSGA) realized that some small operators have the misperception that a sampling program is too expensive or too complicated to implement and maintain. These employers would require basic assistance with the development of an exposure monitoring program that made sense for a small mining operation.

## **PARTNERSHIP OBJECTIVES**

Enforcement agencies and the industries they regulate don't always agree. However, this program is an exception. Representing more than 850 companies in the aggregates industry, NSSGA recognized that its member companies needed assistance with MSHA's monitoring requirements. MSHA and NSSGA joined forces to achieve a common goal: the prevention of silicosis and hearing loss among miners. Both organizations demonstrated a strong commitment to the success of this program.

The invaluable experience and cooperation of the NSSGA Environment, Safety & Health Division and the NSSGA Industrial Hygiene Subcommittee members helped MSHA to develop an appropriate course curriculum focusing on the major issues that needed to be ad-

dressed in training for the aggregates industry. Kelly Bailey, Manager of Occupational Health at Vulcan Materials Company, was the driving force in getting the workshop program off the ground at NSSGA. When asked about the partnership formed by MSHA and NSSGA, Bailey replied, "Noise and dust can be problems in mining. The objective of the MSHA/NSSGA partnership was to design a workshop that especially helped small operators comply with monitoring and controlling noise and dust exposures. Of the approximately 10,000 stone, sand and gravel mines nationwide, 91 percent of the operators have fewer than 25 employees in the entire company."

## **PARTNERSHIP AGREEMENT**

Launched on December 1, 1997, with successful pilot workshops at Luck Stone's Leesburg Quarry (VA) and Tarmac America's Pennsuco Quarry (FL), MSHA's partnership agreement with the former National Stone Association (NSA, now the NSSGA) promotes training in sampling and monitoring so that dust and noise hazards can be recognized, evaluated, and controlled.

## **WORKSHOP TRAINING**

Under the partnership agreement, MSHA develops the training materials, provides instructors, classroom materials, and sampling equipment, and covers the cost of maintenance and repairs of the equipment. Each workshop is held at an NSSGA-member site. Attendees conduct full-shift sampling for respirable silica dust and noise on the host company's employees. Par-

ticipants receive practical experience, encounter problems that sometimes occur in "real world" sampling situations, and discuss potential solutions.

NSSGA recruits the students and publicizes the workshops. Six workshops are held annually, with a minimum of one workshop scheduled per MSHA Metal and Nonmetal District.

MSHA and NSSGA have conducted 24 three-day classes, attracting approximately 250 participants. Each training workshop consists of one day of classroom training, one day of personal, onsite noise and dust exposure monitoring, and one day of case study reviews of control methods, interpretation of sampling re-

sults, discussion of ways to reduce elevated exposures to below MSHA permissible exposure limits (PELs), and a competency exam.



*Dust created when loading a Haul Truck*

### **Each workshop covers:**

- the hazards of exposure to noise and silica
- basic sampling principles
- hands-on noise and dust sampling
- coordinating with an analytical laboratory
- data interpretation
- recordkeeping
- identifying corrective methods
- complying with MSHA regulations
- competency exam

*(See next page)*

Course participants receive a copy of the MSHA textbook, *Industrial Hygiene: Sampling for Silica and Noise*, a certificate suitable for framing, continuing education units (CEUs), and invaluable hands-on experience.

R.J. Lee Group, Inc., accredited by the American Industrial Hygiene Association (AIHA), provides the dust sampling media free-of-charge. The host company compensates R.J. Lee Group, Inc. for the silica sample analysis.

Workshops are almost always held in partnership with the state aggregate associations. The Construction Materials Association of California and the Southern California Rock Products Association co-sponsored the September 2001 workshop, and the Missouri Limestone Producers Association, Inc. co-sponsored the October 2001 workshop.

Workshops may also be arranged by contacting the instructors (see end of this article); all training and materials are identical with the partnership training.

## PRAISE FOR THE AGREEMENT

“This seminar is packed full of useful information presented by professional trainers from MSHA, and is unique in that it features a day-long hands-on segment where participants actually collect samples from aggregates miners,” explained Jim Sharpe, Vice President of Safety and Health Services at NSSGA. “There’s no other workshop like it out there today, and the cost is less than a third of what you would have to pay for this if it were available on the open market.”

John Hayden, Vice President of Environmental Services at NSSGA, commented, “I found

MSHA’s Noise and Dust Monitoring Workshop to be an intensive, comprehensive and practical hands-on experience that provides excellent cross-training -- for environmental professionals like myself -- in industrial hygiene techniques used to measure and evaluate occupational exposures to dust.”

Highlighting the achievements of the program, Jennifer Joy Wilson, NSSGA President and CEO, explained, “I was eager to co-sign the agreement between MSHA and the former NSA in 1997 that got this program off the ground, and I am just as gratified today at the



*Students work together checking a worker being sampled at Ticon Connecticut*

tremendous success of this project over the past four years. Nearly 250 persons have gone through the program during the period, and their evaluations are consistently full of praise for the MSHA instructional team. This workshop is really advancing the cause of health and safety in the industry. MSHA, NSSGA producer members who helped design and those who host the workshop, and NSSGA staff deserve the credit for creating and making these workshops effective.”

