

# Catalog of Training Products for the Mining Industry - FY 2004



U.S. Department of Labor  
Mine Safety and Health Administration  
National Mine Health and Safety Academy



# **Catalog of Training Products for the Mining Industry — FY 2004 (Catálogo de Productos de Entrenamiento para la Industria Minera - AF 2004)**

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U. S. Department of Labor  
(Departamento de Trabajo de los Estados Unidos)

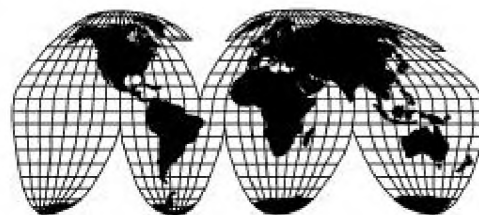
Mine Safety and Health Administration  
(Administración de Salud y Seguridad de las Minas)

National Mine Health and Safety Academy  
(Academia Nacional de Salud y Seguridad de las Minas)



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U. S. Department of Labor  
(Departamento de Trabajo de los Estados Unidos)  
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# INFORMATION AND PRODUCTS

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## INTRODUCTION

Welcome to the FY 2004 edition of the *Catalog of Training Products for the Mining Industry*. You will notice some changes that we hope will make it easier for you to find the products you need. These changes are based on comments received from you, our customers.

The Academy also publishes a catalog, *Courses for MSHA and the Mining Industry*. You can obtain copies of this catalog from the address below.

## HOW TO ORDER FROM THIS CATALOG

The items listed in this catalog can be ordered from:



National Mine Health and Safety Academy  
Department of Instructional Materials  
Printing and Property Management Branch  
1301 Airport Road  
Beaver, West Virginia 25813-9426  
Phone: 304-256-3257  
Fax: 304-256-3368  
E-mail: MSHADistributionCenter@dol.gov

An order form is included in the back of the catalog for your convenience. **Please allow 4-6 weeks for delivery.**

Advance payment in U.S. currency is required for all orders from foreign countries. All other orders may be paid by check or purchase order. **NOTE: We are unable to accept credit cards.**

We will gladly provide further information on any item listed in this catalog, address any comments you may have, or send you additional catalogs.

## ADDITIONAL INFORMATION

You can also obtain information on mine health and safety from the Academy's Technical Information Center and Library (TICL). The TICL is the largest library in the United States devoted to mine safety and health. The library provides books, technical documents, photographs, maps, journal articles, and other materials in various formats and features a wide selection of audiovisual materials. In addition to the primary collection of mine safety and health materials, the library maintains extensive mine accident files, an archive of historical mine disasters information in the United States and selected works on the sociology, history and cultures of mining worldwide.

The TICL offers reference assistance to users by telephone, mail or email. For information call 304-256-3266 or email MSHALibrary@dol.gov.

The TICL's online catalog and information about services are available at:  
<http://www.msha.gov/TRAINING/LIBRARY/library.HTM>



# INFORMACIÓN Y PRODUCTOS

## INTRODUCCIÓN

Bienvenidos a la edición de FY 2004 del Catálogo de Productos por Enseñanza en la Minería. Usted notará algunos cambios que nosotros esperamos hacérselo más fácil a usted encontrar los productos que usted necesita. Nosotros hemos basado estos cambios en las observaciones que hemos recibido de ustedes, nuestros clientes.

Los productos traducidos en español están inscritos por todo este catálogo y están indicados por el siguiente símbolo (introducir el símbolo al imprimir – <sup>ESPAÑOL</sup> ). ***Se puede encontrar un índice separado, en español, en la página 111.***



## CÓMO ENCARGAR DE ESTE CATÁLOGO

Se pueden encargar los artículos inscritos en este catálogo de:

National Mine Health and Safety Academy  
Department of Instructional Materials  
Printing and Property Management Branch  
1301 Airport Road  
Beaver, West Virginia 25813-9426  
Teléfono: 304-256-3257  
Fax: 304-256-3368  
Correo electrónico: MSHADistributionCenter@dol.gov

Se incluye un formulario por encargar en la parte trasera del catálogo por su conveniencia. Por favor, deje usted 4-6 semanas por entrega.

El pago adelantado en moneda estadounidense es necesario por todos los pedidos de países extranjeros. Se puede pagar todos los otros pedidos por cheque o por orden de compra (Purchase Order). NOTA: Nosotros no podemos aceptar tarjetas de crédito.

Con mucho gusto, nosotros le daremos a usted información adicional sobre cualquier artículo en este catálogo, responder a cualquiera observación que usted tenga, o enviarle a usted catálogos adicionales.

## INFORMACIÓN ADICIONAL

Usted también puede obtener información sobre salud y seguridad en las minas en el Centro de Información Técnica y Biblioteca de la Academia (TICL). TICL es la biblioteca más grande en los Estados Unidos dedicada a la seguridad y salud en las minas. La biblioteca proporciona libros, documentos técnicos, fotografías, mapas, artículos de periódicos, y otros materiales en varios formatos y ofrece una selección amplia de materiales audiovisuales. Además de la colección primaria de materiales de seguridad y salud en las minas, la biblioteca mantiene un archivo extenso de los accidentes en las minas, y un archivo de información de desastres históricos en minas en los Estados Unidos y obras escogidas en sociología, historia y culturas de las minas en el mundo entero.

TICL ofrece la asistencia de referencia a usuarios por teléfono, correo o correo electrónico. Por información llame al 304-256-3266 o correo electrónico MSHALibrary@dol.gov.

El catálogo en línea de TICL e información sobre los servicios están disponibles en:  
<http://www.msha.gov/TRAINING/LIBRARY/library.HTM>

# OTHER SOURCES OF TRAINING MATERIALS (OTRAS FUENTES DE MATERIALES DE ENTRENAMIENTO)

In addition to the Academy, several other sources produce training materials. These include the National Institute for Occupational Safety and Health (former Bureau of Mines) and several states that participate in MSHA's State Grants Program. Listed below are the names, addresses, and phone numbers of these organizations.

(Además de la Academia, otras variadas fuentes producen materiales de entrenamiento. Éstos incluyen el Instituto Nacional para la Seguridad y Salud Ocupacionales (antiguo Departamento de las Minas) y varios estados que participan en los Programas de Subvenciones Estatales de MSHA. Listados debajo están los nombres, direcciones, y números de teléfono de estas organizaciones.)

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## [INSTITUTO NACIONAL PARA LA SEGURIDAD Y SALUD OCUPACIONALES (NIOSH)]

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Fax: 412-386-5902  
E-mail: minetraining@cdc.gov



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# MULTIMEDIA TRAINING MATERIALS

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This section of the catalog lists all available multimedia training material.

DVDs (Digital Versatile Disc) and videotapes are listed alphabetically by title. They offer trainers unique opportunities to reinforce key training objectives, expand and enhance training sessions, and add variety to training programs.

DVD technology means more interactivity is available to both student and instructor – may be used for self-paced study or by an instructor in classroom presentations. It is suggested you use the programs to complement training specific to your operation. In order to use the DVD program, **YOU MUST HAVE A DVD SET-TOP PLAYER OR A DVD EQUIPPED COMPUTER.**

Where appropriate, coal-related items are designated (C) and metal/nonmetal items are designated (MNM).

**All videotapes are available in VHS format and cost \$8.00 per tape;  
DVDs cost \$8.00 per disc.**



**Selected videotapes are available in SPANISH from:**

**Ms. Ruth Christianson  
The University of Texas at Austin  
Professional Development Center  
P.O. Box 7518  
Austin, TX 78713-7518  
Telephone: 512-471-4633  
800-687-7345  
Fax: 512-471-4695  
E-mail: [rchristianson@mail.utexas.edu](mailto:rchristianson@mail.utexas.edu)**

# MATERIALES DE MULTIMEDIA PARA ENTRENAMIENTO

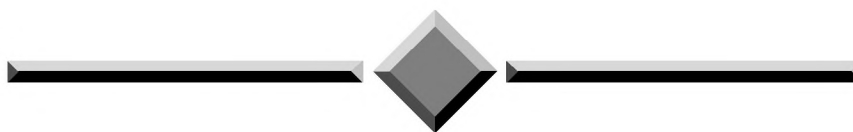
Esta sección del catálogo lista todos los materiales de multimedia para entrenamiento disponibles.

DVDs (Disco Versátil Digital) y videocintas son listados alfabéticamente por el título. Ellos les ofrecen a los instructores únicas oportunidades de reforzar los objetivos importantes de entrenamiento, extender y reforzar las sesiones de entrenamiento, y agregar variedad al programa de entrenamiento.

La tecnología de DVD significa que más interactividad está disponible para ambos el estudiante y el instructor para su auto-ritmo de estudio o para un instructor en las presentaciones en el aula. Se sugiere que usted use los programas para complementar el entrenamiento específico a su funcionamiento. Para usar el programa de DVD, USTED DEBE TENER UN APARATO REPRODUCTOR DE DVD O UNA COMPUTADORA EQUIPADA CON DVD.

Donde sea apropiado, los artículos relacionados con el carbón son designados (C) y los artículos metal/no-metal son designados (MNM).

**Todos las videocintas están disponibles en formato VHS a un costo de \$8.00 por cinta; DVDs a un costo de \$8.00 por disco.**



**Seleccionadas videocintas están disponibles en ESPAÑOL con:**

**Ms. Ruth Christianson  
The University of Texas at Austin  
Professional Development Center  
P.O. Box 7518  
Austin, TX 78713-7518  
Telephone: 512-471-4633  
800-687-7345  
Fax: 512-471-4695  
E-mail: [rchristianson@mail.utexas.edu](mailto:rchristianson@mail.utexas.edu)**

# MULTIMEDIA TRAINING MATERIALS

## Accident Reduction Program/Post Accident Remedies, Technical Support (C/MNM)

This series consists of videos offering ways to prevent accidents before they happen. Technical Support conducts field investigations, laboratory studies, and analyses to resolve specific problems. MSHA is developing this video series in an attempt to help us learn from past accidents. We are providing you with what we are calling "Low Tech" remedies.

The first video consists of five subject areas:

1. New water spray system for continuous mining machines
2. Safely changing cutting bits on a continuous miner
3. Using drip pans and safely lubricating conveyor systems
4. Using safety props for mobile equipment repairs
5. Mechanics taking the vehicle's keys when performing maintenance

MSHA 1999 25 min

Cat No: VC 959

Price: \$8.00



## Another Sunrise: A Close Call on a Surge Pile (C)

This video recounts the rescue of a dozer operator from a coal surge pile accident. Emphasis is placed on reinforcing dozer cabs to withstand burial pressure, the role of advanced technologies in surge pile safety, and good safety practices and training.

MSHA 2002 9 min

Cat No: VC 104

Price: \$8.00

*Also available in Spanish (VC 107-S)  
see description below.*



## Otra Salida del Sol: Una Llamada Importante con una Pila de Regulación (C)

Este video relata el rescate de un operador de excavadora de un accidente en una pila de regulación de carbón. Se pone énfasis en reforzar las cabinas de la excavadora para resistir la presión a enterramientos, el papel de las tecnologías avanzadas en la seguridad con las pilas de

regulación, y buenas practicas de seguridad y entrenamiento.

MSHA 2002 9 minutos

Número de

Catálogo: VC 107-S

Precio: US\$ 8.00

## Anthracite: Pre-Shift Examinations of Underground Mines

Video shows two mine foremen conducting typical pre-shift inspections at two different underground anthracite mines.

MSHA 1994 31 min

Cat No: VC 806

Price: \$8.00

## Ask the Right Questions

Developed in cooperation with the United Mine Workers of America and Bituminous Coal Operator's Association – Joint Industry Training Committee, "Ask the Right Questions" discusses what needs to be done to identify sources of accidents and determine prevention methods at your mine. Four types of physical barriers and five types of human barriers are enacted and analyzed using accident analysis and problem identification (AAPI) techniques. This video is based on the concept that asking the right questions is fundamental to finding solutions to our accident problems.

MSHA 1992 29 min

Cat No: VC 848

Price: \$8.00

## Automatic Emergency Parking Brakes (as required by 30 CFR 75.523-3)

This video discusses the applications of 30 CFR 75.523-3 to "all rubber-tire, self-propelled electric haulage equipment used in active workings of an underground coal mine – with the exception of personnel carriers." Each of the specific subparagraphs of this mandatory standard is not only explained but also demonstrated to reinforce the concept.

MSHA 1992 17 min

Cat No: VC 846

Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS

## Ball Mill Safety (MNM)

Developed cooperatively by MSHA and Lehigh Portland Cement Company. Outlines the various steps – precautions and procedures – that must be taken to safely and efficiently shut down a ball mill, enter, inspect, service (repair or perform routine maintenance), and restart the operation. Procedures discussed/demonstrated include: planning, crew selection and briefing, safe work permits, electrical lockout, isolating maintenance area, hatch/door removal, safe access, ventilation and respiratory protection, welding/cutting, hatch/door installation, and cleanup.

MSHA 1988 17 min  
Cat No: VC 933  
Price: \$8.00



## Best Practice Guide to the Milling of Slate, A (MNM)

This video is designed to raise awareness of the dust and noise hazards associated with the slate industry.

MSHA 2001 13 min  
Cat No: VC 966  
Price: \$8.00

## Blind Spots Can Kill! (C/MNM)

A haul truck driver and an electrician discuss the accident where a 240-ton haul truck drove over the electrician's work vehicle. No one was in the vehicle, but the electrician's one-ton truck was destroyed. This video stresses the importance of getting the driver's attention whenever you're near a large haul truck and avoid getting into a blind spot.

MSHA 1996 6½ min  
Cat No: VC 821  
Price: \$8.00



## Chemical Hazard Information (C/MNM)

Virtually all chemical products are labeled and have Material Safety Data Sheets (MSDSs), when they are delivered to a mine. Many products have hazardous components that can harm miners. This video is intended to train miners to understand how chemicals can enter the body (Routes of Entry). It also teaches miners the contents of chemical labels and MSDSs, as well as how to interpret the technical

terms found on MSDSs. It can be shown to miners as part of your training program, explaining a critical HazCom provision.

MSHA 2002 17 min  
Cat No: VC 971  
Price: \$8.00

*Also available in Spanish (VC 979-S)  
see description below.*



## Información sobre riesgos químicos

Casi todos los productos químicos que llegan a las minas vienen etiquetados y tienen Hojas de Datos de Seguridad de Materiales (MSDSs), sin embargo, muchos productos tienen componentes peligrosos que pueden afectar la salud de los mineros. El primer objetivo de este video es capacitar a los mineros para que entiendan cómo los productos químicos pueden penetrar en su cuerpo (vías de entrada). El segundo, es enseñar a los mineros a leer las etiquetas de los productos químicos y a interpretar los términos técnicos de las MSDSs. Esto puede complementar su programa de capacitación para los mineros, ya que además le permite explicar una disposición esencial de comunicación de riesgos.

MSHA 2002 17 minutos  
Número de  
Catálogo: VC 979-S  
Precio: US\$ 8.00

## Coal Dump Point Safety: Stockpiles and Wastepiles

Using trucks to dispose of waste material and build coal stockpiles are important parts of the mining operation, but accidents can occur during these activities if adequate safety precautions are not taken. The video will illustrate the most common hazards at dump points and piles and will demonstrate recommended safety practices.

MSHA 1998 15 min  
Cat No: VC 924  
Price: \$8.00

*Also available in Spanish (VC 965-S)  
see description on next page.*

# MULTIMEDIA TRAINING MATERIALS



## Seguridad en los puntos de descarga: pilas de almacenaje y de desperdicio (carbón)

El uso de camiones para eliminar el material de desperdicio y para hacer pilas de almacenaje de carbón es una etapa importante de cualquier operación minera. Sin embargo, cualquier accidente puede ocurrir durante esa etapa si no se toman las medidas adecuadas en materia de seguridad. Este video ilustrará los riesgos más comunes que hay en las pilas y en los puntos de descarga y describirá el tipo de medidas de seguridad que deben ser tomadas.

MSHA 1998 15 minutos

Número de  
Catálogo: VC 965-S  
Precio: US\$ 8.00



## Conducting a Chemical Hazard Determination (C/MNM)

MSHA's HazCom requires mine operators to inventory the chemicals at their mines and determine which are hazardous. This video helps mine operators conduct that inventory by explaining HazCom and how it applies to the most common mine chemicals. The video walks the viewer through HazCom's decision process of Chemical Hazard Determination. It can also be shown to miners as part of your training program, explaining a critical HazCom provision.

MSHA 2002 12 min

Cat No: VC 977  
Price: \$8.00

*Also available in Spanish (VC 980-S)  
see description below.*



## Métodos de evaluación de riesgos químicos

La comunicación de riesgos de la MSHA requiere que los operadores mineros hagan un inventario de los productos químicos que tienen en sus minas y que determinen cuáles son peligrosos. El objetivo de este video es ayudar a los operadores mineros a llevar a cabo dicho inventario, explicándoles cuáles son las comunicaciones de riesgos y enseñándoles cómo se aplican a los

productos químicos más comunes en las minas. Este video indica cómo seguir las comunicaciones de riesgos para poder evaluar los riesgos químicos. Esto puede complementar su programa de capacitación para los mineros, ya que además le permite explicar una disposición esencial de comunicación de riesgos.

MSHA 2002 12 minutos

Número de  
Catálogo: VC 980-S  
Precio: US\$ 8.00

## Confined Spaces in Mining

Provides a general definition for confined spaces in mining, and displays common examples of confined spaces. Suggests safety guidelines for working in and around confined spaces. In addition, the permitting process for confined space entry is outlined and 9 steps for safe confined space entry and exit are detailed.

Florida Dept. of Environmental  
Protection 1994 9 min

Cat No: VC 815  
Price: \$8.00

## Control of Back Injuries in Mining

This video defines the origin and history of Lower Back Pain (LBP) and how the general and mining industry can combat musculoskeletal injuries, including back injuries.

BuM 1995 25 min

Cat No: VC 938  
Price: \$8.00

## Customer and Delivery Truck Drivers Hazard Training (MNM)

This video provides hazard information for truckers who frequent mine sites. Covered are safe work behaviors that will help truck drivers avoid the dangers of ground, electrical, transportation, slip and fall, and numerous other hazards that are common in and around mine sites. This video comes with an 8-page guide.

Penn State University 1997 10 min

Cat No: VC 920  
Price: \$8.00

*Also available in Spanish (VC 983-S)  
see description on next page.*



# MULTIMEDIA TRAINING MATERIALS



## Capacitación de riesgos para los choferes de camiones de reparto y de los clientes

Este video familiariza a los choferes, que llevan productos a las minas, con los factores de riesgo más comunes que hay en la industria minera. Además, recomienda algunos consejos para evitar accidentes ocasionados por el terreno, la electricidad, el transporte, los resbalones y caídas o por otros riesgos inherentes a las minas. Este video viene con una guía de ocho páginas.

Universidad del Estado  
de Pensilvania 1997 10 minutos

Número de  
Catálogo: VC 983-S  
Precio: US\$ 8.00

## Dawn of a New Day: Continuous Haulage Safety (C)

This video addresses the hazards associated with continuous face haulage systems.

MSHA 1998 23 min  
Cat No: VC 861  
Price: \$8.00

## Diesel Regulations — Heavy Duty Vehicles (C)

This video was developed to provide assistance to mine operators, diesel equipment manufacturers, and vendors in implementing the final phase of the diesel regulations. This video covers sections 75.1909, 75.1910, and 75.1911 of the Code of Federal Regulations.

MSHA 1999 16 min  
Cat No: VC 944  
Price: \$8.00

*Also available in Spanish (VC 987-S)  
see description below.*



## Reglamentos para motores diesel - Vehículos para servicio pesado

Este video fue concebido para ayudar a los operadores mineros y a los fabricantes y proveedores de equipos diesel a implementar la fase final de las reglamentaciones para motores diesel. Este video cubre las partes 1909, 1910 y 1911 del artículo 75 del Código Federal de Regulaciones.

MSHA 1999 16 minutos

Número de  
Catálogo: VC 987-S  
Precio: US\$ 8.00

## Diesel Regulations — Light Duty Vehicles (C)

This video was developed to assist mine operators, diesel equipment manufacturers, and vendors with the implementation of the final phase of the diesel regulations. This video covers sections 75.1909, 75.1910, and 75.1911 of the Code of Federal Regulations.

MSHA 1999 11 min  
Cat No: VC 949  
Price: \$8.00

*Also available in Spanish (VC 988-S)  
see description below.*



## Reglamentos para motores diesel - Vehículos para servicio ligero

Este video fue concebido para ayudar a los operadores mineros y a los fabricantes y proveedores de equipo diesel a implementar la fase final de las reglamentaciones para motores diesel. Este video cubre las partes 1909, 1910 y 1911 del artículo 75 del Código Federal de Regulaciones.

MSHA 1999 11 minutos  
Número de  
Catálogo: VC 988-S  
Precio: US\$ 8.00

## Dump Point Safety: Stockpiles and Wastepiles (MNM)

Using trucks to dispose of waste material and build stockpiles are important parts of many mining operations, but accidents can occur during these activities if adequate safety precautions are not taken. This video will illustrate the most common hazards at dumps and piles and will demonstrate recommended safety practices.

MSHA 1997 14 min  
Cat No: VC 858  
Price: \$8.00

*Also available in Spanish (VC 975-S)  
see description on next page.*

# MULTIMEDIA TRAINING MATERIALS



## **Seguridad en los puntos de descarga: pilas de almacenaje y de desperdicio**

El uso de camiones para eliminar el material de desperdicio y para hacer pilas de almacenaje es una etapa importante de cualquier operación minera. Sin embargo, cualquier accidente puede ocurrir durante esa etapa si no se toman las medidas adecuadas en materia de seguridad. El objetivo de este video es mostrar los riesgos más comunes que hay en las escombreras y pilas, y recomendar procedimientos de seguridad.

MSHA 1997 14 minutos  
Número de  
Catálogo: VC 975-S  
Precio: US\$ 8.00

## **Dust Control – It's Everyone's Business**

This videotape is one of a series on silica dust and silicosis. These programs are being prepared jointly by the National Industrial Sand Association (NISA) and the Mine Safety and Health Administration (MSHA). This 19-minute video discusses the importance of well-designed and maintained dust control systems and procedures to prevent exposure to dust containing silica.