Dave D. Lauriski, Assistant Secretary of Labor for Mine Safety and Health, celebrates the success of the partnership. “To achieve continued progress in safety and health over the long term,” Lauriski said, “we have to be continually open to new ideas. I know that with creative thinking from everyone in MSHA and from our stakeholders, we can reach new levels of reducing fatalities, injuries and illnesses in the nation’s mines. This program is an example. Aimed especially at the small stone, sand, and gravel operators, our workshops teach students how to properly calibrate and use personal noise and dust monitoring equipment to sample workers, interpret the data, and control overexposures. Our relationship with stakeholders also is enhanced by the trust and goodwill created by the program.”

## OUTCOMES, ACHIEVEMENTS, AND RESULTS

In February 2001, James Miller, Safety Coordinator for Rockydale Quarries’ Staunton Lime and Belmont Quarries, attended the workshop hosted by Florida Rock Industries, Inc., in Fort Myers. “After being there, I came to the realization of what noise can do. Noise meters don’t cost an arm and a leg, and can help me to get a better grasp of the situation,” he explained. “Hands-on exercises included hooking up people myself, checking them every two hours, and collecting the data. How to actually do it [sampling] was a whole lot better than classroom training.”

Small businesses can borrow MSHA’s sampling devices to continue their training for up to a year after completing the workshop, subject to equipment availability. At least 12 mine operators have borrowed MSHA equipment to conduct dust and noise monitoring at their

worksites. NSSGA members can also rent dosimeters from the Association.

“Since the beginning of the [MSHA Equipment Loan] program, eight operators have inquired about the program within our District,” said Bruce Palmer, industrial hygienist with MSHA’s South Central District for Metal and



*Under Rocky McKinney’s watchful eye, a student makes a periodic check of instruments at JB Parosns.*

Nonmetal Mine Safety and Health, Dallas, TX, “Three had not yet attended the class and decided to contract with an industrial hygiene consultant to perform their sampling, as the most cost effective solution for them. The other five attended the class, found it very helpful, but four already have their own sampling equipment. These four are from large operations with more than 100 employees. The one remaining class graduate requested the use of MSHA equipment. He expressed appreciation, and reported that all the equipment functioned well. After we sent him the equipment, he experienced unexpected delays in obtaining filter cassettes, so we gave him all the time he needed to complete comprehensive sampling.”

*(See next page)*

Some companies (e.g., Fred Weber, Calaveras Materials, Pounding Mill, and Salem Stone) have purchased their own industrial hygiene sampling equipment. "It was a super program, with a lot of material covered in a short period of time," recalled Shawn Gorg, Plant Manager of Better Materials Corporation's Penns Park Site. He attended the workshop hosted by Pennsylvania Lime Company's Annville (PA) operation in June 2000. "The instructors stayed on top of our questions. The



*Students work together checking a worker being sampled at Tilcon*

hands-on exercises were the most important part. We have standardized the noise sampling equipment throughout our company's 27 locations. I recommended that we send other members of our company to future noise and dust sampling workshops." In California, one alumnus coordinated training for his company, Calaveras Materials, and organized a second workshop with the Construction Materials Association.

The practical field experience hones industrial hygiene sampling skills. Joseph Sugar, Safety Director of Mt. Hope Rock Products in

New Jersey, explained, "Since attending the workshop [hosted by Hanson Aggregates West in Salt Lake City, Utah in April 2001, I am now more knowledgeable about dust sampling and noise monitoring. The hands-on activities were very beneficial. Rocky [McKinney] and Polly [Kalich] were excellent instructors and remained available for questions, even after the course was completed. The hospitality of the host company was great. It was a wonderful opportunity for me, and the information presented will benefit all employees. Through the MSHA loan program, I borrowed five noise dosimeters (with calibrator) and five air sampling pumps (with cyclones and a calibrator) to continue my practical training, all at no cost."

Jack Carroll, Manager/Coordinator of Health and Safety, and Steve Casey, Director of Safety, both from P.A. Landers' Plymouth, Massachusetts location, attended the workshop hosted by Tilcon, Inc., in New Britain, Connecticut in October 2000. "Rocky [McKinney, the instructor] and staff did a real nice job keeping our attention," Carroll said. "By having the course at the Tilcon quarry, we could relate to our miners, because we saw the same type of operations that we have at our sand and gravel mining facilities. One of the student groups monitored a street-sweeper, so we decided to sample a street-sweeper at P.A. Landers to evaluate the noise exposure. After the workshop, we borrowed noise dosimeters and dust sampling equipment from our company's insurance provider (Travelers Insurance Company) at no cost. What we learned during the workshop is beneficial for every day. The program is a good marriage between MSHA and NSSGA. A lot of material was crammed into three days. Maybe MSHA and NSSGA would consider expanding the one day hands-on portion to two days. If

there is another workshop in our area, we'd like to attend as a refresher."

"The program has demonstrated that cooperative ventures with the ultimate aim of protecting miners can successfully be carried out by MSHA and industry associations," commented Janet Bertinuson, Deputy Superintendent of the National Mine Health and Safety Academy. "The two pilot workshops were an opportunity for the course developers from the Academy to test the materials and determine if content and time allotted for each topic were appropriate. It also helped us see how the field day would work and provided first hand information on problems that could crop up during sampling. All student evaluations are thoroughly reviewed and used as the basis for changes in written materials and the course format. I personally have learned a great deal about the aggregates industry. The walk-through prior to class, discussions with the students, and the field day provided direct experience of the industry."

## AWARD

Innovations in American Government acknowledged the Mine Safety and Health Administration (MSHA) and the National Stone, Sand & Gravel Association (NSSGA) for their cooperative workplace-based sampling training program of noise and dust monitoring workshops. Their joint venture received semifinalist recognition in 2000, for the second consecutive year, ranking in the top seven percent of more than 1,300 projects considered. Innovations in American Government, a prestigious awards program of the Ford Foundation and Harvard University, is administered by the John F. Kennedy School of Government in partnership with the Council for Excellence in Government.

## THE FUTURE

The materials developed and the techniques used in this program are applicable to all mining situations and could easily be adapted to train workers in similar industries. All elements are replicable within MSHA, other agencies, and educational institutions that wish to develop training with a strong hands-on component. MSHA uses the course curriculum as a model for training metal and nonmetal inspectors, miners, and operators in other types of mining operations (e.g., gold, salt, iron ore).

"I'd like to see more students coming from smaller operations. So, I think improving outreach to such operations is key," Bertinuson said. "The partnership with NSSGA has helped us develop educational materials that directly serve the industry and has provided us with a framework for working with other industry and labor organizations in similar cooperative ventures."

When asked about future improvements, Bailey explained, "As chair of the NSSGA Environment, Safety and Health Division and chair of the NSSGA Industrial Hygiene Subcommittee, I would like to see mine operators share their noise and dust monitoring data confidentially with NSSGA. Member companies would use NSSGA as an industry-wide data repository and NSSGA members could assist each other in solving overexposure conditions."

*(See next page)*

## A FINAL NOTE

The success of the MSHA and NSSGA cooperative workplace-based sampling training program is highlighted by collaborative development, innovative implementation, and significant achievement. The beneficiaries of the three day monitoring workshops will continue to be miners who may be at risk of exposure to noise and silica dust. Giving full meaning to MSHA's noise and dust standards, effective exposure monitoring programs help to protect workers from occupational illnesses, in an up-front, proactive way. If dust and noise levels are above MSHA PELs, employers can then implement engineering or administrative changes in the work environment to control the hazardous exposures.

### INTERESTED IN SCHEDULING YOUR OWN WORKSHOP?

The current schedule and registration forms are available on the NSSGA website: [www.nssga.org/calendar/calendar.htm](http://www.nssga.org/calendar/calendar.htm) or by contacting Chris Kolbash by phone (800) 342-1415 x 1069 or email ([ckolbash@nssga.org](mailto:ckolbash@nssga.org)). NSSGA-MSHA workshop fees (currently, subject to change) are \$325 for NSSGA members and \$495 for non-members.

**To arrange workshops through other associations, state groups, or privately, you may also contact:**

·Rocky by phone (304) 256-3345 or  
by email: [mckinney-william@msha.gov](mailto:mckinney-william@msha.gov)  
·Polly by phone (304) 256-3329 or  
by email: [kalich-paulette@msha.gov](mailto:kalich-paulette@msha.gov)  
Tuition/person: \$250

The instructors limit the workshop to 10-12 persons; therefore, it is vital to sign up early.

## REFERENCES:

1. U.S. Department of Labor, Mine Safety and Health Administration: Health Standards for Occupational Noise Exposure; Final Rule; Title 30, Code of Federal Regulations, Parts 56, 57, 62, 70, and 71; Federal Register, Vol. 64, No. 176, pp. 49548-49634, Monday, Sept. 13, 1999. USDOL, MSHA, Arlington, VA (1999).

2. Cash, Doris A.: Introduction to Operator Air Sampling Programs; MSHA Informational Report No. 1250. USDOL, MSHA, Arlington, VA (1999).

3. Suter, Alice H.: "Hearing Conservation." Chp. 1 in Noise & Hearing Conservation Manual (4th Edition), ed. Elliott H. Berger et al.. American Industrial Hygiene Association, Akron, OH (1986).

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# MSHA to Allow Use of High-Voltage Mining Equipment

## New Rule Will Protect Miners Who Work Near High-Voltage Equipment

**DOL/MSHA News Release No. 02-137  
Mine Safety and Health Administration  
Dated Monday, March 11, 2002**

**ARLINGTON, VA** - The U.S. Department of Labor's Mine Safety and Health Administration (MSHA) today issued the final rule permitting the use of high-voltage longwall mining equipment in underground coal mines. Applicable to longwall equipment that uses between 1,001 and 4,160 volts, the rule contains provisions that will protect miners from electrical hazards as they use or work near the equipment.

"Regulations governing miner health and safety must reflect advances in technology in order to be truly effective," said Dave D. Lauriski, Assistant Secretary of Labor for Mine Safety and Health. "The new rule provides for a more efficient and effective use of mining equipment and resources and simultaneously provides maximum protection for workers in the mining environment."

Longwall mining is a technique to extract coal that uses machinery that shears coal along an underground wall approximately 1,000 feet wide and drops the coal on conveyor belts or other equipment to be transported up to the surface. Technological advances over the past quarter of a century have introduced high-voltage equipment on longwall mining systems, which has increased production of longwall systems.