MSHA 1997 19 min  
Cat No: VC 843  
Price: \$8.00

## **DUST – The Invisible Enemy (C/MNM)**

This video describes the portion of dust generated by mining activities that causes dust-related lung disease. Respirable dust, the smallest, unseen particles, are breathed deep into the lungs. When this dust overloads the lungs' ability to protect itself, disease can result. The sources of respirable dust generation, its composition, and control are discussed.

MSHA 2000 15 min  
Cat No: VC 960  
Price: \$8.00

*Also available in Spanish (VC 954-S)  
see description below.*



## **Polvo - El enemigo invisible**

En este video se explica la proporción de polvo generada por las actividades

mineras que provoca las enfermedades pulmonares. El polvo respirable, las pequeñísimas partículas invisibles que, al respirar, entran hasta lo más profundo de los pulmones. Cuando el polvo excede la capacidad de autoprotección de los pulmones, se puede contraer una enfermedad. En este video se habla de las fuentes generadoras de polvo respirable, de su composición y de su control.

MSHA 2000 15 minutos  
Número de  
Catálogo: VC 954-S  
Precio: US\$ 8.00

## **Emergency Response Planning (Who Needs It?)**

This video discusses the importance of small mine operations having an Emergency Response Plan (ERP), and discusses the planning, development, and proper use of the ERP.

Bureau of Mines 1995 16 min  
Cat No: VC 838  
Price: \$8.00

## **Escape From Mine Fires**

Illustrates the importance of knowing effective self-rescue and escape procedures in the event of a mine fire. Two miners describe their experiences in escaping a mine fire in 1988.

BuM 1990 49 min  
Cat No: VC 882  
Price: \$8.00

## **Explosives Underground – Handling Explosives in Modern Mines (MNM)**

This video emphasizes safety standards for the handling and transportation of explosive materials from surface to underground magazines. It shows underground storage of explosives, inspecting vehicles required to transport explosives underground, examining work places and scaling procedures, and loading and detonating explosives. It also includes staged safety violations and a review of an underground blasting accident.

NIOSH 1999 15 min  
Cat No: VC 955  
Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS

## Fall Protection: Your Lifeline to Safety (C/MNM)

This video provides an overview of the hazards associated with doing work at elevated locations and the importance of fall protection. Common types of fall protection systems are presented, including personal fall arrest and restraint devices. Special emphasis is placed on the development of site-specific policies and procedures, with regard to fall protection regulations in the mining industries.

MSHA 2000 14 min  
Cat No: VC 961  
Price: \$8.00

*Also available in Spanish (VC 984-S)  
see description below.*



## Protección contra caídas: Su línea de vida hacia la seguridad

Este video presenta los riesgos asociados con los trabajos que se efectúan en partes elevadas y la importancia de los equipos contra caídas. Este video muestra los sistemas de protección contra caídas más comunes tales como los dispositivos anticaídas personales y los de retención de movimientos. Así mismo, se hace hincapié en el hecho de cada mina desarrolle políticas y procedimientos específicos que cumplan con las normas de seguridad anticaídas.

MSHA 2000 14 minutos  
Número de  
Catálogo: VC 984-S  
Precio: US\$ 8.00

## Fatal Alert: Entry Into Storage Silos

This video addresses the hazards involved in cleaning a storage silo. You'll hear from a rescue worker who describes a recovery operation of a worker who fell into one of the silos.

MSHA 1999 11 min  
Cat No: VC 943  
Price: \$8.00

## Fire Suppression – How It Works (C)

Fire is one of the most feared events that can happen at a mine. This video emphasizes the need for a fire risk analysis of a piece of mining equipment. With a properly sized, installed, and maintained fire

suppression system, a fire could be controlled and extinguished.

MSHA 2000 15 min  
Cat No: VC 952  
Price: \$8.00

## First Aid Video (C/MNM)

Designed to be used with the First Aid Course to conduct first aid training in the mining industry.

**NOTE:** Spanish version available on VHS videotape from the University of Texas at Austin (see page 1).

One videotape covers the following eight subjects:

|                             |           |
|-----------------------------|-----------|
| Patient Assessment          | 6:28 min  |
| Artificial Ventilation      | 11:54 min |
| Control of Bleeding         | 9:11 min  |
| Shock                       | 7:54 min  |
| Wounds and Dressing         | 10:44 min |
| Burns and Scalds            | 5:28 min  |
| Musculoskeletal Injuries    | 7:59 min  |
| Handling and Transportation | 10:17 min |

**NOTE:** Separate tapes on a single subject are not available.

MSHA 1990  
Cat No: VC 886  
Price: \$8.00

## Front-End Loader Safety (C/MNM)

Based upon records of actual mining accidents, this video describes some of the fatalities and injuries that can occur in the use (and misuse) of front-end loaders (particularly if the operator is inattentive, careless, disobeys safety rules, and/or takes unnecessary chances). Analyzes these accidents and explains causes and preventive measures. Presents safe operating procedures for various work assignments. Designed to motivate front-end loader operators to adopt safe driving and operating habits and to develop a positive attitude toward mine haulage safety in general.

MSHA Rev 1994 14 min  
Cat No: VC 862  
Price: \$8.00

# MULTIMEDIA TRAINING MATERIALS

## Geology of Roof Falls (C)

Stresses the importance of noting changes in rock strata. Program follows a sequential change in roof rocks, and describes the changing roof conditions. Each fall area is described with colorful illustrations and photography to explain how weaknesses in the roof rock contributed to the falls.

**NOTE: This video is a taped version of the slide-tape program.**

MSHA 1987 20 min  
Cat No: VC 941  
Price: \$8.00

## Good Berms Save Lives (MNM)

This informative video discusses one mine's concern about berms on their mining property. The mine studied their berms using various materials and different berm heights. The size and speed of mining equipment, weather conditions, and grades also play a role in proper berm construction.

MSHA 1998 15 min  
Cat No: VC 928  
Price: \$8.00

*Also available in Spanish (VC 976-S)  
see description below.*



## Las bermas adecuadas salvan vidas

En este video informativo, una compañía minera comparte los resultados de un estudio que hicieron en su propiedad sobre las bermas. En esta mina se hicieron pruebas con bermas de distintos materiales y alturas. El tamaño y la velocidad del equipo minero, las condiciones meteorológicas y el grado de inclinación también influyen en la construcción adecuada de las bermas.

MSHA 1998 15 minutos  
Número de  
Catálogo: VC 976-S  
Precio: US\$ 8.00

## Ground Support . . . It's Important (Miner Mike Saves the Day) (MNM)

An older, more experienced miner "Mike" teaches two new inexperienced miners about the hazards of taking shortcuts on the job and the importance of proper ground support in metal/nonmetal mines. This

video illustrates the proper techniques and procedures of drilling and bolting for adequate ground support.

NIOSH 2000 33 min  
Cat No: VC 956  
Price: \$8.00



## Gypsum Mining (C/MNM)

*Health and Safety Hazard Awareness - An Overview*

This video is an overview of the basics of health and safety hazard recognition of many of the operations at a mine site. Your mine's education and training program will cover many of these topics in much more detail and inform you of specific policies at your mine. Remember, you, the miner, are the key ingredient in safety.

MSHA 2003 14 min  
Cat No: VC 113  
Price: \$8.00

## Harvey Roles I (MNM)

This video is a hazard recognition and first aid training video. It depicts a contractor arriving at a surface mine to do some work. The lack of proper hazard training, in addition to his preoccupation while driving, ultimately contributes to a near fatal accident. The video uses a classic contrast of a competent and incompetent response by two fellow workers to teach the proper procedures for securing an accident scene, applying first aid principles, and engaging the Emergency Medical System (EMS). This video comes with an 8-page guide.

Penn State University 1997 13 min  
Cat No: VC 921  
Price: \$8.00

## Harvey Roles II (C)

This video is a first aid training video featuring a review of the fundamentals of rescue techniques following an electrocution. It reviews the proper procedure for rescuing a miner who has contacted an energized circuit, and demonstrates how to administer CPR. This video comes with an 8-page guide.

Penn State University 1997 13 min  
Cat No: VC 922  
Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS



## Haul Road and Dump Site Berms (C/MNM)

This DVD\* contains discussion topics, photos, best practice and safety tips, standards and policy (30 CFR Parts 56 and 77), and an interactive test designed to reinforce learning. In addition, there are three complete videos:

|                         |        |
|-------------------------|--------|
| Good Berms Save Lives   | 15 min |
| Dump Point Safety (MNM) | 14 min |
| Coal Dump Point Safety  | 15 min |

MSHA 2002

Cat No: DVD 001

Price: \$8.00

**\* In order to use the DVD program, YOU MUST HAVE A DVD SET-TOP PLAYER OR A DVD EQUIPPED COMPUTER.**

## Haulage and Hoisting in Underground Anthracite Coal Mining

Various haulage and hoisting systems typically found in anthracite coal mining areas are depicted and explained with reference to any hazards associated with each system as well as the measures needed for compliance with applicable 30 CFR regulations.

**NOTE: This video is a taped version of the slide-tape program.**

MSHA 1992 30 min

Cat No: VC 847

Price: \$8.00



## Hazard Communication (C/MNM)

This interactive digital versatile disc (DVD) contains 2 previously-produced Hazard Communication videotape programs, a brief interactive quiz, and a detailed in-depth look at MSHA's HazCom Standard. The material provides a broad look at properties and potential safety and health hazards of substances to which employees may be exposed. This material may not address specific conditions or equipment at your mine, and therefore should be used as a supplement to your own mine-specific training.

MSHA 2003

Cat No: DVD 003

Price: \$8.00

**\* In order to use the DVD program, YOU MUST HAVE A DVD SET-TOP PLAYER OR A DVD EQUIPPED COMPUTER.**

## Hazards and Safety Practices on Surge Piles (MNM)

This video is designed to make dozer operators, miners, and others who work on or around surge piles aware of the hazards associated with surge piles and inform them of the recommended safety practices.

MSHA 1997 11 min

Cat No: VC 859

Price: \$8.00

**Also available in Spanish (VC 989-S)  
see description below.**



## Riesgos y procedimientos de seguridad en pilas de regulación

El objetivo de este video es concientizar a los operadores de topadoras, mineros y demás trabajadores que laboran cerca de las pilas de regulación acerca de los riesgos asociados a dichas pilas, además de mostrar las mejores prácticas de seguridad.

MSHA 1997 11 minutos

Número de

Catálogo: VC 989-S

Precio: US\$ 8.00

## Hazards of Coal Stockpiling Operations

This video shows what happens when miners or equipment operators are working on a surge pile and the material unexpectedly collapses, breaks loose, or starts to flow underneath them. The disastrous result of being engulfed in loose material – suffocation – is demonstrated by a working model of a surge pile. The model shows how stockpiles with drawholes and feeders work, what takes place within the piles, the properties of flowing materials, and how hazardous conditions can develop at surge piles. Included are action scenes of heavy mobile equipment being used around stockpiles. The video emphasizes recognizing stockpile hazards and preventing stockpile accidents.

MSHA 1994 26 min

Cat No: VC 831

Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS



## Hearing Conservation, MSHA's Part 62 (C/MNM)

Noise is a hazard that can diminish or destroy your hearing. This video shows the different hearing protectors available and the proper way to wear them.

MSHA 2002 21 min

Cat No: VC 978

Price: \$8.00

*Also available in Spanish (VC 111-S)  
see description below.*



## Conservación de la Audición, Parte 62 de MSHA (C/MNM)

El ruido es un riesgo que puede disminuir o puede destruir su audición. Este video muestra diferentes protectores disponibles para los oídos y la manera apropiada de llevarlos.

MSHA 2002 21 minutos

Número de

Catálogo: VC 111-S

Precio: US\$ 8.00

## Hidden Danger: Safety Improvements for Surge Piles (C)

Pushing coal on a surge pile has been called the most dangerous job at a prep plant. Nineteen miners have lost their lives in surge pile accidents since 1980 and there have been many other close calls. This video will show two ways to protect equipment operators from this danger: extra-strength cab windows or remote controlled dozers.

MSHA 2000 9 min

Cat No: VC 950

Price: \$8.00

*Also available in Spanish (VC 990-S)  
see description below.*



## Peligro oculto: Mejoras de seguridad para las pilas de regulación

Empujar carbón en pilas de regulación siempre ha sido considerado como la labor más peligrosa en las plantas de preparación. Desde 1980, los accidentes en las pilas de regulación han dejado un saldo de diecinueve mineros muertos sin contar a los lesionados. Este video muestra dos métodos

para proteger a los operadores de éste peligro: vidrios reforzados y vehículos operados a control remoto.

MSHA 2000 9 minutos

Número de

Catálogo: VC 990-S

Precio: US\$ 8.00



## Highwall Hazard Recognition (C/MNM)

If your job puts you on or near highwall operations, you need to be especially careful. This video shows an experienced truck driver training a new employee about the dangers of highwalls.

MSHA 2002 6 min

Cat No: VC 968

Price: \$8.00

*Also available in Spanish (VC 986-S)  
see description below.*



## Identificación de riesgos en frentes de corte alto

Si su trabajo tiene que ver con las operaciones con frente de corte alto, sea muy cuidadoso. En este video, un chofer con experiencia muestra a un nuevo empleado los peligros que puede correr al trabajar en frentes de corte alto.

MSHA 2002 6 minutos

Número de

Catálogo: VC 986-S

Precio: US\$ 8.00

## Inby Roof Support

This video explores the myths/excuses miners use for going inby supported roof.

MSHA 1995 12 min

Cat No: VC 811

Price: \$8.00

## Inundation of Water and Ignition — Eyewitness Account (C)

A miner describes his involvement in a coal mine inundation and explosion. The video stresses the importance of test drilling or examining abandoned areas.

MSHA 1994 12 min

Cat No: VC 823

Price: \$8.00

# MULTIMEDIA TRAINING MATERIALS



## It Can Happen to You (C)

Even with all required roof protection in place, roof falls still can happen. This video stresses the importance of always being aware of your work environment and the ever changing conditions. You will hear from two survivors of roof fall accidents, one a roof bolter, and the other a continuous miner operator.

MSHA 2001 14 min

Cat No: VC 962

Price: \$8.00

*Also available in Spanish (VC 991-S)  
see description below.*



## Esto le puede pasar a usted

A pesar de que se protejan los techos siguiendo las normas, hay techos que pueden venirse abajo. Este video muestra lo importante que es el estar siempre atento a todo lo que sucede en su ambiente de trabajo debido a las condiciones siempre cambiantes. En este video escuchará el testimonio de dos supervivientes; un colocador de pernos y un operador de minadores continuos.

MSHA 2001 14 minutos

Número de

Catálogo: VC 991-S

Precio: US\$ 8.00

## Locating and Rescue of Trapped Miners (C/MNM)

This video describes the equipment and methods used to locate trapped miners in an underground mine environment.

MSHA 1998 8 min

Cat No: VC 927

Price: \$8.00

## Lock Out and Tag for Safety

Maintenance workers and electricians in the mining and milling industries are often exposed to "live" electrical circuits and electric powered machinery and equipment. They are also exposed to the unexpected and accidental energizing of equipment they can be working on – unless they correctly deenergize, lock out, and tag the main power circuit that supplies current to this equipment. This video describes the

proper procedures for performing safe electrical lockout and testing, and dramatically illustrates what can happen if this isn't done. Job safety training and following company safety policies are stressed as a means for preventing such electrical accidents.

Florida Dept. of Environmental  
Protection 1994 9 min

Cat No: VC 852

Price: \$8.00



## Maintaining Diesel Engines (C/MNM)

"Minimizing Exposure to Diesel Emissions –  
An Overview"

This video discusses the following points:

- What is an approved diesel-powered engine?
- De-rating a diesel engine for your mines' elevation by authorized representatives.
- Adjusting and maintaining a diesel-powered engine.
- Conducting weekly emission tests to establish a baseline.
- Benefits of a diesel program.

MSHA 2003 13 min

Cat No: VC 105

Price: \$8.00

## MERD — Mock Disaster (C)

This video documents a Simulated Mine Emergency Problem held in an active mine with 7 mine rescue teams participating. The problem consists of a reported explosion with smoke coming out the return airways. The ventilation controls have been destroyed, 16 miners are unaccounted for, and the mine is located in a remote area. Company, state and federal inspectors, state and local police representatives, local emergency personnel, and a state life flight helicopter are used in the simulation. The video also discusses the lessons learned from the exercise.

MSHA 1998 17 min

Cat No: VC 926

Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS



## No Big Deal (C/MNM)

This video highlights the success story of a rock driller who, while working on top of a highwall, survived a fall and was not injured because he was wearing fall protection equipment. The video contains interviews, including the personal account of the accident. It also points out best practices regarding the dangers of working on top of highwalls and the proper use of personal fall protection equipment.

MSHA 2002 9 min

Cat No: VC 973

Price: \$8.00

*Also available in Spanish (VC 108-S)  
see description below.*



## Nada del Otro Mundo (C/MNM)

Este video resalta la historia exitosa de un taladrador de piedra que, mientras trabajaba encima de un highwall, sobrevivió una caída y no se lesionó porque él llevaba el equipo de protección contra caídas. El video contiene entrevistas, incluso el relato personal del accidente. También señala nuestras mejores prácticas con respecto a los peligros de trabajar encima de highwalls y el uso apropiado del equipo personal de protección contra caídas.

MSHA 2002 9 minutos

Número de

Catálogo: VC 108-S

Precio: US\$ 8.00



## One Mission, One MSHA (C/MNM)

Mining is an occupation where our miners face many dangerous working conditions. This is why the Mine Safety and Health Administration (MSHA) was formed. This video is an overview of our mission, which is to help improve workplace safety and health conditions in our Nation's mines through enforcement, education and training, and technical support.

MSHA 2003 11 min

Cat No: VC 974

Price: \$8.00

*Also available in Spanish (VC 100-S)  
see following description.*



## Una Misión, Una MSHA (C/MNM)

La minería es una profesión difícil y peligrosa. Por esa razón se creó la Administración de Salud y Seguridad Minera conocida como MSHA. Este video describe brevemente nuestra misión: garantizar que se cumplan las normas de salud y seguridad en todas las minas del país, y brindar educación, capacitación, y asistencia técnica.

MSHA 2003 11 minutos

Número de

Catálogo: VC 100-S

Precio: US\$ 8.00

## Pathway to Safety 1

When underground coal miners take an unsafe path by failing to lock and tag out the electricity when making repairs, a miner loses his life. This video shows how being in a hurry and doing work in an unsafe manner can have devastating and sad consequences on our families and coworkers.

Zeigler Coal 1997 9 min

Cat No: VC 957

Price: \$8.00

### Also see:

***What You Can't See Could Kill Someone!***  
***(C/MNM) [Pathway to Safety 2] Page 20***  
***Smoking Safety (C) [Pathway to Safety 3]***  
***Page 17***

## Plain Talk About a Serious Problem . . . Silicosis (C/MNM)

An introduction to silicosis, followed by discussion of the mechanics of dust, the respiratory system, threshold limit values (TLVs), and individual susceptibility. Andy Griffith narrates.

**NOTE: *This video is a taped version of the slide-tape program.***

North Carolina Department of Labor  
Mine and Quarry Division

1983 18 min

Cat No: VC 936

Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS

## Protective Canopy (A Survivor's Story)

A taped interview with a roof fall survivor who was operating a scoop with a protective canopy. The miner tells in his own words how he survived after mine roof, approximately 4 feet thick, fell on the scoop he was operating, trapping him for at least 20 minutes. Taped on location in Madisonville, Kentucky.

MSHA 1995 6 min  
Cat No: VC 894  
Price: \$8.00

*Also available in Spanish (VC 992-S)  
see description below.*



## Cabina protectora (Historia de un superviviente)

Filmado en Madison, Kentucky, este video relata la historia de un minero que, gracias a la cabina de protección del vehículo que manejaba, pudo sobrevivir a la caída de un techo. En sus propias palabras, el minero cuenta cómo sobrevivió cuando una parte del techo de la mina, de unos cuatro pies de espesor, cayó sobre su vehículo, atrapándolo al menos durante 20 minutos.

MSHA 1995 6 minutos  
Número de  
Catálogo: VC 992-S  
Precio: US\$ 8.00

## Reason for Change (Canopy Save)

Danny Terry survived a massive roof fall because his ram car had a canopy. In his interview, Danny admits he did not like canopies, but now he is a firm believer in canopies . . . he wouldn't run any equipment without one.

MSHA 1997 13 min  
Cat No: VC 844  
Price: \$8.00

*Also available in Spanish (VC 993-S)  
see following description.*



## Un motivo para cambiar (la cabina salvadora)

Gracias a la cabina de protección de su vehículo, Danny Terry pudo sobrevivir a la caída de un enorme techo. Danny reconoce que si antes del accidente no le gustaban las cabinas de protección, hoy día ni se le ocurriría trabajar si no tuviera una.

MSHA 1997 13 minutos  
Número de  
Catálogo: VC 993-S  
Precio: US\$ 8.00

## Recovery of Farmington #9 – An Interview With Danny Kuhn

Danny Kuhn normally worked the midnight shift at the Farmington #9 Mine, as did the rest of the mine rescue team. But on the night of November 20, 1968, Danny did not work his regular shift because of a knee injury. A call came into his home and someone asked his mother if he had worked last night. Danny hurried to the mine, hoping there had been only a small explosion. In this video you hear his account of the destruction he witnessed and the recovery process used for finding his coworkers.

NIOSH 2000 58 min  
Cat No: VC 958  
Price: \$8.00



## Reducing Dust Inside Enclosed Cabs (C/MNM)

This video describes the need for structural stability of the cab, proper sealing of cracks and doors for improved positive pressure, and the proper placement of the dust filtration system.

NIOSH 2002 7 min  
Cat No: VC 972  
Price: \$8.00



## "Reflections" Mining History (C)

Shows the evolution of health and safety laws and the role of the supervisor.

MSHA 2002 11 min  
Cat No: VC 969  
Price: \$8.00

# MULTIMEDIA TRAINING MATERIALS



## Respirators – Your Last Defense

There are many different styles, types, sizes, and shapes of respirators and their purpose is to clean the air you breathe. This video will focus on respirators' most common use – protection from silica dust. We hope this video will help you to understand how important your respirator is in protecting your health.

MSHA 2002 21 min

Cat No: VC 982

Price: \$8.00

*Also available in Spanish (VC 109-S)  
see description below.*



## Respiradores—Su Última Defensa

Hay muchos diferentes estilos, tipos, tamaños, y formas de respiradores y su propósito es el de limpiar el aire que usted respira. Este video enfocará en los usos más comunes de los respiradores—protección contra el polvo de sílice. Nosotros esperamos que este video le ayudará a usted a entender lo importante que es el respirador protegiendo su salud.

MSHA 2002 21 minutos

Número de

Catálogo: VC 109-S

Precio: US\$ 8.00

## Rock Falls – Preventing Rock Fall Injuries in Underground Mines (MNM)

This video demonstrates work procedures used by underground miners to detect unstable ground conditions and techniques to protect miners from injuries due to rock falls. It also demonstrates visual examination and sounding techniques, safe manual scaling procedures, and ground support systems. These techniques are shown through a typical mining cycle.

NIOSH 1999 20 min

Cat No: VC 981

Price: \$8.00



## Roof and Rib Control (C)

Presents a broad overview of roof/rib hazards in the underground coal mining industry, and illustrates the need for roof and rib control. Topics covered in this video include roof and rib evaluations, the roof control plan, sources of roof/rib hazards, proper installation of roof supports, retreat mining, longwall mining, MRS units, ATRS units, information and technical support.

MSHA 2003 15 min

Cat No: VC 112

Price: \$8.00

## Roof and Rib Fall Accident Statistics, An Overview of (C)

Designed to examine past and current roof and rib fall accident trends, and costs involved. By analyzing these trends it will present a clearer picture as to what areas of the mining cycle and workplace need to be examined further, and indicate what has to be done to reduce the physical and financial damage that result from such accidents.

**NOTE: This video is a taped version of the slide-tape program.**

MSHA 1988 15 min

Cat No: VC 942

Price: \$8.00

## Roof Fall Entrapment: Eye Witness Accounts (C)

Three miners who either witnessed or were involved in a roof fall accident discuss their experiences, thoughts and renewed respect for complying with safe work procedures and maintaining roof support systems. These videotapes are designed to motivate miners to be more aware of roof conditions and to comply with roof control plans.

This program consists of three (3) video, one for each interview, with accompanying instructions to promote interaction of the viewers.

MSHA 1992

Title/Catalog No.

Eyewitness Accounts:

Dave Garry (VC 865) 15 min

Larry Strayer (VC 866) 14 min

Dave Murone (VC 867) 10 min

Price: \$8.00 each title



# MULTIMEDIA TRAINING MATERIALS

## **Roof Fall Entrapment: Survivors' Accounts (C)**

Two miners who were involved in a roof fall accident discuss their experiences, thoughts, and renewed respect for complying with safe work procedures and maintaining roof support systems. These videotapes are designed to motivate miners to be more aware of roof conditions and to comply with roof control plans. This program consists of two interviews on one videotape.

MSHA 1993

Cat No: VC 837

Survivors' Account:

Donzil Cutlip 13 min

Larry Clevenger 14 min

Price: \$8.00

## **Safety Issues in Deep Cut Mining (Small Mines Tech Transfer)**

This video addresses the ergonomic problems in deep cut mining (cuts greater than twenty feet) and what actions can be taken to help find and to help formulate solutions in solving these problems.

BuM 1995 17 min

Cat No: VC 939

Price: \$8.00

## **Safety On or Near the Water (MNM)**

This video discusses the hazards of working on or near the water and the precautions that need to be taken to protect the workers in this situation.

MSHA 1998 14 min

Cat No: VC 925

Price: \$8.00

*Also available in Spanish (VC 994-S)  
see description below.*



## **La seguridad en el agua o cerca de ella**

En este video se habla de los riesgos que pueden correr los mineros que trabajan en el agua o cerca de ella, y de las precauciones que deben tomarse para prevenir accidentes.

MSHA 1998 14 minutos

Número de

Catálogo: VC 994-S

Precio: US\$ 8.00

## **Safety on the Move: Truck Haulage Safety (C/MNM)**

The camera conveys atmosphere and movement around an open pit mining operation. Shows huge haulage trucks in action. Depicts how truck operators encounter difficult, dangerous, emergency driving situations while performing assigned duties. Points out existing and potential hazards of truck haulage by reenactment of some of the most frequently-occurring accidents. Explains causes of these accidents and outlines corrective steps necessary to prevent their recurrence. Stresses on-the-job safety training and a truck driver's personal safety responsibility throughout.

MSHA Rev 1995 13 min

Cat No: VC 828

Price: \$8.00

## **Safety Procedures in Kiln Rebricking (MNM)**

Kiln rebricking is a very dangerous job. Shot on location, this program emphasizes hazard recognition and safe job procedures.

MSHA 1986 16 min

Cat No: VC 895

Price: \$8.00



## **Safety Tips (Working Beside Highwalls) (C/MNM)**

To increase your awareness of highwall safety, this video lets you follow a supervisor as he makes his rounds at a surface mine operation.

MSHA 2002 5 min

Cat No: VC 970

Price: \$8.00

*Also available in Spanish (VC 985-S)  
see description below.*



## **Consejos de seguridad para trabajar al lado de los frentes de corte alto**

Para que esté más consciente de los riesgos que implica el trabajar en los frentes de corte alto, este video muestra el trabajo de un supervisor durante una de sus rondas.

MSHA 2002 5 minutos

Número de

Catálogo: VC 985-S

Precio: US\$ 8.00

# MULTIMEDIA TRAINING MATERIALS

## Scaling

Scaling, the taking down of loose material from the roof, face and rib in hard rock mining. This videotape will remind you of some of the safety procedures and common sense practices to use during scaling.

MSHA 1996 10½ min

Cat No: VC 836

Price: \$8.00

## Scientific Look At Back Belts

This video discusses the scientific approach to the benefits, and nonbenefits, associated with wearing back belts.

BuM 1995 16 min

Cat No: VC 937

Price: \$8.00

## Seat Belt Success Story - Part I - By Terry Sanders (C/MNM)

This video tells of an accident that occurred in 1980, when an off-road truck lost its power and brakes and went down a mountain backward. The truck was destroyed and the driver states that he is alive because he was wearing his seat belt.

MSHA 1996 5 min

Cat No: VC 833

Price: \$8.00

*Also available in Spanish (VC 995-S)  
see description below.*



## Un cinturón de seguridad cumple su misión - Parte I - por Terry Sanders.

Este video relata un accidente que ocurrió en 1980 cuando a un camión para todo tipo de terreno se le descompuso el motor, los frenos, se fue de reversa y cayó de una montaña. El camión quedó completamente destrozado y el conductor asegura que se salvó gracias al cinturón de seguridad que traía puesto.

MSHA 1996 5 minutos

Número de

Catálogo: VC 995-S

Precio: US\$ 8.00

## Seat Belt Success Story - Part II - (The Roger Newman Story) (C/MNM)

This video tells how a bulldozer operator survived a 160 foot fall from a highwall while buckled in with his seat belt. He miraculously walked away from the accident.

MSHA 1996 7 min

Cat No: VC 834

Price: \$8.00

*Also available in Spanish (VC 996-S)  
see description below.*



## Un cinturón de seguridad cumple su misión - Parte II - (La historia de Roger Newman)

Este video describe como un operador de buldózer sobrevivió a una caída de 160 pies que ocurrió cuando trabajaba en un frente de corte alto, gracias al cinturón de seguridad que traía puesto. Milagrosamente se salvó del accidente.

MSHA 1996 7 minutos

Número de

Catálogo: VC 996-S

Precio: US\$ 8.00



## Self-Contained Self-Rescuer, The Inspection, Care and Use of the CSE SR-100 (C)

Underground coal miners work in an environment that is safer and healthier than ever before; but, if you should ever need to escape from your mine through unbreathable air, the SR-100 self-contained self-rescuer will supply about 100 liters of oxygen, or one hour of use. This video will describe the importance of proper inspections, care, and use of this lifesaving apparatus.

MSHA 2003 18 min

Cat No: VC 883

Price: \$8.00

## Self-Contained Self-Rescuers (SCSRs), An Efficient Method for Donning (C)

Program shows a method for rapidly donning a self-contained self-rescuer (SCSR). Miners who have little or no hands-on experience can quickly don an SCSR after learning the position and simplified technique shown in this program. Individual videotapes



# MULTIMEDIA TRAINING MATERIALS

are available for self-rescuers manufactured by Draeger and Ocenco. Each videotape includes printed instructor's manual, "An Efficient Method for Donning the Self-Contained Self-Rescuer (SCSR)," which carefully explains how to evaluate and conduct training activities in this SCSR donning method.

MSHA 1987

## Title/Catalog No.

Draeger (VC 912) 9 min

Ocenco (VC 914) 12 min

Price: \$8.00 each title

## Silicosis: A Preventable Disease (MNM)

An employee's questions about the health effects of silica dust exposure are answered.

MSHA 1999 17 min

Cat No: VC 929

Price: \$8.00

*Also available in Spanish (VC 997-S)*

*see description below.*



## Silicosis : una enfermedad que se puede prevenir

En este video vemos cómo un médico responde las preguntas de un empleado acerca de los riesgos que representa el trabajar con sílice.

MSHA 1999 17 minutos

Número de

Catálogo: VC 997-S

Precio: US\$ 8.00

## Slips, Trips, and Falls

Various types of slip/trip/fall accidents are depicted—at surface mines, plants, on dredges, and in offices. This video stresses the importance of workers thinking safety – and being alert, observant, and cautious. Special emphasis is placed on proper climbing procedures (ladders, stairways); good housekeeping (cleaning spills, removing tripping objects); and following company safety rules. Concluding message is that the best way to prevent slip, trip, and fall accidents is through effective safety training, combined with safe work practices.

Florida Dept. of Environmental  
Protection 1994 9 min

Cat No: VC 851

Price: \$8.00



## Smoking Safety (C) [Pathway to Safety 3]

This dramatic video stresses the importance of not smoking in an underground coal mine.

Ziegler Coal Co. 2001 6 min

Cat No: VC 964

Price: \$8.00

## Stay Calm and Stay in the Cab!

In this video you'll hear how a bulldozer operator felt while he was buried in a surge pile cavity, and how his company's safety efforts, before and during the accident, contributed to his safe recovery.

MSHA 1999 12 min

Cat No: VC 940

Price: \$8.00

*Also available in Spanish (VC 998-S)*

*see description below.*



## ¡Tranquílcese y quédese en la cabina!

En este video un operador de bulldozer relata qué fue lo que sintió cuando quedó enterrado en una cavidad de una pila de regulación, y cómo, gracias al apoyo de su compañía, antes y durante el accidente, pudo recuperarse.

MSHA 1999 12 minutos

Número de

Catálogo: VC 998-S

Precio: US\$ 8.00

## Stay Out of the Danger Zone (C)

This video describes several fatalities that occurred with the use of remote controlled continuous mining machines. You will also hear from a survivor of a continuous mining machine accident as he describes his injuries and stresses the importance of staying out of the danger zones of this type of mining equipment.

MSHA 1999 12 min

Cat No: VC 945

Price: \$8.00

*Also available in Spanish (VC 999-S)*

*see description on following page.*

# MULTIMEDIA TRAINING MATERIALS



## No se acerque a la zona de peligro

Este video describe varios accidentes mortales ocasionados por el uso de minadores continuos controlados a distancia. También escuchará los consejos de un superviviente que comparte su experiencia y enfatiza la importancia de mantenerse alejado de ese tipo de equipo minero.

MSHA 1999 12 minutos  
Número de  
Catálogo: VC 999-S  
Precio: US\$ 8.00

## Stop Silicosis

This film (copied to videotape) was produced by the U.S. Department of Labor in 1938 and features an introduction by then Secretary of Labor Frances Perkins. This short black and white film presents the causes of silicosis and explains how the disease can be prevented. "Stop Silicosis" was shown as part of a Federal silicosis-prevention campaign that was initiated by Secretary Perkins.

USDOL 1938 12 min  
Cat No: VC 826  
Price: \$8.00



## Surge Pile Survivor (C)

A near miss incident occurred on the surface at an underground coal mine. Mike Gilbert, a mobile equipment operator, tells his story about how he was rescued when his bulldozer became entrapped in a void.

MSHA 2003 8 min  
Cat No: VC 106  
Price: \$8.00



## Survivor Stories of the Coal Mining Industry (C)

This interactive digital versatile disc (DVD) is a collection of seven previously-produced videotape programs depicting survivor stories. It provides a broad look at various mining operations but may not address specific conditions or equipment at your

mine, and therefore should be used as a supplement to your own mine-specific training.

MSHA 2003

Cat No: DVD 002

Price: \$8.00

**\* In order to use the DVD program, YOU MUST HAVE A DVD SET-TOP PLAYER OR A DVD EQUIPPED COMPUTER.**

## The Time Was Right! Mary Lou George (C/MNM)

From miner's daughter to MSHA mine inspector — Mary Lou George tells her inspiring story. She advises to watch out for others and yourself; never lose respect for the mine; and never forget about safety.

MSHA 1998 12 min

Cat No: VC 923

Price: \$8.00

## Timbering in Underground Anthracite Mines

Timbering is the most common roof support method used in underground anthracite mines. The system of timbering is governed by the character of the top and bottom, thickness of the coal vein, pitch of the coal vein, life of the entry, haulage system, and the operator's approved roof control plan. This videotape demonstrates the fundamentals and characteristics used in installing typical timber sets: single prop, post and bar (two-piece sets), and "double timber" (three-piece sets).

MSHA 1994 54 min

Cat No: VC 807

Price: \$8.00

## Truck Haulage Safety Series (C/MNM)

The following seven videotapes were produced as a series; however, they can be purchased individually.

- Brakes, Grades, and Runaways — Highway Trucks Reviews important principles of haul road design and maintenance, braking system inspection and maintenance, and driver procedures for handling highway truck runaways. Topics covered include: road design; road maintenance; berms; brakes; and runaways.

MSHA 1995 18 min

Cat No: VC 873

Price: \$8.00



# MULTIMEDIA TRAINING MATERIALS

- Brakes, Grades, and Runaways – Off-Road Trucks  
Reviews important principles of haul road design and maintenance, braking system inspection and maintenance, and driver procedures for handling off-road truck runaways. Topics covered include: road design; road maintenance; berms; brakes; and runaways.

MSHA 1995 18 min  
Cat No: VC 872  
Price: \$8.00

- Highway Haulage Truck Inspection Conducted by MSHA Inspectors  
Presents a typical sequence of procedures followed by an MSHA inspector during examination of a highway haulage truck. Topics covered include: inspection location; cab inspection; safety appliances; paperwork; steering system; handholds and steps; wheels and rims; suspension components; brakes and braking systems; exhaust system; and inspecting the frame of the bed or trailer.

MSHA 1995 18 min  
Cat No: VC 853  
Price: \$8.00

- Inspection of Off-Road Haulage Trucks by an MSHA Inspector  
Presents a typical sequence of procedures followed by an MSHA inspector during examination of an off-road haul truck. Topics covered include: inspection location; fluid-carrying lines and steering components; suspension components; tires and wheels; truck bed; lights and mountings; cab; safety appliances; and brakes and braking system parts.

MSHA 1995 13 min  
Cat No: VC 850  
Price: \$8.00

- Pre-Operation Inspection of Highway Haulage Trucks by the Driver  
Describes a typical sequence of inspection procedures followed by drivers who operate highway haulage trucks. Topics covered include: inspection location; under-the-hood check; tires and wheels; steering components; suspension components; trailer or bed frame; cab; safety appliances; and brakes and braking systems.

MSHA 1995 10 min

Cat No: VC 863  
Price: \$8.00

- Pre-Operation Inspection of Off-Road Haulage Trucks by the Driver  
Describes a typical sequence of inspection procedures followed by drivers who operate off-road haulage trucks. Topics covered include: inspection location; personal protective equipment; fluid-carrying lines; truck bed; lights and mountings; cab; safety appliances; steering; and brakes and braking systems.

MSHA 1995 16 min  
Cat No: VC 855  
Price: \$8.00

- Visibility and Communications: Off-Road and Highway Trucks (C/MNM)  
This video discusses the visibility and communication problems associated with off-road and highway haulage trucks. Topics covered include: driver awareness; good communication systems; night driving; weather conditions; road design and maintenance; traffic controls; truck lights, wipers, and alarms; blind areas; and additional lighting.

MSHA 1996 18 min  
Cat No: VC 869  
Price: \$8.00

***Also available in Spanish (VC 814-S)  
see description below.***



- Visibilidad y Comunicaciones: Camiones que Se Manejan Fuera de la Carretera y Sobre la Carretera (C/MNM)

Este vídeo discute los problemas de visibilidad y de comunicación que están asociados con camiones de transporte que manejan ambos fuera de la carretera y sobre la carretera. Los asuntos incluidos son: conocimiento del conductor; buenos sistemas de comunicación; manejar por la noche; condiciones del tiempo; diseño y mantenimiento del camino; controles del tráfico; luces del camión, limpiaparabrisas, y alarmas; puntos ciegos del ojo; y alumbrado adicional.

MSHA 1996 18 minutos  
Número de  
Catálogo: VC 814-S  
Precio: US\$ 8.00

# MULTIMEDIA TRAINING MATERIALS



## Underground Electrical Safety (C)

This AEP (American Electric Power) video discusses some of the more common types of electrical hazards that may be found in underground mines. It will benefit certified electricians as a review, and the general underground mining population will learn about basic electrical safety.

AEP 2001 19 min

Cat No: VC 963

Price: \$8.00

## What Does the Term Silicosis Mean to You? (C/MNM)

This video is designed to raise the awareness of silicosis in the workplace and to stimulate a discussion of the disease.

MSHA 1998 13 min

Cat No: VC 913

Price: \$8.00

*Also available in Spanish (VC 101-S)  
see description below.*



## ¿Qué significa para usted la palabra silicosis?

Este video fue concebido para despertar el interés por la silicosis en los lugares de trabajo y para fomentar la discusión de esta enfermedad.

MSHA 1998 13 minutos

Número de

Catálogo: VC 101-S

Precio: US\$ 8.00

## What You Can't See Could Kill Someone! (C/MNM) [Pathway to Safety 2]

Blind spots around haul trucks is a major problem for mining operations. To combat this problem, MSHA asked companies to put cameras on their trucks on an experimental basis. This video contains interviews with drivers who used cameras on their trucks and the safety benefits they received.

MSHA 2000 17 min

Cat No: VC 951

Price: \$8.00

*Also available in Spanish (VC 102-S)  
see following description.*



## ¡Lo que no ve puede matar a alguien! [Sendero hacia la seguridad 2]

Los ángulos muertos de los camiones de transporte son el mayor problema en la minería. Para combatirlos, la MSHA pidió a ciertas compañías que pusieran cámaras en sus camiones como parte de un trabajo experimental. En este video, varios conductores hablan de los resultados positivos obtenidos gracias a las cámaras.

MSHA 2000 17 minutos

Número de

Catálogo: VC 102-S

Precio: US\$ 8.00

## Winter Alert (C)

This video describes the four lines of defense to guard against mine explosions. The four interrelated lines of defense are ventilation, examinations, ignition sources, and rock dusting. Proper attention to each of these areas can greatly reduce the chances of an explosion at your mine.

MSHA 2000 13 min

Cat No: VC 953

Price: \$8.00

*Also available in Spanish (VC 103-S)  
see description below.*



## Alerta en los meses de invierno

Este video describe las cuatro líneas de defensa que hay para protegerse de las explosiones mineras. Las cuatro líneas de defensa son la ventilación, los monitoreos, las fuentes de ignición y el polvo de roca. El dar una atención especial a esas cuatro áreas puede reducir en gran medida las probabilidades de que haya una explosión en su mina.

MSHA 2000 13 minutos

Número de

Catálogo: VC 103-S

Precio: US\$ 8.00

## Winter Alert: The Sonman Mine Disaster (C)

This winter alert video gives a historical review of the Sonman Mine disaster of the 1940s by re-creating underground scenes that dramatize the disaster for a lasting impression.

MSHA 1998 11 min

Cat No: VC 911

Price: \$8.00



# TRAINING MATERIALS (MATERIALES DE ENTRENAMIENTO)

This section is an alphabetical listing of the available printed programs. These programs fall into several different categories. The following is a list of the various categories used in this section, along with the letter code used.

(Esta sección es una lista alfabética de los programas impresos disponibles. Estos programas entran en varias categorías diferentes. Lo siguiente es una lista de las variadas categorías usadas en esta sección, junto con el código de la carta usado.)

|      |                       |      |                     |         |                                 |
|------|-----------------------|------|---------------------|---------|---------------------------------|
| CI   | Course of Instruction | OT   | Other Material      | PI      | Programmed Instruction Book     |
| (CI) | Curso de Instrucción  | (OT) | Otro Material       | (LA PI) | Libro de Instrucción Programado |
| IG   | Instructional Guide   | SM   | Safety Manual       |         |                                 |
| (IG) | Guía Instructiva      | (SM) | Manual de Seguridad |         |                                 |

## Abandoned and Active Mines, Dangers Around (C/MNM)

This booklet highlights the dangers in and around abandoned and active mine sites. It can also be used by children as a coloring book.

MSHA Rev 2003 31 pp

Cat No: OT 7

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## Accident Analysis and Problem Identification for Coal Mines

Introduction to Accident Analysis and Problem Identification (AAPI), a method for examining and correcting accident problems in coal mines.

### Books

Instructor's Guide 81 pp

Student's Text 79 pp

MSHA Rev 2002

Cat No: IG 67 (Instructor's Guide)

IG 67a (Student Text)

Price: Free of charge (1 book/guide)

\$3.00 (each additional copy)

## Accident Analysis and Problem Identification for Metal/Nonmetal Mines

Introduction to Accident Analysis and Problem Identification (AAPI), a method for examining and correcting accident problems in metal/nonmetal mines.