Under current MSHA regulations, longwall mining equipment is only permitted when the equipment uses medium-to low-voltage electrical power. High-voltage

longwall equipment is only permitted on a case-by-case basis through MSHA's petition for modification procedures.

In issuing the rule as final, MSHA has concluded that, based on the high-voltage equipment use experience under granted mine-by-mine petitions, that this equipment can be used safely, provided certain conditions are met. The new rule provides for, among other actions, the use of insulated cable-handling equipment; use of protective gloves to troubleshoot and test low- and medium-voltage circuits associated with high-voltage circuits; and the use of barriers and interlock switches to help guard against contact with energized circuits. The rule also requires the use of cables containing metallic shielding (SHD) around each power conductor.

The rule was published in the Federal Register on Mon., Mar. 11, 2002.

WEBSITE: <http://www.msha.gov/MEDIA/PRESS/2002/NR020311.HTM>

**For further information contact:  
Rodney Brown  
Phone: (703) 235-1452**



## Mid-Ohio District Council Hosts Mining Safety and Current Events Seminar

The Mid-Ohio District Council of the Joseph A. Holmes Safety Association (HSA) held their first Mining Safety and Current Events Seminar at the Zanesville, Ohio, Holiday Inn on February 7, 2002.

### Participants and Guests

Eighteen companies were represented by 80 employees at the seminar. The Mid-Ohio District Council HSA recognized 32 facilities for working safely one or more years without a lost time accident. The total of safe working days among all the companies attending was a remarkable 46,213 days.

Twenty-one vendors and suppliers showcased a variety of materials and services. MSHA displayed their newest training items and safety products and Genesis Hospital of Zanesville ran a Health Fair that included information on Sleep Disorders and Rehabilitation, AED demonstrations, and Heart Healthy displays. Attendees could also attend a wide range of physical examinations that included: Respiratory Screening, Oxygen Saturation, Colo-rectal Screening, Blood Pressure and Blood Sugar Screening, and Foot Screenings.

### Speakers and Topics

“Fatafs in the Mining Industry” - Linda Herbst and Cindy Shumiloff, MSHA

“Public Relations at Your Mine Site” - Tommie Deaner, Martin Marietta

“Silicosis - Its Causes, Symptoms and Treatment” - David L. Klein, MD, Genesis Hospital

“Ohio’s Mining Law Revisions” - Bill Boyle, Ohio Division of Natural Resources

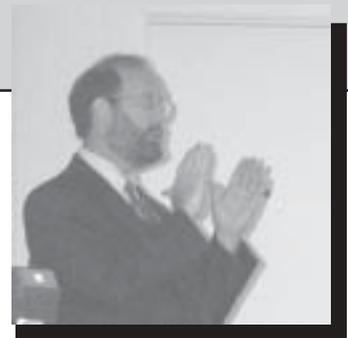
“Accident Reduction Program” - John Hladek, MSHA

“MSHA 101” - Don Canfield, MSHA

“ODOT Group Pre - Certification Ohio Level One Aggregate Tech Training Program” - Pat Jacomet, Executive Director, Ohio Aggregate and Industrial Minerals Association



*Don Canfield, MSHA*



*David L. Klein, MD,  
Genesis Hospital*

## Awards

### Workdays without a lost-time accident (3 years and over):

Company	Begin	End	Days	Years
S&S Aggregate – Logan	1/1/83	12/31/01	6939	19.0
Shelly – Kenton	8/7/92	12/31/01	3433	9.4
Chesterhill Stone – Stockport	3/9/93	7/2/01	3037	8.3
Oxford Mining – #3 New Lexington	8/1/94	12/31/01	2709	7.4
Shelly – York Center	3/2/95	12/31/01	2496	6.8
S&S Aggregate – Zanesville	3/15/95	12/31/01	2483	6.8
Shelly – Chillicothe	7/24/95	12/31/01	2352	6.4
Shelly – Coshocton	3/8/96	12/31/01	2124	5.8
Allied Corp. – Massillon	8/8/96	12/31/01	1971	5.4
Best Sand	2/23/98	12/31/01	1407	3.9
S&S Aggregate – Columbus	4/1/98	12/31/01	1370	3.8
Chesterhill Stone – E. Fultonham	1/6/99	12/31/01	1090	3.0

**Total days of these companies** **31,411**

### Workdays without a lost-time accident (1 to 3 years):

Company	Begin	End	Days	Years
Midvale Sand and Gravel	3/1/99	12/31/01	1036	2.8
Melvin Stone Co. – Richards Plant	3/3/99	12/31/01	1034	2.8
Shelly – Belle Center	5/10/99	12/31/01	966	2.6
Eagle Material Supply	6/15/99	12/31/01	930	2.5
Shelly – Racine	7/14/99	12/31/01	901	2.5
Shelly – Dresden	8/25/99	12/31/01	859	2.4
Shelly – Springfield	9/15/99	12/31/01	838	2.3
Melvin Stone – Williamsport Plt	10/18/99	12/31/01	805	2.2
Sidwell Materials Inc. Union Stone	12/3/99	12/31/01	759	2.1
Chesterhill Stone – Willow Island	12/4/99	12/31/01	758	2.1
SWVA – Mill Point	12/16/99	12/31/01	746	2.0
Sidwell Materials – Zanesville Plt	2/20/99	12/31/01	742	2.0
Oxford Mining Snyder Mine	1/13/00	12/31/01	718	2.0
Solon Exc. Sand & Gravel	1/31/00	12/31/01	700	1.9
Jefferson Materials	3/21/00	12/31/01	637	1.7
Daron Coal Standing Stone Mine	4/4/00	12/31/01	636	1.7
Van Wey Sand and Gravel	12/27/00	12/31/01	369	1.0
Belpre Sand and Gravel	1/1/01	12/31/01	364	1.0
Shelly – Marseilles	1/11/01	12/31/01	354	1.0