### Books

Instructor's Guide 81 pp

Student's Text 79 pp

MSHA Rev 2002

Cat No: IG 68 (Instructor's Guide)

IG 68a (Student's Text)

Price: Free of charge (1 book/guide)

\$5.00 (each additional copy)

## Accident Investigation (C/MNM)

Regulations specify that certain accidents must be investigated. This manual deals with the technical aspects of accident investigations. It includes: Accident Prevention, Investigative Procedures, Equipment and Supplies, Fact Finding, Interviews, Problem Solving Techniques, and Report of Investigation.

**Note to Trainer:** Although written for mine accidents, principles described may be applied in other industries.

MSHA Rev 2002 38 pp

Cat No: SM 10

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## Accident Prevention (C/MNM)

Defines and describes accidents and causes of accidents. Explains what is involved in effective accident prevention programs in mining. Includes a study of accident causes at all levels and the means of dealing with those causes.

MSHA Rev 2003 28 pp

Cat No: SM 4

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

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# TRAINING MATERIALS

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## **Advanced Mine Emergency Operations (C/MNM)**

These materials were designed for use in the Mine Simulation Laboratory to conduct Mine Emergency Response Disaster exercises. The materials can be modified to be used in other simulated settings. Includes an Instructor's Guide for conducting the exercise and a Student's Text for those who will be performing the exercise. **NOTE:** IG 16, Principles of Mine Rescue, is a part of this program. Copies need to be ordered when CI 4 is ordered.

MSHA 1992

### **Books**

|                                     |       |
|-------------------------------------|-------|
| Instructor's Guide (C)              | 51 pp |
| Student's Text (C)                  | 7 pp  |
| Cat No: CI 4 (Instructor's Guide-C) |       |
| Cat No: CI 4a (Student's Text-C)    |       |
| Price: \$4.00 (Instructor's Guide)  |       |
| \$2.00 (Student's Text)             |       |

## **Advisory Committee Recommendations to Eliminate Black Lung and Silicosis (C)**

On January 31, 1995, Secretary of Labor Robert B. Reich established the Advisory Committee on the Elimination of Pneumoconiosis Among Coal Mine Workers. The key Committee recommendations, which will help direct MSHA's efforts to eliminate coal mine dust-related lung disease, are summarized under eight topic headings in this pamphlet. Note: There is a companion card (HH-8) to this pamphlet. See "Pocket Cards" section on how to order.

MSHA 1997 8 pp

Cat No: OT 25  
Price: Free of charge (1 copy)  
\$2.00 (each additional copy)

## **Alcohol and Drug Abuse Manual, Mining Industry (C/MNM)**

A collection of practical information on alcohol and drug abuse in the workplace. Includes bibliographies of sources and materials on Employee Assistance Programs (EAPs).

MSHA 1986 42 pp

Cat No: OT 8  
Price: Free of charge (1 copy)  
\$3.00 (each additional copy)

## **Analysis of Underground Powered Haulage Lost Time Accidents, January 1990 — December 1999 (C/MNM)**

This publication addresses underground powered haulage lost time accidents that occurred during the period January 1990 through December 1999 involving shuttle cars, scoops, track-mounted equipment, mobile haulage equipment, and conveyor belts. Although mining methods and equipment vary greatly in coal and metal/nonmetal mining, the similarities of haulage equipment and the methods of operation are similar; therefore, the study includes both coal and metal/nonmetal powered haulage accidents. This report identifies the major factors that led to these accidents, and recommends accident prevention methods to reduce the frequency of these accidents.

MSHA 2000 18 pp

Cat No: OT 43  
Price: Free of charge

## **Annual Refresher Training Games (C)**

Compilation of questions and answers, various game formats and guidelines for using games in training. The guide is designed to be used in annual refresher training. Topics include:

1. Roof and Rib Control
2. Self-Rescue Devices
3. Communication
4. Respiratory Devices
5. Explosives
6. Permissibility
7. Accident Prevention Techniques
8. Health
9. Barricading
10. First Aid
11. Cardiopulmonary Resuscitation
12. Haulage and Transportation
13. Recognition and Avoidance of Electrical Hazards
14. Gases
15. Ventilation
16. Surface Mining
17. Miscellaneous

MSHA 1989 610 pp

Cat No: IG 79  
Price: \$9.00



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# TRAINING MATERIALS

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## **Anthracite Mining Workbook**

This workbook, in the programmed instruction format, discusses the various aspects of Anthracite mining: the anthracite coal fields of Pennsylvania; mine development; the four methods of mining (full-box breast, open breast, slant breast, and longhole methods); ventilation; and roof and rib control.

MSHA Rev 1999 59 pp

Cat No: PI 13

Price: Free of charge (1 book)

\$3.00 (each additional copy)



## **Audiometric Testing Reference Guide for MSHA's Occupational Noise**

### **Exposure Standard**

This audiometric testing guide provides mine operators with examples of validated scientific methods and/or equipment specifications for testing the hearing sensitivity of miners.

MSHA 2000 16 pp

Cat No: IG 57

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## **Back Injuries in the Mining Industry**

Deals with back injuries in the coal and metal/nonmetal mining industry. It addresses back injury statistics, anatomy and common back problems, the causes and corrective actions for back injury prevention, and recommendations for developing a program for the prevention of back injuries.

MSHA Rev 2000 26 pp

Cat No: SM 24

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## **Bins and Hoppers Safety Awareness Program (C/MNM)**

Designed for trainers of coal and metal/nonmetal mine personnel. Covers the safe handling of materials around bins and hoppers, working safely around bins and hoppers, the prevention of entrapment, and rescue in the event of an entrapment. The program contains eight sections:

1. Bins and Hoppers Related Law
2. Entrapment of Miners

3. Development of Safe Work Methods Around Bins and Hoppers
4. General Bins and Hoppers Safety/Technical Information
5. Abstracts of Bin and Hopper Accidents
6. Bins and Hoppers Safety Awareness Factors to Utilize in a Training Session
7. Key Safety Awareness Points to Remember When Involved with Bins and Hoppers
8. Illustrations and Abstracts of Bin and Hopper Fatalities

MSHA Rev 2003 50 pp

Cat No: IG 66

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## **Blaster's Training Program for Independent Contractors (C/MNM)**

Designed to train independent contractors in the safe use and application of explosives. The training package includes: Leader's Guide, Knowledge Checklist for Supervisors, Knowledge Checklist for Trainees, an OJT Checklist, and a Student Workbook. A multi-part videotape covers the following topics: Safety in Blasting, Buckle Up on the Job, Ground Control in Surface Mining (Coal), Surface Blasting in Metal and Nonmetal Mines, Quarry Safety, Safety in Surface Coal Mining, and Hazard Recognition and Avoidance in Surface Coal Mining. **Note:** Separate tapes on a single subject are not available.

MSHA Rev 1997 194 pp

Cat No: IG 81

Price: Free of charge (1 book)

\$5.00 (each additional copy)

\$8.00 (1 videotape)

## **Blasting Hazard Awareness: Surface and Underground Coal Mines**

These two programs cover blasting hazard recognition and avoidance in and around underground and surface coal mines.

Please specify program(s) wanted when ordering.

MSHA Rev 1996

Cat No: IG 71 (Surface) 108 pp

IG 72 (Underground) 112 pp

Price: Free of charge (1 book)

\$4.00 (each additional copy)

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# TRAINING MATERIALS

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## **Blasting Hazard Awareness: Surface Metal and Nonmetal**

Covers blasting hazard recognition and avoidance in and around surface metal and nonmetal mines.

MSHA Rev 1996 100 pp

Cat No: IG 73

Price: Free of Charge (1 book)

\$4.00 (each additional copy)

## **Blasting Hazard Awareness: Underground Metal and Nonmetal**

Covers blasting hazard recognition and avoidance in and around underground metal and nonmetal mines.

MSHA Rev 1996 139 pp

Cat No: IG 74

Price: Free of Charge (1 book)

\$4.00 (each additional copy)

## **Blasting Requirements — Surface Coal**

This training package of lesson plans, handouts, visuals, and student text is designed to train entry level coal mine inspectors and supervisors. It covers the characteristics, transportation, and handling and use of explosives. Course content emphasizes hazard recognition and safe work practices, and is keyed to MSHA regulations.

### **Books**

Instructor's Guide 395 pp

Student's Text 25 pp

MSHA 1994

Cat No: CI 21 (Instructor's Guide)

CI 21a (Student's Text)

Price: \$7.00 (Instructor's Guide)

\$2.00 (Student's Text)

## **Bleeder and Gob Ventilation Systems (C)**

This student handout material is from the Bleeder and Gob Ventilation Systems course. The course is primarily of interest to ventilation specialists, safety inspectors, and supervisors. The textbook contains information on ventilation principles; bleeder system design, approvals, inspection and examination, and evaluation; and illustrations of bleeder systems. Ventilation regulations, case study information, and other materials are also included in the package.

MSHA Rev 2002 321 pp

Cat No: CI 42a

Price: Free of charge (1 copy)

\$6.00 (each additional copy)

## **Bloodborne Pathogens: A Guide for the Mining Industry**

This guide contains information about the risk of occupational exposure to bloodborne pathogens and how mine operators can reduce this risk.

MSHA 2000 24 pp

Cat No: IG 44

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## **Carpal Tunnel Syndrome**

Discusses the symptoms, causes, and treatment of carpal tunnel syndrome (CTS). Many industries claim that the incidence of carpal tunnel syndrome is increasing and is one of their most disabling and costly medical problems.

MSHA Rev 2003 46 pp

Cat No: SM 23

Price: Free of charge (1 copy)

\$2.00 (each additional copy)

## **Coal Country**

This computer program, developed for elementary school children, will help them learn about coal formations, deposit locations, mining techniques, and common uses of coal in everyday life. The program is available on five 3 1/2-inch computer diskettes.

BuM 1994

Cat No: OT 9

Price: \$9.00 (5 computer diskettes)

## **Coal Mining**

Gives an overview of coal mining. It begins with the origin and nature of coal, progresses through underground and surface mining methods, training, and mine hazards, and ends with the uses of coal. Includes a glossary of common mining terms.

MSHA Rev 2002 29 pp

Cat No: SM 1

Price: Free of charge (1 book)

\$2.00 (each additional copy)



# TRAINING MATERIALS

## Coal Preparation

This instructor guide is one of a series of six books covering mining systems. It introduces the major steps in preparing coal. This guide covers preparation plant systems, delivery to the plant, crushing and breaking, sizing, washing, dewatering and drying, and storage and transportation of coal.

MSHA 2000 47 pp

Cat No: IG 54

Price: \$3.00

*Also available in Spanish (IG 54-S)  
see description below.*



## Preparación del carbón

Esta guía del instructor es uno de una serie de seis libros que cubre los sistemas mineros. Éste introduce los pasos mayores preparando carbón. Esta guía cubre sistemas de preparación en la planta, la entrega a la planta, aplastando y rompiendo, clasificando según tamaño, lavando, escurriendo y secando, y el almacenamiento y transporte del carbón.

MSHA 2000 47 pp

MSHA 1991 36 páginas

Número de

Catálogo: IG 54-S

Precio: US\$ 3.00

## Code of Federal Regulations, Title 30, via Computer Linkup

The mining community can gain quick access to current regulations, program information bulletins, policy memos, and other data on MSHA's home page at [www.msha.gov](http://www.msha.gov). Copies may be purchased from Superintendent of Documents, Government Printing Office, Washington, DC 20402  
Telephone: 202/512-1800 Fax: 202/512-2233

## Compliance Guide to MSHA's Occupational Noise Exposure Standard

MSHA's revised noise standard became effective on September 13, 2000. This compliance guide is in a question and answer format, and provides information to assist the mining industry in complying with the revised noise standard.

MSHA 2000 24 pp

Cat No: IG 33

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Coping with Substance Abuse in Mining

Deals with substance abuse in the mining industry, which is a reflection of the experience of American industry in general. The manual puts forth a five-part strategy for controlling substance abuse at the workplace; establishment of a written substance abuse policy; supervisory training; employee education and awareness; an employee assistance program; and drug testing, as appropriate.

MSHA Rev 2002 33 pp

Cat No: SM 25

Price: Free of charge (1 book)

\$2.00 (each additional copy)

*Also available in Spanish (SM 25-S)  
see description below.*



## Enfrentándose con Abusos de Sustancias en la Minería

Trata del abuso de sustancias en la minería, que es una reflexión de la experiencia de industrias americanas en general. El manual da una estrategia de cinco partes para controlar el abuso de sustancias en el sitio de trabajo; establecimiento de una norma escrita sobre el abuso de sustancias; enseñanza por los supervisores; educación y conocimiento de los empleos; un programa para ayudar a los empleos; y exámenes por la presencia de drogas, cada vez que sea apropiada.

MSHA 1991 36 páginas

Número de

Catálogo: SM 25-S

Precio: Gratis (1 copia)

US\$ 2.00 (cada copia adicional)

## Degraded Image Hazard Recognition (C)

The goal of this program is to improve the ability of miners to recognize hazards in their dangerous work environment, and thereby, to reduce accidents. The program is based on research conducted by the U.S. Bureau of Mines (now NIOSH) in conjunction with the Illinois Department of Natural Resources and Illinois Eastern Community College. A study has found that miners trained with this method have shown a greater improvement in their hazard recognition skill level as compared to traditional methods.

NIOSH 1997 8 pp

Cat No: IG 1

Price: \$12.00 (includes 1 book, 10 slides,  
and a videotape)



# TRAINING MATERIALS



## **Diesel Inspection of Underground Coal Mine Equipment – Wagner Model LST-5S Scoop**

This computer CD contains visuals and discussion to assist students in the understanding and application of equipment safety requirements for the Wagner model LST-5S scoop. The program focuses on inspection of the machine for diesel permissibility compliance. It is primarily designed for trainers, maintenance personnel, and industry safety inspectors, and may also be beneficial for others who work in an underground coal mine where this type of equipment is used. The presentation may take from one to four hours depending on classroom discussion and inclusion of regulatory and other reference materials. The same presentation is available on MSHA's home page ([www.msha.gov](http://www.msha.gov)); however, the CD includes additional formats for those who wish to present the material full-screen with a computer projection system, without being connected to the internet, and/or wish to tailor the material to their operations. A color booklet is also available containing the same material in an easy-to-read format.

MSHA 2001 1 CD  
50 pp booklet

Cat No: IG 10-CD  
IG 10a (Color booklet)  
Price: \$8.00 (1 booklet and CD, which includes booklet and PowerPoint slides)  
Free of charge (1 booklet only)  
\$3.00 (each additional copy of booklet)

## **Don't Be the Fall Guy!**

This booklet is part of the PROP (Preventive Roof/Rib Outreach Program). It is designed to **alert** miners to the hazards presented in underground coal mining from falls of roof, face, and ribs. This booklet describes the sources of roof/rib hazards and provides practical information to avoid injuries from what has been historically the greatest danger to underground miners. Sources of technical assistance on roof control and other health and safety training resources are included.

MSHA 2000 25 pp  
Cat No: OT 44  
Price: Free of charge (1 book)  
\$2.00 (each additional copy)

## **Draeger BG 174A Breathing Apparatus, Using the**

Designed to show, step-by-step, the proper use of this mine rescue apparatus. A PowerPoint (PPT) presentation on a CD and illustrations for making transparencies are included. The CD includes a PPT viewer so that the presentation can be used with any version of PPT or none at all. Note: System requirements for viewer are – 486K or higher processor; Win 95, 98, or 2000 system, or Win NT Workstation 3.51 (with Service Pack 5.x or later), or NT 4.0; 9MB hard disk space; and VGA or higher resolution.

MSHA Rev 2003 31 pp  
Cat No: IG 21-CD  
IG 21 (Book)  
Price: Free of charge (1 book)  
\$2.00 (each additional book)  
\$8.00 (1 book, CD)



## **Dump Point Inspection Handbook (C/MNM)**

Dumping material from trucks is a common practice in the mining industry. No matter what type of dump point is involved, a waste pile, an overburden dump, a stockpile, or a hopper, accidents can occur if certain precautions are not taken. The intent of this handbook is to provide MSHA inspection staff with the information needed to understand the hazards at dump points, and to better recognize potentially unsafe dump-point conditions and practices. In addition, the handbook can assist inspectors in sharing information on dump-point safety with miners and mine operators.

MSHA 2001 32 pp  
Cat No: IG 59  
Price: Free of charge (1 book)  
\$2.00 (each additional copy)

## **Dust — What You Can't See CAN Hurt You! (C)**

This booklet describes the hazards associated with dust exposures in coal mining and provides miners and mine operators with information on a variety of methods of preventing or reducing these exposures.

MSHA Rev 2002 24 pp  
Cat No: OT 4  
Price: Free of charge (1 book)  
\$2.00 (each additional copy)

***Also available in Spanish (OT 4-S)  
see description on following page.***



# TRAINING MATERIALS



## **Polvo — ¡Lo Que Usted No Puede Ver Sí PUEDE Dañarse a Usted! (C)**

Este folleto describe los peligros de las exposiciones al polvo en las minas de carbón y suministra a los mineros y a los operadores de las minas la información sobre varias maneras para evitar o reducir estas exposiciones.

MSHA Revisado 2002 24 páginas  
Número de  
Catálogo: OT 4-S  
Precio: Gratis (1 libro)  
\$2.00 (cada copia adicional)



## **Electrical Calculations**

Designed to assist industry, labor, and inspection force in obtaining compliance in electric motor circuit calculation.

MSHA/WV Office of  
Miners' Health, Safety  
and Training 2003 105 pp  
Cat No: OT 19  
Price: Free of charge (1 book)  
\$4.00 (each additional copy)

## **Electrical Hazards (C)**

Treats the numerous hazards associated with power distribution centers, trailing cables, trolley wires and other electrical equipment used in mining operations.

MSHA Rev 2003 122 pp  
Cat No: PI 5  
Price: Free of charge (1 book)  
\$4.00 (each additional copy)

## **Electrical Hazards (C/MNM)**

Electricity is used to power most mining equipment (in underground mines, in surface mining drilling and loading operations, in preparation plants and in mills). Manual covers hazards of electricity. Concentrates on electrical shock and electrical arcs. Presents methods of controlling these hazards.

MSHA Rev 2003 50 pp  
Cat No: SM 9  
Price: Free of charge (1 book)  
\$2.00 (each additional copy)

## **Equipment Guarding, MSHA's Guide to (C/MNM)**

Designed to assist industry, labor, and MSHA inspectors in obtaining uniformity in mechanical safeguarding. Basic principles of guarding are discussed. Various techniques are illustrated (with brief written explanations).

MSHA Rev 2000 36 pp  
Cat No: OT 3  
Price: Free of charge (1 book)  
\$2.00 (each additional copy)

**Also available in Spanish (OT 3-S)**  
*see description below.*



## **Salvaguardias por el Equipo, La Guía de MSHA (C/MNM)**

Diseñada para ayudar a la industria, a los trabajadores, y a los inspectores de MSHA para llegar a uniformidad en el uso de salvaguardias mecánicas. Se discuten los principios básicos de salvaguardar. Se ilustran varias técnicas (con breves explicaciones escritas).

MSHA Revisado 2000 36 páginas  
Número de  
Catálogo: OT 3-S  
Precio: Gratis (1 libro)  
US\$ 2.00 (cada copia adicional)



## **Fatal Accidents at Small Crushed Stone and Sand and Gravel Mining Operations, 2000-2001 (MNM)**

This publication presents information on fatalities involving crushed stone and sand and gravel operations from January 2000 through December 2001. Small mines in this publication refer to mines with 50 or fewer employees. This publication includes statistics for the fatalities as well as abstracts, illustrations, and best practices.

MSHA 2002 30 pp  
Cat No: OT 41  
Price: Free of charge

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# TRAINING MATERIALS

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## **Fatal Accidents Involving Construction, Maintenance and Repair at Coal Mines, 1996-2001**

This publication presents information on fatalities involving construction fatalities that occurred in coal mining operations from January 1996 through December 2001. The fatalities in this report consist of accidents involving construction, maintenance, and repair. It includes statistics for all of the fatalities, as well as abstracts and illustrations.

MSHA 2002 24 pp

Cat No: OT 35

Price: Free of charge



## **Fatal Accidents Involving Construction, Maintenance and Repair at Metal/Nonmetal Mines, 1996-2001**

This publication presents information on construction fatalities that occurred in metal/nonmetal mining operations from January 1996 through December 2001. The fatalities in this report consist of accidents involving construction, maintenance, and repair at metal/nonmetal mining operations.

MSHA 2002 18 pp

Cat No: OT 36

Price: Free of charge



## **Fatal Accidents Involving Contractors at Coal and Metal/Nonmetal Mines, 2000-2001**

This publication presents information on fatalities involving contractors that occurred in coal and metal/nonmetal operations from January 2000 through December 2001. It includes statistics for all of the fatalities, as well as abstracts and illustrations.

MSHA 2002 53 pp

Cat No: OT 37

Price: Free of charge



## **Fatal Accidents Involving Conveyors at Coal and Metal/Nonmetal Mines, 1990-2001**

This publication presents information on fatalities that occurred in coal and metal/nonmetal operations from January 1990 through December 2001, as a result of conveyor related accidents. This

publication includes statistics for the fatalities as well as abstracts, illustrations, and best practices.

MSHA 2002 56 pp

Cat No: OT 40

Price: Free of charge



## **Fatal Accidents Involving Drowning at Coal and Metal/Nonmetal Mines, 1996-2001**

This publication presents information on fatalities involving drownings that occurred in coal and metal/nonmetal mining operations from January 1996 through December 2001. It includes statistics for all of the fatalities, as well as abstracts and illustrations. The drowning fatalities in this report come under several accident classifications. These classifications are slip or fall of person, machinery, powered haulage, electrical, and "other."

MSHA 2002 26 pp

Cat No: OT 34

Price: Free of charge



## **Fatal Accidents Involving Independent Contractors at Coal Mines, 1996-2001**

This publication presents information on fatalities involving independent contractors that occurred in coal mining operations from January 1996 through December 2001. This publication includes statistics for the fatalities as well as abstracts, illustrations, and best practices.