**Total days of these companies** **14,802**

**Total Safe Days of all Companies** **46,213**

According to J. Mark Moellendick, Compliance Officer, Chesterhill Stone Company, vendors, speakers, and other presenters helped make the seminar an unqualified success. He stated that the Council is scheduling the next seminar for the first full week of February 2003 and he hoped even more could attend.■

*Tommie Deaner  
Martin Marietta*



*(Photos courtesy of Mark Moellendick, Chesterhill Stone)*

# **MSHA Issues New Rules On Diesel Particulate Matter Exposure**

## **New Requirements Supplement Regulations Issued January 2001**

**ARLINGTON, VA**-The U.S. Department of Labor's Mine Safety and Health Administration (MSHA) today issued a final rule addressing miners' exposure to diesel particulate matter (DPM) in underground metal and nonmetal mining operations. Two new provisions published today clarify and amend requirements addressed in the comprehensive rule governing exposure to DPM at metal and nonmetal mines, issued in January 2001.

"This is a very important step toward completing the entire rule addressing diesel exposure for mine workers at metal and nonmetal mining operations," said Dave Lauriski, Assistant Secretary of Labor for Mine Safety and Health. "The successful implementation of these provisions demonstrates the benefits of cooperation between government, labor, and industry where disagreements may exist on important issues relating to miners' health."

The final rule specifies what evidence a miner needs to determine tagging of diesel equipment for prompt examination. The rule clarifies the term "evidence" to mean visible smoke or odor that is unusual for the equip-

ment under normal operating procedures, or obvious or visible defects in the exhaust emissions control system or in the diesel engine. The rule also clarifies "prompt" to mean before the end of the next shift during which a qualified mechanic is scheduled to work.

The final rule also clarifies that mine operators can transfer diesel engines or equipment from the inventory of one underground mine to another underground mine operated by the same mine operator.

DPM is a microscopic-size particle found in diesel exhaust. Underground miners are exposed to far higher concentrations of this substance than any other group of workers. Overexposure to high concentrations of DPM results in a variety of serious health problems, including diseases such as lung cancer, heart failure and other cardiopulmonary problems.

**DOL/MSHA News Release No. 02-115**  
**Mine Safety and Health Administration**  
**Contact: Rodney Brown**  
**Phone: (703) 235-1452**  
**Released Wednesday, February 27, 2002**

# Fatalities through April 30, 2002

COAL			
1/1/2002 - 4/30/2002			
11 FATALITIES			
Date	Classification	State	UG/Sur
1/02	Roof Fall	W V	U G
1/24	Electrical	VA	U G
1/28	Exploding Vessel	VA	Sur
1/31	Powered Haulage	KY	U G
2/18	Roof Fall	KY	U G
2/20	Roof Fall	W V	U G
2/20	Fall Rib/Highwall	W Y	Sur
2/27	Powered Haulage	UT	Sur
3/22	Powered Haulage	KY	U G
4/10	Roof Fall	W V	U G
4/26	Powered Haulage	N M	Sur

METAL / NONMETAL				
1/1/2002 - 4/30/2002				
14 FATALITIES				
Date	Classification	State	UG/Sur	Commodity
1/09	Powered Haulage	TX	Sur	Limestone
1/12	Powered Haulage	W Y	Sur	Pumice
1/14	Slip/Fall of Person	G A	Sur	Granite
1/21	Falling/Sliding Mtl	O R	Sur	Cement
1/21	Machinery	C O	Sur	Sand & Gravel
1/24	Powered Haulage	TN	Sur	Sand & Gravel
2/09	Machinery	N M	Sur	Sand & Gravel
2/13	Hoisting	S C	Sur	Sand & Gravel
2/13	Machinery	FL	Sur	Limestone
3/29	Powered Haulage	NE	Sur	Sand & Gravel
3/30	Powered Haulage	TX	Sur	Cement
4/04	Fall of Material	M O	Sur	Limestone
4/22	Machinery	S D	Sur	Granite
4/24	Powered Haulage	TX	Sur	Limestone

Powered haulage continues to cause the most fatalities (ten altogether so far) both in coal mines and in metal and nonmetal mines. Accidents in all classifications seem to be on the rise which calls for added vigilance and possibly reinforced training to try to prevent further deaths.

# 2002 National/International Metal and Nonmetal Mine Rescue Contest

August 20-22, 2002  
Reno, Nevada

## PRELIMINARY INFORMATION

Team Registration and a Team Hosting Party will be held at the Reno Hilton on August 19, 2002.

Contest will be held in Reno, Nevada (this is a change in venue) on August 20, 21, and 22, 2002.

Competitions will be held at the Reno/Sparks Convention Center (804-443-1482).

The Awards Banquet will be held on the evening of August 22, 2002.

General contest information – contact Edward E. Lopez, Contest Director, at 703-235-1565, or email: [eelopez@msha.gov](mailto:eelopez@msha.gov)

### For information on:

Mine Rescue Contest Rules – contact Don Foster, Chief Judge, at 724-772-2333 or email: [foster-donald@msha.gov](mailto:foster-donald@msha.gov)

First-Aid Competition – contact Felix Quintana at 218-720-5448, or email: [quintana-felix@msha.gov](mailto:quintana-felix@msha.gov)

Team Registration or the Awards Banquet/Banquet Tickets – contact Pat Hines at 703-235-8480 or email: [hines-patricia@msha.gov](mailto:hines-patricia@msha.gov)

Apparatus or Gas Detector Instrument Bench Tests – contact Joe Denk at 724-772-2333 or email: [denk-joseph@msha.gov](mailto:denk-joseph@msha.gov)

Shipping, Storage, Contest Facilities or Vendor Participation – contact Sherry Wood at 214-767-8401 or email: [wood-sherry@msha.gov](mailto:wood-sherry@msha.gov)



# COURSES, CONFERENCES, SEMINARS, WORKSHOPS THROUGH JULY

## SOMETHING FOR EVERYONE!!!

Following is a list of courses and seminars offered by the Mine Health and Safety Academy to the mining industry, state agencies, other government agencies, and all other interested persons. If you are interested in attending those scheduled at the Academy, call 304-256-3252 to enroll. Please contact the Coordinator at his/her telephone number for details on topics covered or any further information. Courses indicated with an (\*) can be scheduled at your worksite if a minimum of 10 are to be enrolled.

<u>COURSES/SEMINARS</u>	<u>2002 DATE(S)</u>	<u>TUITION</u>	<u>COORDINATOR/PHONE NO.</u>
Roof Control Seminar	5/29-30	—	Joseph Fama 304-256-3309 or John Rosiek 304-256-3211
Instructor Training Workshop (Part 46) with Optional MSHA First Aid Class on 1 <sup>st</sup> day	6/3-6	\$215 \$286	Kenneth Scott 304-256-3347
Hoists and Elevators	6/11-13	\$215	Joseph P. Fama 304-256-3309
Mine Construction, Maintenance and Repairs Safety	6/18-19	\$143	Tom Bonifacio 304-256-3357
Mine Fire Control Seminar	6/20	—	Dave Friley 304-256-3343 or Jerry Bailey 304-256-3254
Electrical Safety for Miners	6/25-26	\$143	Roy Milam 304-256-3529
*Noise Hazards, Regulation, and Control	6/25-27	\$215	Wm. (Rocky) McKinney 304-256-3345
Instructor Training Workshop (Part 48) with Optional MSHA First Aid Class on 1 <sup>st</sup> day	7/8-11	\$215 \$286	Kenneth Scott 304-256-3347
*Mine Elevator Inspection Program Training Module 1	7/30-8/1	\$215	Roy Milam 304-256-3529
*Accident Prevention Techniques (3 days) upon request		\$215	Kenneth Scott 304-256-3347
*Respirable Dust and Silica (3 days) Sampling and Control		\$215	Wm. (Rocky) McKinney 304-256-3345

♦♦♦♦

The following course was developed with the National, Stone, Sand and Gravel Association and covers three days of a combination of classroom work and on-site sampling for dust and noise. A minimum of 10 students is required; maximum class size is 15 students.

Industrial Hygiene: Sampling for Respirable Dust and Noise	\$250	Wm. (Rocky) McKinney 304-256-3345
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The TRAM 2002 National Mine Instructors Seminar is coming up in October – details and a registration form will be included in the July issue. Make plans NOW to attend!!!

you are born with fewer fibers, the potential to increase muscle size is not as great. The number of muscle fibers is genetically determined and cannot be increased.

### **Testosterone**

Another critical factor in building muscle size is your level of the hormone testosterone. This hormone plays a large role in the development of new muscle tissue. A higher level of testosterone means that a greater potential exists for increasing muscle size. Again, the level of testosterone circulating in your body is genetically determined.

Some women worry that strength training will produce big, bulky muscles that they find unattractive. However, for most females, a great deal of muscular strength can be developed **without** a proportional increase in muscle size. This is probably due to the fact that, on average, females are born with fewer muscle fibers and have about one tenth the level of circulating testosterone.

### **How Fast Can I Gain Muscle Mass?**

Certainly, as a muscle's size increases, so will its weight. Over time, this results in an increase in body weight proportional to the increase in muscle mass. The rate at which this change occurs varies greatly between individuals for the reasons previously stated.

In general, it's a rather slow process. Even for the most highly motivated person with a genetic tendency for building large muscles, regular high-intensity strength training can produce an increase in muscle mass of no more than about one half pound per week. If you are gaining weight faster than this, you are probably eating more calories than you need.

### **STEROIDS**

Some people are always looking for an easier way to get strong. Since it is well known that testosterone levels affect muscle strength and size, they resort to taking synthetic testosterone, known as "steroids." Use of these substances appears to be increasing, not only among athletes, but also in other occupations.