MSHA 2002 48 pp

Cat No: OT 38

Price: Free of charge



## **Fatal Accidents Involving Independent Contractors at Metal and Nonmetal Mines, 1996-2001**

This publication presents information on fatalities involving independent contractors that occurred in metal and nonmetal mining operations from January 1996 through December 2001. This publication includes statistics for the fatalities as well as abstracts, illustrations, and best practices.

MSHA 2002 66 pp

Cat No: OT 39

Price: Free of charge



# TRAINING MATERIALS



## Fatal Accidents Involving Roof Falls in Coal Mining, 1996-2001

This publication presents information on fatalities involving roof and rib falls that occurred in coal mining operations from January 1996 through December 2001. During this period, 64 miners died at coal operations from accidents classified as roof falls. This publication includes statistics for the fatalities as well as abstracts, best practices, and illustrations.

MSHA 2002 73 pp

Cat No: OT 42

Price: Free of charge

## Fatal Illustration Program (C/MNM)

Highlights fatal accidents that occurred in coal and metal/nonmetal mines and alerts miners to dangers around mines and how potential accidents can be prevented. Flexible and adaptable to many different training situations (new miner, annual refresher, task safety training – large or small groups, general safety meetings or special emphasis safety talks). Includes illustrated abstracts (summaries) of fatal mining accidents. Please order by quantity and title(s) desired.

MSHA Updated every 6 months

Cat No: OT 10 (Coal – Surface and Underground)

OT 12 (Metal/Nonmetal – Surface and Underground)

Price: Free of charge



## Fighting Miner Fatigue on Unusual Work Schedules (C/MNM)

Unusual work schedules are becoming more and more usual in mining. These PowerPoint presentations and instructor guides will raise miner awareness of the potential problems and methods of coping with unusual work schedules.

MSHA 2002

Cat No: IG 82 CD contains PowerPoint presentations and Instructor Guides

IG 82a A Management Perspective Instructor Guide 13 pp

IG 82b A Worker Perspective Instructor Guide 13 pp

Price: Free of charge (1 book)

\$2.00 (Instructor's Guide)

\$8.00 (CD and Instructor's Guides)

## Fire Protection (C/MNM)

Designed to train Federal mine inspectors in the inspection of fire protection systems and equipment in both underground and surface mines, in accordance with 30 CFR 75 and 30 CFR 77 (Coal), and 30 CFR 56 and 30 CFR 57 (MNM).

### Books

Instructor's Guide (C) 128 pp

Student's Text (C) 6 pp

Instructor's Guide (MNM) 118 pp

Student's Text (MNM) 6 pp

MSHA Rev 2002

Cat No: CI 5 (Instructor's Guide-C)

CI 5a (Student's Text-C)

CI 6 (Instructor's Guide-MNM)

CI 6a (Student's Text-MNM)

Price: \$4.00 (Instructor's Guide)

\$2.00 (Student's Text)

## Fire Safety (C/MNM)

Deals with the hazards associated with fires, and the procedures used to prevent fires and to protect life and property when fires do occur.

**Note to Trainer:** Although designed for mining applications, the sections on fire causes and detection systems are useful in any setting.

MSHA Rev 2002 42 pp

Cat No: SM 13

Price: Free of charge (1 book)

\$2.00 (each additional copy)

**Also available in Spanish (SM 13-S)**

*see description below.*



## Seguridad con Incendios (C/MNM)

Trata de los peligros asociados con incendios y los procedimientos por evitar incendios y por proteger las vidas y la propiedad cuando los incendios ocurren.

**Nota al Entrenador:** Aunque está diseñada por uso en las minas, las secciones sobre causas de los incendios y sistemas de detección son útiles en cualquier escenario.

MSHA Revisado 1990 42 páginas

Número de

Catálogo: SM 13-S

Precio: Gratis (1 copia)

US\$ 2.00 (cada copia adicional)

# TRAINING MATERIALS

## First Aid (C/MNM)

Describes first aid techniques. Discusses how to stop bleeding and control shock. Lists specific first aid procedures for a wide variety of injuries.

MSHA Rev 2001 62 pp

Cat No: SM 3

Price: Free of charge (1 book)

\$2.00 (each additional copy)

**Also available in Spanish (SM 3-S)**

*see description below.*



## Primeros Auxilios (C/MNM)

Describe técnicas de primeros auxilios.

Discute como parar sangría y controlar descarga eléctrica. Enumera procedimientos específicos de primeros auxilios por una variedad ancha de heridas.

MSHA Rev 2001 62 páginas

Número de

Catálogo: SM 3-S

Precio: Gratis (un libro)

US\$ 2.00 (cada libro adicional)

## First Aid Book (C/MNM)

Designed to provide workers in the mining industry with basic first aid knowledge and skills in order to better prepare them to deal with both on-the-job and off-the-job accidents and emergencies.

MSHA Rev 1998 251 pp

Cat No: IG 61

Price: Free of charge (1 book)

\$6.00 (each additional copy)

## First Aid Instructor's Guide (C/MNM)

Designed for first aid trainers in the mining industry. Teaches methods to care for sick or injured persons. The training materials are packaged loose-leaf to help trainers extract selected study topics from the total package. The book contains printed copies of visuals which can be made into transparencies.

MSHA Rev 2000 329 pp

Cat No: IG 52

Price: Free of charge (1 book)

\$7.00 (each additional copy)

## Front-End Loader Hazard Awareness Program (C/MNM)

Covers front-end loader hazard recognition and avoidance in and around coal and metal/nonmetal operations.

MSHA Rev 2001 38 pp

Cat No: IG 76

Price: Free of charge (1 book)

\$3.00 (each additional copy)

**Also available in Spanish (IG 76-S)**

*see description below.*



## Programa de Concienciación de los peligros del Cargador Frente-Extremo (C/MNM)

Cubre el reconocimiento y anulación de los peligros del cargador frente-extremo en y alrededor del carbón y operaciones de metal/ no-metal.

MSHA 2001 38 pp

Número de

Catálogo: IG 76-S

Precio: Libre del cargo (1 libro)

US\$ 3.00 (cada copia adicional)

## Guide to Conducting Noise Sampling, A

MSHA's revised noise standard became effective on September 13, 2000. This guide will provide easy-to-read instructions on how to conduct noise surveys. These surveys can be used to comply with the monitoring requirements of the revised noise rule and are intended to be best practices for the mining industry.

MSHA 2000 9 pp

Cat No: IG 32

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Haul Road Inspection Handbook

The design and maintenance of haul roads plays an important role in surface haulage safety. This handbook provides guidance for conducting a safety inspection of a mine's haul roads and includes summaries of MSHA's standards that apply to haul roads.

MSHA 2000 58 pp

Cat No: IG 58

Price: Free of charge (1 book)

\$3.00 (each additional copy)



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# TRAINING MATERIALS

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## **Haulage Fatalities – Surface Coal (2000-2001)**

This publication highlights haulage fatalities that occurred at surface coal operations from January 2000 through December 2001. The fatalities in this report involve equipment such as: haul trucks, front-end loaders, boom trucks, concrete trucks, scrapers, pickup trucks, and automobiles.

MSHA 2002 20 pp

Cat No: OT 5

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Haulage Fatalities – Surface Metal and Nonmetal (2000-2001)**

This publication highlights haulage fatalities that occurred at surface metal and nonmetal operations from January 2000 through December 2001. The fatalities in this report involve equipment such as: haulage trucks, front-end loaders, scrapers, water trucks, forklifts, and pickup trucks.

MSHA 2002 24 pp

Cat No: OT 6

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Haulage Fatalities – Underground Coal (2000-2001)**

This publication highlights haulage fatalities that occurred at underground coal operations from January 2000 through December 2001. The fatalities included in this report involve all fatalities classified by the Mine Safety and Health Administration as “haulage/powered haulage.” These statistics do not include haulage fatalities at surface areas of underground operations.

MSHA 2002 16 pp

Cat No: OT 14

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Hazard Recognition Training Program for Construction, Maintenance, and Repair Activities**

This is a NIOSH-developed training program that provides surface miners with information for increasing their knowledge and awareness of the many hazards that exist in conducting construction, maintenance,

and repair tasks in the workplace. It coordinates specific instruction materials with 3-D scenes that depict a variety of hazards and enhance the perceptual skills of the trainees. This program consists of an Instructor's Guide and three 3-D reels.

NIOSH 1999

Cat No: IG 45

Materials

Needed: Instructor's Guide 78 pp

Three 3-D reels

View-Master\* 3-D viewers may be purchased directly from the manufacturer at Fisher-Price, Inc., View-Master Custom Sales, Customer Service, 636 Girard Avenue, East Aurora, NY 14052 Phone 716-687-3899

Price: Instructor's Guide \$3.00

Three 3-D reels \$6.00

*\* Reference to specific products does not imply endorsement by MSHA.*

## **Hazard Recognition Training Program for Underground Limestone**

This NIOSH-developed hazard recognition training program was developed by combining the degraded image concept with 3-D slides. It focuses on teaching underground limestone miners certain techniques for recognizing visual cues in the workplace and using these cues to evaluate mining conditions and hazardous situations. This program consists of an Instructor's Guide and four 3-D reels.

NIOSH 1997

Cat No: IG 46

Materials

Needed: Instructor's Guide 44 pp

Four 3-D reels

View-Master\* 3-D viewers may be purchased directly from the manufacturer at Fisher-Price, Inc., View-Master Custom Sales, Customer Service, 636 Girard Avenue, East Aurora, NY 14052 Phone 716-687-3899

Price: Instructor's Guide \$2.00

Four 3-D reels \$8.00

*\* Reference to specific products does not imply endorsement by MSHA.*

# TRAINING MATERIALS



## HazCom Information

This CD holds about ten (10) hours of Power-Point presentations on virtually every major aspect of MSHA's Hazard Communication Standard. These presentations include notes, illustrations, and photographs to help your audience better understand HazCom and chemical terminology. The presentations include: chemical injuries and illnesses in mining; basic chemical families; basic toxicology; labeling; MSDSs; exemptions; and written programs, among others.

MSHA 2002 1 CD

Cat No: OT 51-CD

Price: \$8.00



## HazCom 30 CFR Part 47 – Telling Miners About Chemical Hazards

This booklet is HazCom's Tool Kit, supplying information that helps operators interpret the standard, but also providing model HazCom programs, training tips, and supplementary materials to help operators establish a successful HazCom program.

MSHA 2002 82 pp

Cat No: OT 49

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Heat Stress in Mining (MNM)

Deals with heat stress and strain and heat control mechanisms in the human body. Describes signs of and treatment for heat-related disorders. Heat stress control measures are noted.

MSHA Rev 2000 32 pp

Cat No: SM 6

Price: Free of charge (1 book)

\$2.00 (each additional copy)

**Also available in Spanish (SM 6-S)**  
*see description below.*



## Tensión de Calor en la Minería (MNM)

Trata de tensión y fatiga causadas por calor y los mecanismos de control en el cuerpo humano. Describe señales de y primeros auxilios por enfermedades causadas por el calor. Se notan medidas de control por la tensión de calor.

Número de MSHA Revisado 2000 32 páginas

Catálogo: SM 6-S

Precio: Gratis (1 libro)

US\$ 2.00 (cada copia adicional)



## Hidden Hazards – Pipeline Safety in the Mining Industry (C/MNM)

This item consists of a video and a CD. The video deals with the hidden hazards associated with buried pipelines on mining property. According to the U.S. Office of Pipeline Safety, more than two-thirds of all pipeline accidents occur due to accidental contact from heavy equipment. The mining industry alone experienced two fatalities in the year 2000. Between 1986 and 2002 more than 348 fatalities occurred due to pipeline accidents in general industry.

The accompanying CD includes a **PowerPoint presentation** – consisting of 51 slides – which can be conducted in approximately 30 to 40 minutes; a handout of **key facts** to be provided to class participants; and an **instructor's guide**. (The key facts and instructor's guide may be printed from the CD.) The Hidden Hazards package is an excellent tool to be utilized as a one-hour scheduled block for surface annual retraining, surface new miner training, supervisor training, safety meetings, or as a supplement to individual task training. The program can also be utilized for mining industry contractor training.

Martin Consulting 2002 19 min

Cat No: IG 85

Price: \$12.00

## Hoisting (C/MNM)

Covers various types of hoists, wire ropes, rope end attachments, hoisting system components, brakemen cars, portal shaft elevators, recordkeeping, appendices and coal and metal/nonmetal mandatory safety standards related to hoisting. Handouts, lesson plans, visuals, and tests and evaluations are included which will assist in instructing hoisting training.

MSHA Rev 2002

Cat No: CI 16 Coal 424 pp

CI 17 MNM 428 pp

Price: \$8.00 each copy



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# TRAINING MATERIALS

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## **Industrial Hygiene for Healthier Miners (C/MNM)**

Deals with industrial hygiene – the science and art of recognition, evaluation and control of health hazards at work. Text includes examples of shortterm and long-term job-related exposures of workers to toxic agents. Manual also covers preventive measures to protect workers from harmful conditions.

MSHA Rev 1996 53 pp

Cat No: SM 21

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Industrial Hygiene: Sampling for Silica and Noise**

This publication for metal and nonmetal mining is an instructor's manual for a three-day class covering the hazards of silica and noise, principles of industrial hygiene, sampling methods and procedures, and calculations. The manual includes numerous sampling forms and appendices.

MSHA 1999

Instructor's Guide 335 pp

Student's Text 159 pp

Cat No: IG 13 (Instructor's Guide)

IG 13a (Student's Text)

Price: Free of charge (1 book)

\$6.00 (Instructor's Guide)

\$4.00 (Student's Text)

## **Industry Supervisory Training — Metal/Nonmetal**

Designed for trainers of metal/nonmetal supervisory personnel. Focuses on ways to increase awareness of the high rate of supervisory/foremen fatalities and on ways to reduce that rate. Packaged in two volumes (one for instructors and one for participants), each volume is divided into four modules:

Defining the Problem

Developing an Individualized Safety Program

Supervisory Skills

Supervisory Responsibilities

Materials are 3-hole punched. Dividers are furnished. Complete set of materials contains:

## **Books**

Instructor's Training Guide 262 pp

Participant's Handbook 244 pp

MSHA 1985

Cat No: IG 9 (specify number of Participant's Handbooks)

Price: Free of charge (1 set of books)

\$5.00 (each additional book)

## **Instructor Training Workshop Guide**

Designed to provide the fundamentals of instruction for potential instructors. May also be used as a refresher course for experienced instructors.

MSHA Rev 2002

Cat No: IG 24a (Specific to Part 48) 75 pp

IG 24b (Specific to Part 46) 75 pp

Price: Free of charge (1 book)

\$3.00 (each additional copy)

## **Introduction to Metal/Nonmetal Mining:**

### **A Programmed Text**

A workbook in programmed instruction format that covers elements of underground and surface metal and nonmetal mining. Each self-contained workbook section contains text materials, questions about the text, and answers to these questions. Students can study and review the material at their own pace and check their work as they proceed. Topics covered include: Basic Geology; Mining and the American Economy; Health and Safety Standards; The Work Environment; Industrial Hygiene and Personal Protective Equipment; Mine Gases; and Electricity in Mining. Other subjects include: Blasting and Explosives; Welding; Surface Machinery; Surface Machinery Safety; Dredges and Barges; Underground Mining; Underground Mining Machinery; Hoisting; Conveyors; Haulage; Processing (Milling and Crushing); Sand and Gravel; Cement Plants; and Salt Mines and Mining.

MSHA 1995 482 pp

Cat No: PI 6

Price: Free of charge (1 book)

\$8.00 (each additional copy)

# TRAINING MATERIALS

## Job Safety Analysis (C/MNM)

This training package of lesson plans, handouts, visuals, and student text is designed to train Federal mine inspectors in Job Safety Analysis procedures. It allows the user to be able to identify hazards and to develop step-by-step procedures to provide the safest, most efficient way to complete a major task.

### Books

|                    |        |
|--------------------|--------|
| Instructor's Guide | 168 pp |
| Student's Text     | 14 pp  |

MSHA Rev 1999

Cat No: CI 28 (Instructor's Guide)

CI 28a (Student's Text)

Price: \$4.00 (Instructor's Guide)

\$2.00 (Student's Text)

## Job Safety Analysis (C/MNM)

JSA – an approach to accident prevention. Manual describes the four basic JSA steps: (1) select the job, (2) separate the job into basic steps, (3) identify the hazards and (4) control each hazard.

MSHA Rev 2000 31 pp

Cat No: SM 5

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Job Safety Analysis Process: A Practical Approach, The (C/MNM)

Designed to enable miners and supervisors to work together to identify hazards and to develop step-by-step procedures that make up the safest, most effective way to complete a major task. The Instruction Guide contains three sections:

- I. Leader's Guide  
Instructional material necessary to teach the Job Safety Analysis process.
- II. Visuals  
These visuals follow the Leader's Guide and Participant's Guide, and can be made into transparencies.
- III. Participant's Guide  
An instructional handout and reference for each person who attends Job Safety Analysis training.

You may want to order additional copies of the Participant's Guide.

MSHA 1990

Cat No: IG 83 (Instruction Guide) 90 pp

IG 83a (Participant's Guide) 14 pp

Price: Free of charge (1 copy)

\$4.00 (each additional Instruction Guide)

\$2.00 (each additional Participant's Guide)

## Mine Electricity (C/MNM)

Designed to train Federal mine inspectors in the inspection of electrical systems and units in both underground and surface mines, in accordance with 30 CFR 75 and 30 CFR 77 (Coal), and 30 CFR 56 and 30 CFR 57 (MNM).

### Books

|                        |        |
|------------------------|--------|
| Instructor's Guide (C) | 162 pp |
|------------------------|--------|

|                    |       |
|--------------------|-------|
| Student's Text (C) | 58 pp |
|--------------------|-------|

|                         |        |
|-------------------------|--------|
| Instructor's Guide MNM) | 137 pp |
|-------------------------|--------|

|                      |        |
|----------------------|--------|
| Student's Text (MNM) | 117 pp |
|----------------------|--------|

MSHA Rev 1999

Cat No: CI 7 (Instructor's Guide-C)

CI 7a (Student's Text-C)

CI 8 (Instructor's Guide-MNM)

CI 8a (Student's Text-MNM)

Price: \$4.00 CI 7 Instructor's Guide - C

\$3.00 CI 7a Student's Text - C

\$4.00 CI 8 Instructor's Guide - MNM

\$4.00 CI 8a Student's Text - MNM

## Mine Emergency Ventilation (C/MNM)

Designed for use by mine rescue team members and managers and supervisors responsible for mine rescue efforts. Lessons include instruction on making decisions on ventilating or sealing emergency areas and building ventilation controls and seals.

### Books

|                        |       |
|------------------------|-------|
| Instructor's Guide (C) | 33 pp |
|------------------------|-------|

|                    |      |
|--------------------|------|
| Student's Text (C) | 8 pp |
|--------------------|------|

|                          |       |
|--------------------------|-------|
| Instructor's Guide (MNM) | 33 pp |
|--------------------------|-------|

|                      |      |
|----------------------|------|
| Student's Text (MNM) | 8 pp |
|----------------------|------|

MSHA 1992

Cat No: CI 9 (Instructor's Guide-C)

CI 9a (Student's Text-C)

CI 10 (Instructor's Guide-MNM)

CI 10a (Student's Text-MNM)

Price: \$2.00 (Instructor's Guide)

\$2.00 (Student's Text)



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# TRAINING MATERIALS

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## Mine Escapeways (C/MNM)

An introduction to mine escapeways and evacuation. Stresses the importance of having clear escapeways in case of an emergency.

MSHA Rev 1997 24 pp

Cat No: SM 11

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Mine Gases (C/MNM)

A complete reference on the sources and properties of mine gases (including explosive and toxic effects). Discusses means of detection, identification, analysis and legal requirements for each gas found in mine air. Also includes mine gas control methods.

MSHA Rev 1999 42 pp

Cat No: SM 2

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Mine Illumination (C)

Describes the eye and how it works; how low and high lighting levels affect vision. Includes brief history of types of lighting used in mines from ancient times. Explains MSHA standards and policies that require illumination in mines (underground and surface); how to meet these requirements; how light levels are measured; and where to get assistance.

MSHA Rev 2003 81 pp

Cat No: IG 53

Price: Free of charge (1 book)

\$3.00 (each additional copy)

## Mine Maps — Underground (C)

This course is designed to train Federal coal mine inspectors to read and interpret underground coal mine maps. Included are the regulations with examples of their usage, and suggested mine map symbols.

### Books

Instructor's Guide 95 pp

Student's Text 9 pp

MSHA 1996

Cat No: CI 40 (Instructor's Guide)

CI 40a (Student's Text)

Price: \$3.00 (Instructor's Guide)

\$2.00 (Student's Text)

## Mine Rescue Training Modules (C/MNM)

Modules are designed to train experienced or inexperienced mine rescue team members. Each self-contained unit covers a separate subject and includes suggested handouts and visual aids.

WV University Mining

Extension Service 1981

BuM Contract JO308002

### Books

Introduction to Mine Rescue (2002)

Metal/Nonmetal Training Module (2201)

Coal Training Module (2101)

MSHA Rev 1999

Cat No: IG 5 - Introduction 869 pp

IG 6 - Metal/Nonmetal 528 pp

IG 7 - Coal 486 pp

Price: \$12.00 IG 5 - Introduction

\$ 8.00 IG 6 - Metal/Nonmetal

\$ 7.00 IG 7 - Coal

## Miners' Health Pack, The

The Miners' Health Pack is a manual on health hazards in mining. It reflects MSHA's determination to protect miners from exposure to such well-known health hazards as silica, carbon monoxide, and noise, as well as injuries resulting from repetitive work occurring in cramped places and awkward positions.

Through the Health Pack, which is really a series of fact sheets and resources, MSHA hopes to make basic scientific, medical, and control technology information about health hazards in mining understandable to miners and mine operators so that they can take action to reduce exposures and protect miners. The materials are packaged in a binder so that new training materials on hazards such as lead, mercury, or diesel exhaust can be added as they are developed by MSHA to create a comprehensive manual on health hazards.