Steroids, taken either in pill form or injected with a hypodermic needle, have two basic properties: anabolic



# MUSCULAR FITNESS

## INCREASING MUSCLE SIZE

### **Muscle Fibers**

Strength training produces new muscle tissue, which is then available to contract and generate force. More muscle tissue means that each individual fiber becomes thicker (larger diameter). Since muscles are made up of thousands of fibers, increased strength results in more muscle tissue and greater muscle size.

This increase in muscle size depends upon many things other than just effective strength training. The number of fibers a muscle contains is very important—the more fibers you have, the bigger your muscles can become. If

meaning that they build tissue, and androgenic meaning that they produce male sex characteristics. Producers try to chemically alter these drugs to minimize their androgenic properties, and to maximize their anabolic benefits, but **all steroids exert both effects on the user.**

There is little doubt that steroids do what they are supposed to:

- Extra testosterone increases protein synthesis, leading to a quicker build-up of muscle tissue.
- Steroids induce the body to retain fluid, making muscles appear larger.
- Steroids tend to increase aggression, which some people channel by exercising more intensely.
- Steroids can shorten the rest and recovery period needed between workouts, so steroid users can lift weights more frequently.

However, there is another side to the coin: unwanted side effects and dangerous dependency. These problems can be summarized as follows.

### **Less Serious Side Effects**

In male steroid users, some of the extra testosterone may be converted by the body into estrogen, the female sex hormone. The result is the appearance of breast tissue, a condition known as gynecomastia. Too much testosterone in the bloodstream triggers the testicles to reduce their own natural production. The end result is that the testicles shrink (testicular atrophy) which can lead to impotence and sterility.

For the female user, suddenly higher testosterone levels seem to confuse the body into thinking it is male: breasts shrink, the clitoris enlarges (often becoming painful), hair begins to grow on the face and body, the voice deepens, and the menstrual cycle is disrupted. Except for the latter effect, these changes are usually irreversible.

In **both sexes**, steroids cause acne, balding, and aggressive behavior. Steroids can disrupt the brain's chemistry,

and documented cases of steroid-induced psychosis are growing.

### **More Serious Side Effects**

The water retention induced by steroids leads to higher blood pressure and kidney damage. Steroids also affect the liver, resulting in higher levels of blood cholesterol. As a result, the process of arteriosclerosis is accelerated, so that heart attacks and strokes have occurred in users who are only twenty to thirty years old. In fact, steroids are so toxic that liver cells begin to die with even the smallest dose. Liver tumors and various forms of cancer have also been linked to steroid use.

### **Dependency and Cumulative Damage**

As with any drug, steroid users quickly develop a tolerance. The same dose no longer is enough; they must take ever larger doses to achieve the same effect. Steroids also tend to be psychologically addicting because users feel weak and depressed without them—they don't like to see their muscles shrinking when they stop taking the drug.

The end result is that steroid users tend to take larger doses for longer periods of time, and damage to the body mounts. Experts now conclude that long-term, high-dose steroid usage comes with a price tag: an average fifteen year life expectancy.

**People tend to be impatient, wanting a quick fix or a magic pill to speed up progress. No such thing exists. Regular strength training and a balanced diet should be considered long-term projects, requiring dedication and discipline.■**

# 2002 Local Coal Contest Listing

A National Coal Mine Rescue, First Aid and Bench Contest Rules and Interpretations Meeting was held at the National Mine Health and Safety Academy on March 19 and 20, 2002. The meetings were videotaped and are available to teams for training purposes. If you would like to receive this video, contact Mary Lord at (304) 256-3257 or write to National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813-9426 or email [lord-mary@msha.gov](mailto:lord-mary@msha.gov).

<b>Contest</b>	<b>Date and Location</b>	<b>Contact Person and Telephone</b>
West Virginia State Mine Rescue, First Aid, Bench and Preshift Contest	July 17-18, 2002 Beckley, WV	Mike Rutledge 304-558-1425 Ext.29
Rocky Mountain Association Mine Rescue, First Aid and Bench Contest	August 6-8, 2002 Price, UT	Kevin Tuttle 435-687-2317
Virginia Mining Institute's Safety Day-Mine Rescue, First Aid, Bench and Preshift Contest	August 6-8, 2002 Blacksburg, VA	Norman Page/Diane Crouse 276-679-0230
NMRA-Post 5 Mine Rescue, First Aid and Bench Contest	August 14-15, 2002 Morgantown, WV	Jerry W. Johnson 304-291-4277 or -4311
Knott-Floyd Holmes Safety Days, Mine Rescue, Bench and Preshift Contest	August 22-23, 2002 Allen, KY	Dave Jones 606-785-4191
Pennsylvania State Mine Rescue and Bench Contest	August 22-23, 2002 Carmichaels, PA	Carol Boring 724-925-5150 Ext. 142
Southern West Virginia Mine Rescue, First Aid, and Bench Contest	August 28-29, 2002 Beckley, WV	Mike Rutledge 304-558-1425 Ext. 29
Kentucky Mining Institute, Mine Rescue, Bench Preshift, and MET Contest	September 4-6, 2002 Owensboro, KY	Geaunita Caylor 859-257-2820
State of Alabama Mine Rescue, First Aid and Bench Contest	September 12-13, 2002 Birmingham, AL	Bill Kelce 205-822-0384
Illinois Mine Rescue and Bench Contest	September 24, 2002 Springfield, IL	Steve Kattenbraker 618-439-4355
NMRA-Post 11 Bench Contest	October 11-12, 2002 Paducah, KY	Tom Dupree 270-821-0444

# 2002 Metal and Nonmetal National Mine Rescue Regional Contest Information



<b>Date</b>	<b>Location</b>	<b>Contact</b>
July 9 - 10, 2002	Elko Olympiad (at the Meikle Mine) Elko, NV	Bill Francom 775-778-8857
July 19 - 20, 2002	Northern Invitational Mine Rescue Contest	Rick Hickman 440-639-4223
August 19 - 22, 2002	National Metal and Nonmetal Mine Rescue Contest	Ed Lopez 703-235-1565
October 10 - 11, 2002	University of Missouri Rolla Regional Mine rescue Contest Rolla, MO	Jim Taylor 573-341-6406

# Join Today! and Grow with us...

## Apply for Membership...

Membership is free. Your organization can become a Joseph A. Holmes Safety Association Chapter by completing a membership application and submitting it to the Holmes Safety Association.

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: \_\_\_\_\_

Signature of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Send to:

Joseph A. Holmes Safety Association

P.O. Box 4187

Falls Church, VA 22044-0187

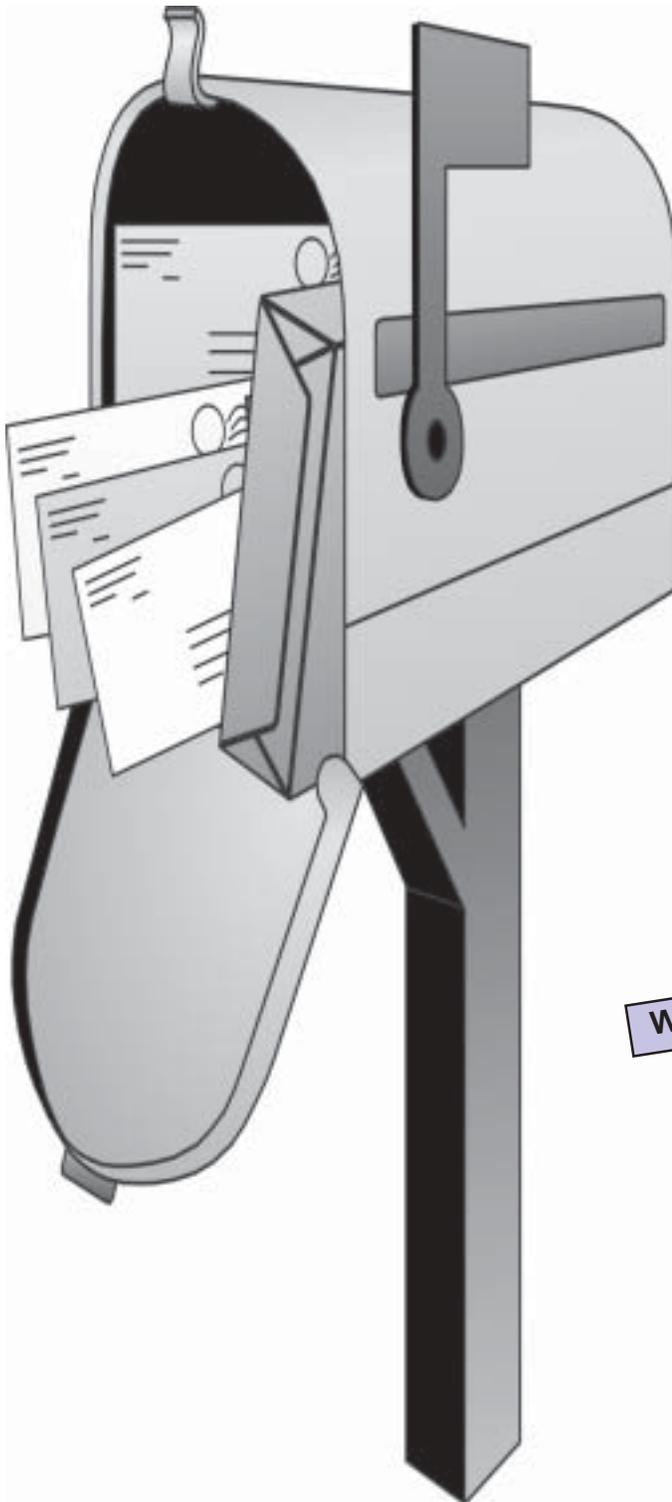
or

Telephone: (703) 235-8264

Fax: (703) 235-9412



# For address changes, comments, suggestions and new subscription requests:

**Contact:**

Bob Rhea  
Joseph A. Holmes Safety Association Bulletin  
Mailing List  
MSHA-US DOL  
4015 Wilson Blvd. Rm. 523A  
Arlington, VA 22203-1984  
703/235-1400 Fax: 703/235-9412  
e-mail: rhea-robert(@msha.gov

**Please address any comments to:**

Charlotte Richardson  
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 304/256-3346  
or Fax us at 304/256-3461  
e-mail: richardson-charlotte@msha.gov

**Reminder:** The District Council Safety Competition for 2002 is underway - please remember that if you are participating this year, you need to mail your quarterly report to:

**We moved...**

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

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