MSHA Rev 2003 86 pp

Cat No: IG 28

Price: Free of charge (1 book)

\$3.00 (each additional copy)

# TRAINING MATERIALS

## **Miners' Rights and Responsibilities Under the Federal Mine Safety and Health Act of 1977, Guide to (C/MNM)**

Summarizes rights and responsibilities of miners, their representatives, and applicants for mine work under the Federal Mine Safety and Health Act of 1977. Intended as a guide only and not as an "official" statement of the law or as a source for legal interpretations of the Act.

MSHA Rev 2000 52 pp

Cat No: OT 2

Price: Free of charge

*Also available in Spanish (OT 2-S)  
see description below.*



## **Derechos y Responsabilidades de los Mineros Sobre la Ley Federal de Seguridad y Salud en las Minas de 1977, Guía a (C/MNM)**

Da un sumario de los derechos y de las responsabilidades de los mineros, de sus representantes y de los aspirantes por trabajo en las minas sobre la Ley Federal de Seguridad y Salud en las Minas de 1977. Proyectado solo como una guía y no como un comunicado «oficial» de la ley o como una fuente por interpretaciones jurídicas de esta Ley. Hemos vuelto a escribirla y modernizarla completamente de nuevo para incluir información sobre Parte 46.

MSHA Revisado 2000 52 páginas

Número de

Catálogo: OT 2-S

Precio: Gratis

## **Mining Disasters**

This publication includes photographs and newspaper clippings of some of the nation's worst mining disasters. The publication also includes a listing of Historic Coal Mine Disasters in the United States from 1839-2003 and a listing of Historic Metal Nonmetal Disasters in the United States from 1869-2003.

MSHA Rev 2003 66 pp

Cat No: OT 32

Price: Free of charge (1 book)

\$3.00 (each additional copy)

## **MSA W-65 Self-Rescuer**

Instructs underground workers and visitors in the proper use of this self-rescuer. Provides students with working knowledge of the device and the ability to use the self-rescuer in an emergency. The 8 basic steps are pictured on PowerPoint slides as well as a pocket card. A CD on which a PowerPoint presentation (with a "reader" so the user can view the presentation without the need of the PowerPoint program) of the entire manual is also available.

MSHA Rev 2000 15 pp

Cat No: IG 2-CD

IG 2 (book)

Cards: 100 cards per pack

Price: Free of charge (1 book, 1 card)

\$2.00 (each additional book)

\$8.00 (1 book, 1 CD)

\$5.00 (per pack of cards)

## **On-The-Job Training Modules — Anthracite and Bituminous Coal Preparation Plants and Shops**

Sixteen-part program developed cooperatively by MSHA and members of the anthracite and bituminous coal mining industry. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT).

Topics include:

1. Plant Operation
2. Plant Maintenance and Repair
3. Maintaining Conveyor Systems
4. Welding and Cutting
5. Electrical Procedures for Nonelectricians
6. Thermal Dryer Operation
7. Railcar Handling
8. Barge Haulage/Dredge Operations
9. Barge Loading Facilities
10. Front-End Loader Operation
11. Truck Haulage
12. Bulldozer Operation
13. Mobile Crane Operation
14. Ladders and Scaffolds
15. Manual Handling of Materials
16. Prevention of Slips and Falls

Addendum - Questions for Discussion

MSHA 1988 226 pp

Cat No: IG 49

Price: Free of charge (1 book)

\$5.00 (each additional copy)



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# TRAINING MATERIALS

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## **On-The-Job Training Modules — Cement**

Developed cooperatively by MSHA and members of the cement industry. A fifteen-module program:

1. General Plant Cleanup
2. Cleaning Belt Conveyors
3. Unplugging Clinker Breaker
4. Shooting Kiln Gun
5. Unplugging Preheater
6. Restarting After a Plantwide Power Failure
7. Manual Handling of Materials
8. Operating and Handling Railroad Equipment
9. Splicing Conveyor Belts
10. Using an Overhead Hoist to Lift or Handle Parts or Material
11. Replacing the Drive Chain or Belt on a Screw Conveyor
12. Handling Materials with Shop Overhead Crane
13. Welding and Cutting
14. Equipment Lockout Procedures
15. Electrical Procedures for Nonelectricians

Each module contains a brief job description and a generic job safety analysis (JSA) of a job common to cement operations.

MSHA Rev 2002 113 pp

Cat No: IG 42

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## **On-The-Job Training Modules — Metal and Nonmetal Dredges**

Developed cooperatively by MSHA and members of the dredging industry. A five-module program:

1. Dredge Operations
2. Barge Haulage
3. Replacing Major Components of a Cutterhead Dredge
4. Equipment Lockout Procedures
5. Manual Handling of Materials

Each module contains a brief job description and a generic job safety analysis (JSA) of a job common to dredging operations.

MSHA Rev 2002 44 pp

Cat No: IG 41

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## **On-The-Job Training Modules — Metal and Nonmetal Inspectors**

This 23-part series of on-the-job training materials is used in the training of MSHA metal/nonmetal inspectors. It may also be used by industry personnel wishing to improve their inspection capabilities.

Topics include:

1. Citations and Orders
2. Inspection Procedures
3. Ground Control
4. Loading, Hauling and Dumping
5. Machinery and Equipment
6. Material Storage and Handling
7. Fire Prevention and Control
8. Air Quality, Ventilation, and Noise
9. Electricity
10. Illumination
11. Personal Protection
12. Compressed Air and Boilers
13. Drilling
14. Explosives
15. Miscellaneous
16. Part 50
17. Safety Programs
18. Travelways and Escapeways
19. Hoisting
20. Accident Investigation
21. Mine Rescue and Emergency Procedures
22. Gassy Mines
23. Radiation

MSHA Rev 2001 281 pp

Cat No: IG 55

Price: Free of charge (1 book)

\$6.00 (each additional copy)

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# TRAINING MATERIALS

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## **On-The-Job Training Modules — Sand, Gravel, and Crushed Stone**

Developed cooperatively by MSHA and members of the sand, gravel and crushed stone industries. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT). Consists of nineteen modules:

1. Starting the Plant
2. Plant Clean-Up
3. Plant Shutdown
4. Plant Operation
5. Maintaining Conveyor Systems
6. Plant Repair
7. Welding and Cutting
8. Equipment Lockout Procedures
9. Electrical Procedures for Nonelectricians
10. Truck Haulage
11. Ground Control
12. Inspecting and Replacing Cables (Wire Ropes)
13. Replacing the Drive Chain or Belt on a Screw Conveyor
14. Manual Handling of Materials
15. Using an Overhead Hoist to Lift or Handle Parts or Material
16. Handling Material with Shop Overhead Traveling Crane
17. Primary Crushing Operation
18. Operating Drilling Equipment
19. Transportation, Use, and Storage of Explosives

Each module contains both a description and a generic job safety analysis (JSA) of a job common to sand, gravel and crushed stone operations.

MSHA Rev 2000 204 pp

Cat No: IG 40

Price: Free of charge (1 book)

\$6.00 (each additional copy)

## **On-The-Job Training — Structuring Effective Programs (C/MNM)**

How to design, conduct, and evaluate structured OJT training programs. Intended as a guide for supervisory personnel involved in OJT.

MSHA 1983 89 pp

Cat No: IG 12

Price: Free of charge (1 book)

\$3.00 (each additional copy)

## **On-The-Job Training Modules — Surface Anthracite**

Fifteen-part program developed cooperatively by MSHA and members of the anthracite mining industry. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT). Topics include:

1. Front-End Loader Operation
2. Dozer Operation
3. Hauler Operation
4. Pan Scraper Operation
5. Backhoe and Hydraulic Excavator Operation
6. Power Shovel Operation
7. Dragline Operation
8. Drill Operation
9. Storage, Transportation, and Use of Explosives
10. Field Maintenance of Surface Equipment
11. Welding and Cutting
12. Inspecting and Replacing Wire Ropes (Cables)
13. Ground Control
14. Manual Handling of Materials
15. Prevention of Slip and Fall Accidents

Addendum - Questions for Discussion

Each module contains an introduction and a generic job safety analysis (JSA) of a job common to surface anthracite operations.

MSHA Rev 1999 210 pp

Cat No: IG 51

Price: Free of charge (1 book)

\$6.00 (each additional copy)

## **On-The-Job Training Modules — Surface Coal**

Fifteen-part program developed cooperatively by MSHA and members of the surface coal mining industry. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT). Topics include:

1. Front-End Loader Operation
2. Bulldozer Operation
3. Truck Haulage
4. Pan Scraper Operation
5. Backhoe and Hydraulic Excavator Operation
6. Power Shovel Operation
7. Dragline Operation
8. Drill Operation
9. Storage, Transportation and Use of Explosives



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# TRAINING MATERIALS

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10. Field Maintenance of Surface Equipment
11. Welding and Cutting
12. Inspecting and Replacing Wire Ropes (Cables)
13. Ground Control
14. Manual Handling of Materials
15. Prevention of Slip and Fall Accidents

Addendum - Questions for Discussion

MSHA Rev 2003 201 pp

Cat No: IG 48

Price: Free of charge (1 book)

\$6.00 (each additional copy)

## **On-The-Job Training Modules — Surface Coal Mine Inspection**

This 23-module set of materials is intended to help train entry level coal mine inspectors. It can also be used to refresh or retrain journeyman inspectors in specific subject areas.

Topics covered include:

1. Uniform Mine File
2. Mine Books and Records
3. Surface Installations
4. Refuse Piles
5. Impoundments
6. Thermal Dryers
7. Safeguards for Mechanical Equipment
8. Compressed Air and Boilers
9. Electric Equipment - General
10. Trailing Cables
11. Grounding
12. Surface High-Voltage Distribution
13. Surface Low- and Medium-Voltage AC Circuits
14. Ground Control
15. Fire Protection
16. Maps
17. Explosives and Blasting
18. Personnel Hoisting
19. Auger Mining
20. Surface Loading and Haulage
21. Miscellaneous
22. Trolley Wires and Trolley Feeder Wires
23. Slope and Shaft Sinking

This training package has been developed using the latest available information. Because regulations, policy, and mining technology constantly change, be sure to check for information that could supersede the material in the module.

MSHA 1999 102 pp

Cat No: IG 25

Price: \$5.00

## **On-The-Job Training Modules — Surface Metal/Nonmetal**

Seventeen-part program developed cooperatively by MSHA and members of the surface metal/nonmetal industry. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT). Topics include:

1. Front-End Loader Operation
2. Dozer Operation
3. Hauler Operation
4. Pan Scraper Operation
5. Backhoe and Hydraulic Excavator Operation
6. Mobile Crane Operation
7. Hydraulic Shovel Operation
8. Power Shovel Operation
9. Dragline Operation
10. Drill Operation
11. Storage, Transportation and Use of Explosives
12. Field Maintenance of Surface Equipment
13. Welding and Cutting
14. Inspecting and Replacing Wire Ropes (Cables)
15. Ground Control
16. Manual Handling of Materials
17. Prevention of Slip and Fall Accidents

Addendum - Questions for Discussion

Each module contains an introduction and a generic job safety analysis (JSA) of a job common to surface metal and nonmetal operations.

MSHA Rev 2001 262 pp

Cat No: IG 43

Price: Free of charge (1 book)

\$6.00 (each additional copy)

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# TRAINING MATERIALS

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## **On-The-Job Training Modules — Underground Anthracite**

Seven-part program developed cooperatively by MSHA and members of the anthracite mining industry. Designed to supplement existing training programs and assist the industry in conducting effective on-the-job training (OJT). Topics include:

1. Roof Control - General
2. Installing Permanent Supports
3. Equipment Lockout Procedures
4. Prevention of Slip and Fall Accidents
5. Manual Handling of Materials
6. Installing Ventilation Controls
7. Blasting Operations

Addendum - Questions for Discussion

MSHA Rev 1999 101 pp

Cat No: IG 50

Price: Free of charge (1 book)

\$5.00 (each additional copy)

## **On-The-Job Training Modules — Underground Coal**

Designed cooperatively by MSHA and members of industry. Consists of thirteen modules:

1. Roof Control - General
2. Installing Temporary Supports
3. Installing Permanent Supports
4. Shuttle Car Haulage
5. Scoop Haulage
6. Operating Track Haulage Equipment
7. Belt Conveyor Haulage
8. Manual Handling of Materials
9. Prevention of Slip and Fall Accidents
10. Equipment Lockout Procedures
11. Electrical Procedures for Non-Electricians
12. Installing Ventilation Controls
13. Section Belt and Power Center Moves

MSHA 1986 191 pp

Cat No: IG 47

Price: Free of charge (1 book)

\$5.00 (each additional copy)

## **On-The-Job Training Modules — Underground Coal Mine Inspection**

This 23-module set of materials is intended to help train entry level coal mine inspectors. It can also be used to refresh or retrain journeyman inspectors in specific subject areas.

Topics covered include:

1. Uniform Mine File
2. Mine Books and Records
3. Roof Support
4. Ventilation
5. Escapeways
6. Longwall and Shortwall Travelways
7. Combustible Materials and Rock Dusting
8. Electrical Equipment - General
9. Trailing Cables
10. Grounding
11. Underground High-Voltage Distribution
12. Low- and Medium-Voltage A Circuits
13. Trolley Wires and Trolley Feeder Wires
14. Fire Protection - Underground
15. Mine Maps
16. Underground Blasting and Explosives
17. Hoisting and Man Trips
18. Emergency Shelters
19. Communications
20. Miscellaneous
21. Diesel Equipment
22. Respirable Dust
23. Citations and Orders

This training package has been developed using the latest available information. Because regulations, policy, and mining technology constantly change, be sure to check for information that could supersede the material in the module.

MSHA 1999 138 pp

Cat No: IG 26

Price: \$5.00

## **Part 45 – Coal and Metal/Nonmetal Entry Level Training**

This program covers 30 CFR Part 45 which pertains to the regulations covering independent contractors. Based on case studies, students will determine whether citation(s) or order(s) must be issued to the independent contractor, to the mine operator, or to both.

MSHA Rev 2001 14 pp

Cat No: CI 32

Price: Free of charge (1 book)

\$2.00 (each additional copy)



# TRAINING MATERIALS

## Part 46 Instructors Guide With Lesson Plans, 30 CFR

This guide is designed to assist mine operators and independent contractors, who are covered by the part 46 regulations, to develop effective and mine-specific training programs. The target audience for this guide is the instructor who gives part 46 training and the person(s) designated by the operator as being responsible for part 46 training at the mine.

MSHA 1999 21 pp

Cat No: IG 37

Price: Free of charge

*Also available in Spanish (IG 37-S)  
see description below.*



## Parte 46—Guía por Instructores con Planes por las Lecciones, 30 CFR

Se diseña esta guía para ayudar a los operadores de las minas y los contratistas independientes, quienes están cubiertos por las normas de parte 46, para desarrollar eficaces programas de enseñanza, específicos por las minas. Esta guía está escrita para el instructor quien da enseñanza sobre parte 46 y la(s) persona(s) nombrada(s) por el operador responsable por la enseñanza sobre parte 46 en la mina.

MSHA 1999 21 páginas

Número de

Catálogo: IG 37-S

Precio: Gratis

## Part 46 Starter Kit With Sample Training Forms, 30 CFR

This package is intended to help the user develop an effective, mine-specific training program that meets the provisions of part 46.

MSHA 1999 75 pp

Cat No: IG 36

Price: Free of charge

*Also available in Spanish (IG 36-S)  
see following description.*



## Parte 46—Equipo para Empezar con Muestras de Formularios de Enseñanza, 30 CFR

El objetivo de este paquete es ayudar al usuario a desarrollar un eficaz programa de enseñanza, que es específico a la mina y que cumple con las normas de parte 46.

MSHA 1999 75 páginas

Número de

Catálogo: IG 36-S

Precio: Gratis

## Part 46 Training Packet — Introduction to the Work Environment

This package has 10 sections that review various subjects which can be discussed with trainees in an Introduction to the Work Environment as required under the provisions of part 46. Topics covered include: Surface Machinery, Surface Machinery Safety, Dredges and Barges, Haulage, Processing (Milling and Crushing), Conveyors, Electricity in Mining, Welding, Blasting and Explosives, and Sand and Gravel.

MSHA 2000 75 pp

Cat No: IG 31

Price: Free of charge

## Part 46 Training — Sand and Gravel Mines (MNM)

Designed for use **only** at sand and gravel mines. Repeats general materials contained in **IG 19 Surface Mines** program but has changes and additions specific to sand and gravel operations. Packaged in three volumes:

- (1) New Miners Training 212 pp
- (2) Newly Employed Experienced Miners Training 115 pp
- (3) Annual Refresher Training 146 pp

MSHA Rev 2002

Cat No: IG 18

Price: \$8.00 (3 books)

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# TRAINING MATERIALS

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## **Part 48 Alcohol and Other Drug Abuse Recognition in the Mining Industry (C/MNM)**

A course of study that includes lessons on common types of drugs and their effects on the worker, alcohol as a commonly abused substance, how to recognize the symptoms of substance abuse, and how to get assistance for abuse problems. Can be tailored to include the company's Employee Assistance Program if available. Includes tests and answer sheets.

### **Books**

|                                  |       |
|----------------------------------|-------|
| Instructor's Guide               | 26 pp |
| Student's Text                   | 15 pp |
| MSHA                             | 1992  |
| Cat No: IG 80                    |       |
| Price: Free of charge (one book) |       |
| \$3.00 (Instructor's Guide)      |       |
| \$3.00 (Student's Text)          |       |

## **Part 48 Training — Coal**

### **Surface**

General training materials designed for use at all surface coal mining operations, including surface work areas of underground mines and coal preparation plants. The complete program consists of 23 separate training modules which support four Part 48 training categories:

- (1) New Miners Training
- (2) Newly Employed Experienced Miners Training
- (3) Annual Refresher Training
- (4) Hazard Training

An outline is also furnished to show trainers how the program is put together.

|                                        |          |
|----------------------------------------|----------|
| WV University Mining                   |          |
| Extension Service                      | 1980     |
| BuM Contract                           | JO188069 |
| Cat No: IG 22                          |          |
| Price: \$15.00 (23 modules, 1 outline) |          |

### **Underground**

General training materials designed for use at all underground coal mining operations. The complete program consists of 27 separate training modules which support four Part 48 training categories:

- (1) New Miners Training
- (2) Newly Employed Experienced Miners Training
- (3) Annual Refresher Training
- (4) Hazard Training

An outline is also furnished to show trainers how the program is put together.

|                                        |          |
|----------------------------------------|----------|
| WV University Mining                   |          |
| Extension Service                      | 1980     |
| BuM Contract                           | JO188069 |
| Cat No: IG 23                          |          |
| Price: \$18.00 (27 modules, 1 outline) |          |

## **Part 48 Training — Metal/Nonmetal**

### **Deep Mines**

General materials designed for use at all deep metal/nonmetal mines — **except** underground salt mines. Packaged in three volumes:

- |                                                |          |
|------------------------------------------------|----------|
| (1) New Miners Training                        | 519 pp   |
| (2) Newly Employed Experienced Miners Training | 123 pp   |
| (3) Annual Refresher Training                  | 139 pp   |
| Bendix Corp                                    | 1981     |
| BuM Contract                                   | JO308011 |
| Cat No: IG 17                                  |          |
| Price: \$11.00 (3 books)                       |          |

### **Surface Mines**

General materials designed for use at all surface metal/nonmetal mines — **except** sand and gravel operations and surface uranium mines. Packaged in three volumes:

- |                                                |          |
|------------------------------------------------|----------|
| (1) New Miners Training                        | 218 pp   |
| (2) Newly Employed Experienced Miners Training | 119 pp   |
| (3) Annual Refresher Training                  | 142 pp   |
| Bendix Corp                                    | 1981     |
| BuM Contract                                   | JO308011 |
| Cat No: IG 19                                  |          |
| Price: \$8.00 (3 books)                        |          |



# TRAINING MATERIALS

## Underground Salt Mines

Designed for use only at underground salt mines. Repeats general materials contained in **IG 19 Surface Mines** program but has changes and additions specific to underground salt mining operations. Packaged in three volumes:

- (1) New Miners Training 235 pp
  - (2) Newly Employed Experienced Miners Training 118 pp
  - (3) Annual Refresher Training 139 pp
- Bendix Corp 1981  
BuM Contract JO308011

Cat No: IG 20

Price: \$8.00 (3 books)

## Part 50 — Coal and Metal/Nonmetal

Title 30 CFR Part 50 defines the accident, injury, illness, employment and production (coal) reporting obligations to MSHA of operators working on mine properties. This information also discusses the procedures followed in processing the reported data, a description of some statistical computations used in arriving at incident and severity rates, and a question and answer section. In addition to the text materials, handouts, lesson plans, visuals, and test and evaluations are included which will assist in instructing 30 CFR Part 50 training.

### Books

- Instructor's Guide 222 pp
- Student's Text 51 pp

MSHA Rev 1999

Cat No: CI 30 (Instructor's Guide)  
CI 30a (Student's Text)

Price: \$5.00 (Instructor's Guide)  
\$3.00 (Student's Text)

## Permissibility — Electric Face Equipment (C/MNM)

Addresses definitions, mandatory requirements, and other information concerning electric-driven mining equipment.

**Note to Trainer:** Designed for use by safety and maintenance personnel, mine inspectors, and other mining personnel.

MSHA Rev 2002 38 pp

Cat No: SM 16

Price: Free of charge (1 book)  
\$2.00 (each additional copy)

## Personal Protective Equipment (C/MNM)

Use of personal protective equipment is necessary in mining (and in many other occupational areas – including some home activities). This manual describes various devices used, why they are needed, where they are needed, and how to care for the equipment. (Typical equipment includes head, eye, face, foot and body protection devices and respiratory protection devices.)

MSHA Rev 1999 69 pp

Cat No: SM 14

Price: Free of charge (1 book)

\$2.00 (each additional copy)

*Also available in Spanish (SM 14-S)  
see description below.*



## Equipo Personal de Protección (C/MNM)

El uso del equipo personal de protección es necesario en la minería (y en muchas otras áreas profesionales – incluso unas actividades caseras). Este manual describe varios aparatos usados, por qué se los necesitan, donde se los necesitan y como se cuidan el equipo. (Equipo típico incluye aparatos para proteger la cabeza, los ojos, la cara, los pies, y el cuerpo y aparatos para proteger la respiración.)

MSHA Revisado 1999 69 páginas

Número de

Catálogo: SM 14-S

Precio: Gratis (1 libro)

US\$ 2.00 (cada copia adicional)

## Principles of Mine Rescue (C/MNM)

Designed to instruct mining personnel in the principles involved in mine rescue operations and to increase miners' awareness of the necessity of a thorough knowledge of mine rescue techniques.

MSHA Rev 2002 94 pp

Cat No: IG 16

Price: Free of charge (1 book)

\$3.00 (each additional copy)

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# TRAINING MATERIALS

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## **Program Policy Manual**

Summary of MSHA's policies in the areas listed below:

Volume I - 1977 Mine Act

Volume II - Testing and Evaluation

Volume III - 30 CFR Parts 40-50 and Part 100

Volume IV - Metal/Nonmetal Mines

Volume V - Coal Mines

MSHA Updated each year

Cat No: OT 15 (Coal – Volumes I, II, III, V)

OT 16 (Metal/Nonmetal – Volumes I, III, IV)

OT 17 (General Interest – Volumes I-V)

Price: OT 15 \$7.00

OT 16 \$6.00

OT 17 \$7.00

**NOTE: Also available through MSHA's home page at <http://www.msha.gov>**

## **Radiation Hazards in Mining**

Deals with the occurrence of lung cancer from breathing radioactive dust particles. Covers radon daughter hazards, radiation control and medical surveillance measures for mine personnel.

MSHA Rev 2003 21 pp

Cat No: SM 7

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Repeat Violation Reduction Program (RVRP)**

This program was developed by MSHA's coal district office in Morgantown, West Virginia, as an inspection procedure. The intent of the program is to reduce the number of repeat violations of mandatory standards by identifying the root causes of the violations. It may also be used by industry personnel to reduce repeat violations.

MSHA Rev 2001 134 pp

Cat No: IG 63

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## **Roof and Rib Control (C)**

This training package of lesson plans, handouts, visuals, and student text is designed to train Federal mine inspectors in roof control plans and mandatory standards related to roof and rib control.

MSHA Rev 2003 322 pp

Cat No: CI 20

Price: \$6.00

## **Rubber-Tired Front-End Loader and Forklift Truck Accident Prevention (C/MNM)**

Designed to show safe working procedures for front-end loaders and forklift trucks.

MSHA Rev 2002 57 pp

Cat No: IG 30

Price: Free of charge (1 book)

\$3.00 (each additional copy)

## **Safety and Health Audit for Aggregate Operators (MNM)**

This safety and health audit is a short version adapted from IG-14a. It focuses on the most common violations found at aggregate operations, based on twenty conditions/practices that accounted for violations cited at sand, gravel, and crushed stone operations in 2001. Completing this self-audit package is a first step in developing a safety program that will avoid common conditions/practices at your mining operation.

MSHA 2002 17 pp

Cat No: IG 14

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## **Safety and Health Audit for Aggregate Operators – Long Version (MNM)**

This safety and health audit is a self-audit package that will help to check safety and health conditions at your surface operation. The audit is focused on the requirements of 30 CFR Part 56. Completing this self-audit package is a first step in developing a safety program that will avoid common conditions/practices at your mining operation.

MSHA 2000 159 pp

Cat No: IG 14a

Price: Free of charge (1 book)

\$4.00 (each additional copy)



# TRAINING MATERIALS

## Safety Basketball (MNM)

A 4-team game for use in training participants on health and safety standards.

MSHA 1995 50 pp

Cat No: IG 78

Price: \$4.00

## Safety Observation (C/MNM)

Designed to help present training to mining industry personnel on safety observation and to help management understand that an efficient safety observation can be integrated into mine accident prevention programs. This material is a companion to **The Job Safety Analysis Process: A Practical Approach (IG 83)**.

MSHA Rev 2001 30 pp

Cat No: IG 84

Price: Free of charge (1 book)

\$2.00 (each additional copy)

**Also available in Spanish (IG 84-S)**  
*see description below.*



## Observación de Seguridad (C/MNM)

Diseñado para ayudar en entrenamientos presentes del personal de la industria minera en la observación de seguridad y para ayudar a la gerencia a entender que una observación de seguridad eficaz puede integrarse en programas de prevención de accidentes. Este material es complementario a El Proceso de Análisis del Trabajo Seguridad: Un Acercamiento Práctico (IG 83).

MSHA Rev 2001 30 pp

Número de

Catálogo: IG 84-S

Precio: Gratis sin cargo (1 libro)

US\$ 2.00 (cada copia adicional)

## Sampling for Silica and Noise — A Handbook for Metal/Nonmetal Miners and Mine Operators

This handbook provides miners and mine operators with basic information on sampling methods and procedures. It is based on the course materials for Industrial Hygiene: Sampling for Silica and Noise (IG-13).

MSHA 1999 37 pp

Cat No: IG 29

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Stockpiling Safety

Deals with the safe operation of mobile equipment on and around stockpiles. Discusses the hazards associated with stockpiles and reviews the procedures that can be used to minimize the occurrence of accidents.

MSHA Rev 2001 58 pp

Cat No: SM 27

Price: Free of charge (1 copy)

\$2.00 (each additional copy)



## Strategies for Improving Miners' Training (C/MNM)

This Information Circular from the National Institute for Occupational Safety and Health (NIOSH) documents and supplements the information presented in a series of workshops. The first three papers in this document present basic principles for teaching adults. The five remaining papers are intended to illustrate how these principles can be applied to the development and implementation of effective training for miners.

NIOSH 2002 54 pp

Cat No: IG 34

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Substance Abuse Recognition for Supervisors (C/MNM)

Designed to educate supervisors in the common types of drugs and their effects on the worker, how to recognize a troubled employee, and how to give assistance. Can be tailored to include the company's Employee Assistance Program if available.

### Books

Instructor's Guide 71 pp

Student's Text 17 pp

MSHA 1992

Cat No: CI 11 (Instructor's Guide)

CI 11a (Student's Text)

Price: \$4.00 (Instructor's Guide)

\$3.00 (Student's Text)

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# TRAINING MATERIALS

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## **Supervisory Training Program (C)**

Designed for coal mine section supervisors. Focuses on the knowledge and skills needed to carry out supervisory responsibilities. Packaged in two volumes (one for instructor and one for participants), and includes CD with 107 PowerPoint slides. Each volume is divided into ten lessons:

1. Role of the Supervisor
2. Leadership and Supervision
3. Motivation
4. General Communications
5. Organizational Communications
6. Enforcing Rules and Regulations
7. Performance Review
8. Planning
9. Supervisors' Training Responsibilities
10. Supervisors' Safety Role

Each volume is bound separately. Complete set of training materials contains:

|                        |                          |
|------------------------|--------------------------|
| Instructor's Guide     | 456 pp                   |
| Participant's Handbook | 172 pp                   |
| CD                     |                          |
| MSHA                   | Rev 2002                 |
| Cat No: IG 4           |                          |
| Price: \$7.00          | (Instructor's Guide)     |
| \$4.00                 | (Participant's Handbook) |
| \$8.00                 | (CD)                     |

## **Surface Contractors Training Program (C/MNM)**

This program will provide recommendations and instructional guidelines to help prevent accidents to surface contractors in the mining industry. It includes six fundamental accident prevention topics: Review of Pertinent Federal Laws; Review of Independent Contractor Fatalities; Review of General First Aid; Review Hazard Training Applications; Review Pertinent General Safety Guidelines; and Review Line of Authority and Responsibility.

|               |      |        |
|---------------|------|--------|
| MSHA          | 1999 | 478 pp |
| Cat No: OT 18 |      |        |
| Price: \$7.00 |      |        |

## **Surface Haulage Coal Mine Inspector Training**

This set of materials covers 39 topics relating to surface coal mine haulage regulations and procedures.

### **Books:**

|                    |                      |
|--------------------|----------------------|
| Instructor's Guide | 750 pp               |
| Student's Text     | 50 pp                |
| MSHA               | 1997                 |
| Cat No: CI 22      | (Instructor's Guide) |
| CI 22a             | (Student's Text)     |
| Price: \$11.00     | (Instructor's Guide) |
| \$ 3.00            | (Student's Text)     |

## **Surface Haulage Metal/Nonmetal Mine Inspector Training**

This set of materials reviews 86 topics relating to surface metal/nonmetal mine haulage regulations and procedures.

### **Books:**

|                    |                      |
|--------------------|----------------------|
| Instructor's Guide | 800 pp               |
| Student's Text     | 27 pp                |
| MSHA               | 1997                 |
| Cat No: CI 45      | (Instructor's Guide) |
| CI 45a             | (Student's Text)     |
| Price: \$11.00     | (Instructor's Guide) |
| \$ 3.00            | (Student's Text)     |

## **Surface Haulage Safety (C/MNM)**

Accidents involving haulage trucks and other mobile surface equipment constitute a major safety problem in the mining industry. This manual illustrates the important principles of haul road design and maintenance, braking system inspection and maintenance, and driver procedures relating to truck runaways. A section also looks at potential hazards and preventive measures associated with surface haulage, and how these hazards can be minimized to equipment operators.

|                       |                        |       |
|-----------------------|------------------------|-------|
| MSHA                  | Rev 2000               | 50 pp |
| Cat No: SM 22         |                        |       |
| Price: Free of charge | (1 book)               |       |
| \$2.00                | (each additional copy) |       |



# TRAINING MATERIALS

## Surface Installations (C)

Designed to train Federal coal mine inspectors in the inspection of surface installations at both underground and surface mines, including coal preparation plants, in compliance with 30 CFR Part 77. A lesson on inspecting thermal dryers is included.

### Books

|                    |        |
|--------------------|--------|
| Instructor's Guide | 189 pp |
| Student's Text     | 56 pp  |

MSHA 1992

Cat No: CI 12 (Instructor's Guide)

CI 12a (Student's Text)

Price: \$5.00 (Instructor's Guide)

\$3.00 (Student's Text)

## Surface Powered Haulage Safety (C/MNM)

This computer CD contains visuals and discussion based on a classroom presentation developed by MSHA instructors. The training material is aimed at surface haulage accident prevention, and addresses several of the hazards that may arise in surface haulage operations at mines. It is primarily designed for equipment operators, supervisors, and safety personnel at surface mines, but may also benefit others who work at a surface mine. The full presentation may take about an hour and a half. The same presentation is available on MSHA's home page ([www.msha.gov](http://www.msha.gov)); however, the CD includes additional formats for those who wish to present the material full-screen with a computer projection system, without being connected to the internet, and/or wish to tailor the material to their operations.

MSHA 2000 1 CD

Cat No: IG 56-CD

Price: \$8.00

## Survey of Substance Abuse Programs in the Mining Industry, A (C/MNM)

Survey conducted for the Mining Industry Committee on Substance Abuse. Gives insight on company programs designed to curb work site alcohol and drug use.

MSHA 1990 174 pp

Cat No: OT 30

Price: \$5.00

## Tire and Rim Safety Awareness Program (C/MNM)

Designed for trainers of coal and metal/nonmetal mine personnel. Covers the handling and servicing of multi- and single-piece rim wheels.

MSHA Rev 1999 34 pp

Cat No: IG 60

Price: Free of charge (1 book)

\$4.00 (each additional copy)

**Also available in Spanish (IG 60-S)**

*see description below.*



## Programa de Información Sobre Seguridad en el uso de Neumáticos y Llantas

Este programa está diseñado por instructores de personal de las minas metales/no metales. Trata del manejo y mantenimiento de ruedas de ambas llantas de una pieza y llantas de más de una pieza.

MSHA Revisado 1999 34 páginas

Número de

Catálogo: IG 60-S

Precio: Gratis

US\$ 4.00 (cada copia adicional)

## Toolbox — Practical Ways to Reduce Exposure to Diesel Exhaust in Mining

This toolbox contains practical ideas for reducing miners' exposures to diesel particulate matter in the mining environment.

MSHA 1999 93 pp

Cat No: OT 45

Price: \$4.00

## Traffic Control at Surface Mines and Installations, Guidelines for (C/MNM)

All kinds and sizes of vehicles travel roads at surface operations. These vehicles are operated by drivers who travel the mine haul roads on a daily basis or very infrequently or even for the first time. This means that there is a need for good traffic control on mine haul roads. This full-color spiral-bound booklet reviews what mine operators and drivers need to know about traffic control.

MSHA Rev 2002 15 pp

Cat No: OT 26

Price: \$4.00

# TRAINING MATERIALS

## TRAP — Take Responsibility for Accident Prevention

Near-misses are incidents which indicate the presence of a hazard – a “trap,” that is waiting to catch a miner. Traps come and go in the workplace every day. Some are simple, such as a cord stretched across a walkway, while others are more complex such as a poorly designed set of controls on a mining machine. In any case, traps are dangerous. “Take Responsibility for Accident Prevention” is a proactive program. It involves miners, supervisors, managers, and MSHA in an effort to make the workplace safer for everyone. The TRAP Program includes four short courses. The entire program is available on CD.

MSHA Rev 2003

Cat No: IG 62-CD

IG 62a Take Responsibility for  
Accident Prevention

IG 62b Task Training

IG 62c Miners’ Rights and  
Responsibilities

IG 62d Supervisory Responsibilities

Price: Free of charge (1 of each book)

\$2.00 IG 62a Take Responsibility  
for Accident Prevention

\$2.00 IG 62b Task Training

\$2.00 IG 62c Miners’ Rights and  
Responsibilities

\$2.00 IG 62d Supervisory  
Responsibilities

\$8.00 1 CD of entire set

## Underground Haulage, Transportation, and Machinery (C)

Designed to train Federal coal mine inspectors in the inspection of haulage and transportation systems and machinery in underground coal mines, in compliance with 30 CFR Part 75.

### Books

Instructor’s Guide 213 pp

Student’s Text 144 pp

MSHA 1992

Cat No: CI 13 (Instructor’s Guide)

CI 13a (Student’s Text)

Price: \$5.00 (Instructor’s Guide)

\$4.00 (Student’s Text)



## Understanding MSHA’s HazCom

This booklet explains HazCom’s basic compliance responsibilities by using easily understood language and mine-related examples. It’s intended to familiarize mine operators with each of HazCom’s requirements, what they mean, and what an operator must do to comply with the standard.

MSHA 2002 38 pp

Cat No: OT 50

Price: Free of charge (1 book)

\$1.00 (each additional copy)

## Winter Alert (C/MNM)

Surveys potentially dangerous conditions encountered in underground coal operations during the winter months, and covers winter related surface mining hazards. Although primarily intended for coal, much of the information in this manual can be applied to metal/nonmetal mines.

MSHA Rev 2002 64 pp

Cat No: SM 19

Price: Free of charge (1 book)

\$2.00 (each additional copy)



# POCKET CARDS TARJETAS DE BOLSILLO

This section is an alphabetical listing of the available printed pocket cards. Cards available in Spanish are indicated with an "S" after the Card No.

**(Esta sección es una lista alfabética de las tarjetas de bolsillo impresas disponibles. Las tarjetas disponibles en español se indican con una "S" después del Número de la Tarjeta.)**

MSHA has developed a series of pocket cards covering a variety of topics as part of the Agency's continuing effort to protect the health and safety of our Nation's miners. Each pack contains 100 cards. One pack is free of charge. Additional packs cost \$5.00 each. Be sure to include the Card No. and quantity when ordering.

**(MSHA ha desarrollado una serie de tarjetas de bolsillo cubriendo una variedad de temas como parte del continuo esfuerzo de la Agencia para proteger la salud y seguridad de los mineros de nuestra Nación. Cada paquete contiene 100 tarjetas. Un paquete es gratuito. Paquetes adicionales costaron \$5.00 cada uno. Esté seguro de incluir el Número de la Tarjeta y cantidad a pedir.)**

## ◆ Best Practice Card Series (BP) ◆

|       |                                                                                     |        |                                                                                                 |
|-------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------|
| BP-1  | Brake Systems                                                                       | BP-9S  | ROPS (Estructura Protectora de Rodillos y FOPS (Estructura Protectora Contra Caidas de Objetos) |
| BP-1S | Sistema de Frenos                                                                   | BP-10  | Steering                                                                                        |
| BP-2  | Cab Inspection                                                                      | BP-10S | La Dirección                                                                                    |
| BP-2S | Inspección de Cabina                                                                | BP-11  | Surface Mine, Powered Truck Haulage Dumping Procedures                                          |
| BP-3  | Haulage Equipment Operators                                                         | BP-11S | Camión Volquete Procedimientos de Vertido Exploración de Minas al aire libre                    |
| BP-3S | Operadores de Equipo de Transporte                                                  | BP-12  | Truckers' Training Checklist                                                                    |
| BP-4  | Haulage Safety Attitude                                                             | BP-12S | Lista de Verificación de Entrenamiento                                                          |
| BP-4S | Actitud Sobre la Seguridad en Equipo de Acarreos                                    | BP-13  | Maintenance, Repair and Construction                                                            |
| BP-5  | Highway Truck Pre-Operation Inspection                                              | BP-13S | Mantenimiento, Reparación y Construcción                                                        |
| BP-5S | Inspecciones Pre-Operativas para a Camiones de carretera                            | BP-14  | Operating Equipment Near a Body of Water                                                        |
| BP-6  | 100-Ton or Greater Truck Pre-Operation Inspection                                   | BP-14S | Equipos Operados Cerca del Agua                                                                 |
| BP-6S | Inspecciones Pre-Operativas para Camiones de 100 o más Toneladas                    | BP-15  | Contractors' Machinery                                                                          |
| BP-7  | 100-Ton or Less Truck Pre-Operation Inspection                                      | BP-15S | Maquinaria para Contratistas                                                                    |
| BP-7S | Inspecciones Pre-Operativas para Camiones de 100 o menos Toneladas                  | BP-16  | Contractors' Powered Haulage                                                                    |
| BP-8  | Pre- & Post-Operation Inspection of Surface Haulage Equipment                       | BP-16S | Recomendaciones de Seguridad Para Contratistas Conductores de Camiones                          |
| BP-8S | Inspecciones pre-operativas y post-operativas a los equipos de carga de superficie  | BP-17  | Electricity                                                                                     |
| BP-9  | ROPS (Rollover Protective Structure) and FOPS (Falling Object Protective Structure) | BP-17S | Seguridad Eléctrica                                                                             |
|       |                                                                                     | BP-18  | Drowning Prevention                                                                             |
|       |                                                                                     | BP-18S | Prevención Contra Ahogamientos                                                                  |
|       |                                                                                     | BP-19  | Mechanics (MNM Contractors)                                                                     |
|       |                                                                                     | BP-19S | Reparación y Mantenimiento Seguridad Para Contratista                                           |

# POCKET CARDS

|        |                                                                 |        |                                                                                     |
|--------|-----------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|
| BP-20  | Electrical Safety                                               | BP-38S | Medidas de Seguridad Sugeridas para Equipos Operando en Depósitos de Almacenamiento |
| BP-20S | Seguridad Eléctrica Para Contratistas                           | BP-39  | Truck Drivers - Dump Sites                                                          |
| BP-21  | Cranes (MNM Contractors)                                        | BP-39S | Conductores de Camiones – Sitios para Descargar                                     |
| BP-21S | Grúas Para Contratistas                                         | BP-40  | Truck Drivers - Safe Operating Procedures                                           |
| BP-22  | Welding/Cutting (MNM Contractors)                               | BP-40S | Conductores de Camiones – Procedimientos de Operación Segura                        |
| BP-22S | Soldadura y Corte Para Contratistas                             | BP-41  | Truck Drivers - Vehicle Capabilities                                                |
| BP-23  | Haulage (MNM Contractors)                                       | BP-41S | Conductores de Camiones – Capacidades de su Vehículo                                |
| BP-23S | Carga Para Contratistas                                         | BP-42  | Truck Drivers - Arrive Home Alive                                                   |
| BP-24  | Extended Cuts - Remote Control Miners                           | BP-42S | Camiones de Carga – Llegue a Casa Vivo                                              |
| BP-24S | Cortes Extendidos Mineros Operando Equipos a Control Remoto     | BP-43  | Coal Mine Roof Bolter Operators and Helpers                                         |
| BP-25  | Remote Control Miners                                           | BP-43S | Pernos de las Azotea de las Mina de Carbón Operadores y Ayudantes                   |
| BP-25S | Mineros Operando Equipos a Control Remoto                       | BP-44  | Underground Powered Haulage Safety for Coal Miners                                  |
| BP-26  | Roof Evaluation and Examination                                 | BP-44S | Seguridad para Sistemas de Carga Subterráneos en las Minas de Carbón                |
| BP-26S | Evaluación y Examinación de Techos                              | BP-45  | Roof and Rib Safety in Coal Mines                                                   |
| BP-27  | Retreat Mining                                                  | BP-45S | Seguridad en los Techos y Paredes Laterales de las Minas de Carbón                  |
| BP-27S | Operaciones Mineras Finales                                     | BP-46  | Coal Mine Longwall Section Employees                                                |
| BP-28  | Roof Bolting                                                    | BP-46S | Minería de Carbón de Corte Transversal Sección de Empleados                         |
| BP-28S | Pernando Techos                                                 | BP-47  | Continuous Miner/Loading Machine Operators and Helpers                              |
| BP-29  | Moving to a New Location, Mine or Job                           | BP-47S | Minería Continua / Cargadores Operadores y Ayudantes de Maquinarias                 |
| BP-29S | Moviéndose a Una Nueva Localización, Mina o Trabajo             | BP-48  | Conveyor Safety Tips for Laborers                                                   |
| BP-30  | Tire and Rim Safety (MNM)                                       | BP-48S | Sugerencias para los Obreros                                                        |
| BP-30S | Seguridad de Neumáticos y Rines                                 | BP-49  | Conveyor Safety Tips for Mechanics                                                  |
| BP-31  | Drilling - Contractors (MNM)                                    | BP-49S | Sugerencias para los Mecánicos                                                      |
| BP-31S | Perforando Metal/No-Metal Para Contratistas                     | BP-50  | Conveyor Safety Tips for Plant Operators                                            |
| BP-32  | Blasting - Contractors (MNM)                                    | BP-50S | Sugerencias para los Operadores de Planta                                           |
| BP-32S | Detonaciones y Explosivos Para Metal/No-Metal Para Contratistas | BP-51  | Conveyor Safety Tips for Supervisors                                                |
| BP-33  | Pressure Vessels (MNM)                                          | BP-51S | Sugerencias para los Supervisores                                                   |
| BP-33S | Recipientes a Presión Recipientes Explosivos                    | BP-52  | Hazardous Conditions: Posting, Correcting, and Recording (Coal)                     |
| BP-34  | Surge Pile Safety                                               |        |                                                                                     |
| BP-34S | Seguridad en sitios de Almacenamiento                           |        |                                                                                     |
| BP-35  | Electrical Safety in Mining                                     |        |                                                                                     |
| BP-35S | Seguridad Eléctrica en las Minas de Carbón                      |        |                                                                                     |
| BP-36  | Haulage Roads                                                   |        |                                                                                     |
| BP-36S | Vías de Carga                                                   |        |                                                                                     |
| BP-37  | Highwall Drills                                                 |        |                                                                                     |
| BP-37S | Taladrado de Corte Lateral                                      |        |                                                                                     |
| BP-38  | Suggested Safety Measures for Operating Equipment on Surge Pile |        |                                                                                     |



# POCKET CARDS

|        |                                                                                        |        |                                                                                                         |
|--------|----------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------|
| BP-52S | Condiciones Peligrosas: Fijando, Corrigiendo, y Registrando                            | BP-68  | Repair and Maintenance of Surface Equipment                                                             |
| BP-53  | On-Shift Examination (Coal)                                                            | BP-68S | Reparación y Mantenimiento de Equipo                                                                    |
| BP-53S | Examinaciones Durante los Turnos de Trabajo                                            |        | de Superficie                                                                                           |
| BP-54  | Preshift Examination (Coal)                                                            | BP-69  | Falling/Sliding Material, Highwalls and Banks                                                           |
| BP-54S | Examinación antes de los Turnos de Trabajo                                             | BP-69S | Material Deslizándose/Cayéndose de Barrancos y Paredes Altas                                            |
| BP-55  | Weekly Examination (Coal)                                                              | BP-70  | Slips and Falls on Mobile Equipment                                                                     |
| BP-55S | Examinación Semanal                                                                    | BP-71  | Geology and Mining - Ground Control for Underground Gold Mines                                          |
| BP-56  | Bucket Repair (Anthracite)                                                             | BP-71S | La Geología y las Condiciones de la Minería - El Control de Terrenos Para las Minas Subterráneas de Oro |
| BP-57  | Crane Operation (Anthracite)                                                           | BP-72  | Examination/Testing/Scaling - Ground Control for Underground Gold Mines                                 |
| BP-58  | Electrical (Anthracite)                                                                | BP-72S | La inspección/Las pruebas/El saneamiento- El Control de Terrenos Para las Minas Subterráneas de Oro     |
| BP-59  | Hoisting/Man Trips (Anthracite)                                                        | BP-73  | Rock Bolting - Ground Control for Underground Gold Mines                                                |
| BP-60  | Roof Bolter (Anthracite)                                                               | BP-73S | El Bulonaje - El Control de Terrenos Para las Minas Subterráneas de Oro                                 |
| BP-61  | Safety Reminders for Truck Drivers at Dump Points (Anthracite)                         | BP-74  | Retreat Mining Roof Fall Fatal Analysis                                                                 |
| BP-62  | Slips or Falls Underground (Anthracite)                                                | BP-75  | Advance Mining Roof Fall Fatal Analysis                                                                 |
| BP-63  | Timberman/Miner (Anthracite)                                                           | BP-76  | Weekly CO Checks - Repeatable Engine Load Test: Torque Converter Transmissions                          |
| BP-64  | Working Around Bins, Hoppers, and Draw-Off Tunnels (Anthracite)                        | BP-77  | Weekly CO Checks - Repeatable Engine Load Test: Hydrostatic Transmissions                               |
| BP-65  | Winter Alert                                                                           |        |                                                                                                         |
| BP-65S | Alerta de Invierno para Mineros de Carbón                                              |        |                                                                                                         |
| BP-66  | MSHA Notice for Contractors                                                            |        |                                                                                                         |
| BP-66S | Anuncio de la MSHA para Contratistas                                                   |        |                                                                                                         |
| BP-67  | Responsibilities of Independent Contractors Working on Mine Property                   |        |                                                                                                         |
| BP-67S | Responsabilidades de los Contratistas Independientes Trabajando en Propiedades Mineras |        |                                                                                                         |

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# POCKET CARDS

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## ◆ Health Hazard Card Series (HH) ◆

|       |                                                                           |       |                                                             |
|-------|---------------------------------------------------------------------------|-------|-------------------------------------------------------------|
| HH-1  | Examination of Respirable Dust Controls at Underground Coal Mine          | HH-21 | Asbestos Hazards in the Mining Industry                     |
| HH-2  | Mineral Dust Hazard and Sampling (C)                                      | HH-22 | Coal Workers' Pneumoconiosis (Black Lung)                   |
| HH-3  | Polyurethane Foam Health Hazards (C)                                      | HH-23 | Controlling Dust for a Healthier Work Environment           |
| HH-4  | Silica Exposure of Surface Coal Miners                                    | HH-24 | Respirable Dust Monitoring Using Single, Full-Shift Samples |
| HH-5  | Hazards of Silica to Underground Coal Miners                              | HH-25 | Cold Injuries                                               |
| HH-6  | Silica Exposure of MNM Miners                                             | HH-26 | Diesel Exhaust Gases - Nitrogen Dioxide (NO <sub>2</sub> )  |
| HH-7  | Tips for Preventing Silicosis: If It's Silica, It's Not Just Dust (NIOSH) | HH-27 | Diesel Exhaust Gases - Carbon Monoxide (CO)                 |
| HH-8  | Advisory Committee Recommendations to Eliminate Black Lung and Silicosis  | HH-28 | Carbon Monoxide and Mining                                  |
| HH-9  | Two Minutes on Silicosis for Metal and Nonmetal Miners                    | HH-30 | Bloodborne Pathogens                                        |
| HH-10 | Two Minutes on Silicosis for Coal Miners                                  | HH-31 | Hearing Conservation                                        |
| HH-11 | Working in Confined Spaces (MNM)                                          | HH-32 | Beryllium Hazards in the Mining Industry                    |
| HH-12 | Filter Self-Rescue Devices (MNM)                                          | HH-33 | Tips for Dusty Jobs – Baggers                               |
| HH-13 | Hazards of Radon Progeny                                                  | HH-34 | Tips for Dusty Jobs – Mobile Equipment Operators            |
| HH-14 | Poison Plants                                                             | HH-35 | Tips for Dusty Jobs – Drillers                              |
| HH-15 | Personal Noise Measurements (MNM)                                         | HH-36 | Tips for Dusty Jobs – Crusher Operators                     |
| HH-16 | Working With Mercury (MNM)                                                | HH-37 | Tips for Dusty Jobs – Laborers                              |
| HH-17 | "Watch Your Back" - Prevent Back Injuries                                 | HH-38 | Tips for Dusty Jobs – Stone Cutters                         |
| HH-18 | Welding Hazards (MNM)                                                     |       |                                                             |
| HH-19 | Mineral Dust Hazards and Sampling (MNM)                                   |       |                                                             |
| HH-20 | Heat Stress                                                               |       |                                                             |



# POCKET CARDS

**The following cards may be of special interest to Independent Contractors.**

|        |                                                                                                 |        |                                                                                        |
|--------|-------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------|
| BP-1   | Brake Systems                                                                                   | BP-12S | Lista de Verificación de Entrenamiento                                                 |
| BP-1S  | Sistema de Frenos                                                                               | BP-15  | Contractors Machinery                                                                  |
| BP-2   | Cab Inspection                                                                                  | BP-15S | Maquinaria para Contratistas                                                           |
| BP-2S  | Inspección de Cabina                                                                            | BP-16  | Contractors' Powered Haulage                                                           |
| BP-3   | Haulage Equipment Operators                                                                     | BP-16S | Recomendaciones de Seguridad Para Contratistas Conductores de Camiones                 |
| BP-3S  | Operadores de Equipo de Transporte                                                              | BP-19  | Mechanics (MNM Contractors)                                                            |
| BP-4   | Haulage Safety Attitude                                                                         | BP-19S | Reparación y Mantenimiento Seguridad Para Contratista                                  |
| BP-4S  | Actitud Sobre la Seguridad en Equipo de Acarreos                                                | BP-20  | Electrical Safety                                                                      |
| BP-5   | Highway Truck Pre-Operation Inspection                                                          | BP-20S | Seguridad Eléctrica Para Contratistas                                                  |
| BP-5S  | Inspecciones Pre-Operativas para a Camiones de carretera                                        | BP-21  | Cranes (MNM Contractors)                                                               |
| BP-6   | 100-Ton or Greater Truck Pre-Operation Inspection                                               | BP-21S | Grúas Para Contratistas                                                                |
| BP-6S  | Inspecciones Pre-Operativas para Camiones de 100 o más Toneladas                                | BP-22  | Welding/Cutting (MNM Contractors)                                                      |
| BP-7   | 100-Ton or Less Truck Pre-Operation Inspection                                                  | BP-22S | Soldadura y Corte Para Contratistas                                                    |
| BP-7S  | Inspecciones Pre-Operativas para Camiones de 100 o menos Toneladas                              | BP-23  | Haulage (MNM Contractors)                                                              |
| BP-8   | Pre- & Post-Operation Inspection of Surface Haulage Equipment                                   | BP-23S | Carga Para Contratistas                                                                |
| BP-8S  | Inspecciones pre-operativas y post-operativas a los equipos de carga de superficie              | BP-31  | Drilling - Contractors (MNM)                                                           |
| BP-9   | ROPS (Rollover Protective Structure) and FOPS (Falling Object Protective Structure)             | BP-31S | Perforando Metal/No-Metal Para Contratistas                                            |
| BP-9S  | ROPS (Estructura Protectora de Rodillos y FOPS (Estructura Protectora Contra Caídas de Objetos) | BP-32  | Blasting - Contractors (MNM)                                                           |
| BP-10  | Steering                                                                                        | BP-32S | Detonaciones y Explosivos Para Metal/No-Metal Para Contratistas                        |
| BP-10S | La Dirección                                                                                    | BP-66  | MSHA Notice for Contractors                                                            |
| BP-11  | Surface Mine, Powered Truck Haulage Dumping Procedures                                          | BP-66S | Anuncio de la MSHA para Contratistas                                                   |
| BP-11S | Camión Volquete Procedimientos de Vertido Exploración de Minas al aire libre                    | BP-67  | Responsibilities of Independent Contractors Working on Mine Property                   |
| BP-12  | Truckers' Training Checklist                                                                    | BP-67S | Responsabilidades de los Contratistas Independientes Trabajando en Propiedades Mineras |
|        |                                                                                                 | BP-68  | Repair and Maintenance of Surface Equipment                                            |
|        |                                                                                                 | BP-68S | Reparación y Mantenimiento de Equipo de Superficie                                     |
|        |                                                                                                 | BP-69  | Falling/Sliding Material, Highwalls and Banks                                          |
|        |                                                                                                 | BP-69S | Material Deslizándose/Cayéndose de Barrancos y Paredes Altas                           |
|        |                                                                                                 | BP-70  | Slips and Falls on Mobile Equipment                                                    |

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# NIOSH MATERIALS

## MATERIALES DE NIOSH

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This section lists training materials (exercises) developed by the National Institute of Occupational Safety and Health (NIOSH) and the former Bureau of Mines.

Each exercise is followed by a summary of the exercise content, type of audience for which it is designed, materials needed to complete the exercise, cost of materials, and the catalog ordering number. NOTE: Each exercise has specific information pertaining to that individual exercise.

For more information on these products, contact Bobbie Calhoun at 412-386-5901 (see page v for complete address, fax, and e-mail information).

There are no products in this section available in Spanish.

**(No hay ningún producto disponible en español en esta sección.)**

### **Apparent Diving Accident (C/MNM)**

You are on a picnic with your family. Some teenagers ask you to help their friend who is hurt. You find a young man lying on the bank of a river. He appears partially paralyzed. His friends say he was injured diving into the shallow water. You must decide what to do.

#### **Audience:**

Basic first aid class

#### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 1

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

### **Basics of Transformers and Monitors (C/MNM)**

Mining equipment often makes use of AC circuits with transformers. AC circuits with transformers are the basis for ground fault monitoring systems that are used on shuttle cars and other equipment. These safety systems are designed to prevent electrical shocks to workers. If ground monitor systems are bypassed, serious injuries and fatalities can result. You need to work through the exercise answering questions about the diagrams.

#### **Audience:**

Mine electricians and miners

#### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheets - may be duplicated from the Instructor's copy

Demonstration apparatus which allows the class members to duplicate the conditions found in the exercise - directions for making this are found in the instructor's copy as well as a list of materials needed. Items should be readily available locally.

Optional - overhead projector and overheads of the diagrams found in the instructor's copy and the problem booklet

**Cat No:** NI 2

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

# NIOSH MATERIALS

## Belt Fire Exercise (C)

You are the foreman for an eight person crew that is advancing the headings of a longwall entry. You receive a call from the dispatcher reporting smoke coming out the belt entry from your section 5,000 feet outby your position. The air at the face is clear. You must decide how to evacuate the section, what equipment to take with you, gather information about the location and size of the fire, and determine if you should fight the fire or leave. The lives of the eight miners you supervise, the lives of many other miners in the mine, and the well-being of the mine depend upon your judgments and actions.

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 3

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Belt Fire Injury (C)

You are the section foreman. After you complete your methane check at the face of No. 2 entry, you think you hear someone yelling "Fire!" You run down No. 2 entry and through the last open crosscut to No. 3 entry. You see Louie, the section mechanic, running up No. 3 entry. Louie informs you that there is a fire along the belt, 2 crosscuts outby the tailpiece. He also tells you that he has found Ollie lying injured along the belt just outby the fire. You examine the situation and determine that Ollie suffered a spinal injury when he fell while trying to fight the fire. As the section foreman and only EMT, you must treat Ollie's injuries plus direct fire fighting efforts.

### Audience:

Underground coal miners and section foremen

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 4

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Belt Haulage Accident (C)

*[Previously called Douglas O. Tackett]*

You are a general inside laborer. You and Douglas Tackett are shoveling loose coal onto the belt. While pitching a load, Douglas catches the tip of his shovel on the moving belt. Douglas' arm is thrown up and back as he is spun around and the shovel is flung down the entry. Douglas swears and holds his right shoulder with his left hand. His shoulder looks deformed and he says it hurts. You must decide what to do.

**NOTE:** *This exercise is very similar to the **Belt Line Problem** designed for surface metal or nonmetal miners.*

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 5

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each



# NIOSH MATERIALS

## **Belt Line Problem (MNM)**

*[Previously called Douglas O. Sanders]*

You are a laborer. You and Doug Sanders are shoveling onto the belt. While working, Doug catches the tip of his shovel on the moving belt. Doug's arm is thrown up and back as he is spun around and the shovel is flung away. Doug swears and holds his right shoulder with his left hand. His shoulder looks deformed and he says it hurts. You must decide what to do.

**NOTE:** *This exercise is similar to the **Belt Haulage Accident** designed for underground coal miners.*

### **Audience:**

Underground and surface metal/nonmetal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 6

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## **Bennie's Chest Pain (C)**

*[Previously called Bennie J. Floyd]*

You and Bennie are building cribs in an entry that was cut too wide. It is near the end of the shift. As you are about to finish a crib, Bennie kneels, clutches his chest, and gasps. When you question him he says he has bad chest pain and trouble breathing. Bennie wants to rest a minute and then finish the job. You must decide what to do.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 7

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## **Bernie's Feeder Accident (MNM)**

*[Previously called Bernie T. Reddish]*

A feeder in the reclaim tunnel under the product pile at a phosphate ore processing plant has failed and fallen on the belt conveyor. The belt has stopped. You and two workers are moving timbers to prop and jack the failed feeder so it can be repaired. Bernie, one of your coworkers, is tired. He places himself in a dangerous position. He is hurt. You must provide first aid and remove him from the tunnel.

**NOTE:** *This exercise is very similar to **Cleo's Longwall Accident** designed for underground coal miners and **Leroy's Feeder Accident** designed for coal preparation plant workers.*

### **Audience:**

Surface metal/nonmetal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 8

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

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# NIOSH MATERIALS

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## **Bob's Electrical Shock (C)**

*[Previously called Bob Hall]*

Your friend, Bob Hall, leans against the electric track of the electric loading shovel. The shovel lights go out and Bob convulses. The mine floor is wet. You want to help Bob, but you need to protect yourself too.

**NOTE:** *This exercise is similar to Bob's Loader Accident designed for surface coal miners.*

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 9

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## **Bob's Loader Accident (C/MNM)**

*[Previously called Bob Woods Exercise]*

Your friend, Bob Woods, leans against the electric track of the electric loading shovel. The shovel lights go out and Bob convulses. The ground is wet. You want to help Bob, but you need to protect yourself too. You must decide what to do and how to do it.

**NOTE:** *This exercise is very similar to Bob's Electrical Shock designed for underground coal miners.*

### **Audience:**

Surface miners who are trained in CPR

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 10

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## **Bull's Double Header: Too Much Unsupported Roof (C)**

You work at a mine that has approval to make 34-foot cuts using a remote-controlled continuous miner. The roof bolting machine has broken down. The continuous miner has just been refitted with a new cutting head and bits that cut the coal much faster. The two roof bolter operators have been having a hard time keeping up with Bull, the continuous miner operator. At the face of No. 4 entry, Bull makes a 40-foot extended cut, trams back from the face, and then turns the miner and cuts the left-hand crosscut all the way through to the No. 3 entry. When the roof bolter operators discover Bull's "double header," they get the section foreman, and then try to plan a safe way to bolt this large area of unsupported roof. Shortly after they complete their assessment and plan of attack, a large roof fall occurs. Now the face crew must decide how to safely clean up the fall while advancing roof support.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheets may be duplicated from the instructor's copy

Optional - overhead projector and overheads of the diagrams found in the problem booklet and the answer key found in the Instructor's copy

**Cat No:** NI 11

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each



# NIOSH MATERIALS

## **Cleo's Longwall Accident (C)**

*[Previously called Cleo C. Pike]*

You are pulling timbers off the chain conveyor of a longwall section and handing them to Cleo. Cleo is putting the timbers on top of the lowered shield to give the shield contact with the roof in a faulted area. Cleo's hand is crushed by a roof fall. You and one other miner are the only ones available to help him. As you help him, he passes out. Now you must decide what to do.

**NOTE:** A companion exercise **Cleo's Longwall Accident** role play simulation is also available. This exercise is also similar to **Bernie's Feeder Accident** designed for phosphate ore, sand and gravel, and crushed rock processing plant workers and **Leroy's Feeder Accident** designed for coal preparation plant workers.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 12

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## **Cleo's Longwall Accident (C) – Role Play**

*[Previously called Cleo C. Pike role play simulation]*

You are a jack setter and an EMT. Your partner Cleo yells for help. You find that his hand was crushed by a rock fall when he reached between a lowered chock and the roof. You administer first aid using the mine first aid kit that is available. Your first aid performance will be rated against a checklist by the instructor and your classmates.

**NOTE:** This exercise is a parallel version of the invisible ink **Cleo's Longwall Accident** exercise. The role play version provides hands-on practice of the first aid skills involved in the **Cleo's Longwall Accident**, **Bernie's Feeder Accident**, and **Leroy's Feeder Accident** invisible ink exercises.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

**Cat No:** NI 13

**Price:** Instructor's Copy \$2.00 each

## **Coal Miners' Chest X-ray Program (C)**

As some of the miners are eating lunch at the section dinner hole, Jeb, a younger miner, asks about the notice of the chest x-ray program he has seen on the company bulletin board. The miners begin talking about the program. Questions are raised about the purpose of the program, how it operates, what happens to the x-rays, and if it is important for miners to participate in the program. As these matters are discussed you are asked to give your advice and opinions about these matters. As the exercise is completed, the miners will learn more about this program.

### **Audience:**

Underground and surface miners at underground coal mines

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 14

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

# NIOSH MATERIALS

## Continuous Miner Accident (C)

*[Previously called Harry Harlan]*

You are the continuous miner operator. You hear your helper cry out. When you stop the machine, you find Harry lying on the floor near the miner tail boom. A shuttle car operator says he saw Harry get pinned to the mine roof by the tail boom. You and the other miners on the section must figure out how to care for Harry and take him out of the mine or he may die.

**NOTE:** *This exercise is similar to the **Haul Truck Repair Accident** designed for surface miners. The exercise **Continuous Miner Accident** role play provides hands-on practice of the first aid skills required in this exercise.*

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 15

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Continuous Miner Accident (C) – Role Play

*[Previously called Harry Harlan role play]*

You are the continuous miner operator. You hear your helper cry out. When you stop the machine, you find Harry lying on the floor near the miner tail boom. A shuttle car operator says he saw Harry get pinned to the mine roof by the tail boom. You and the other miners on the section must do a primary survey and then begin to treat Harry's injuries, stabilize him, and prepare him for the trip to the surface. You have a mine first aid kit. There is no EMT available. Your first aid performance will be rated

against a checklist by the instructor and your classmates.

**NOTE:** *This exercise provides hands-on practice for the first aid skills required for the **Continuous Miner Accident** and **Haul Truck Repair Accident** invisible ink exercises.*

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Answer sheet - 1 for each trainee, may be duplicated from the Instructor's copy

**Cat No:** NI 16

**Price:** Instructor's Copy \$2.00 each  
Answer Sheet \$1.00 each

## Continuous Miner Fire (C)

You are a mine section foreman. While completing pre-shift checks at the face for the oncoming second shift, you hear someone yelling "Fire!" You respond and find the continuous mining machine on fire in the last open crosscut. Near the fire a miner is down and injured. The fire is hot and getting out of hand. The mine roof over the burning machine begins to work and fall. Two miners are downwind from the smoke and missing. You must decide what to do to help the injured miner, fight the fire, and locate the two missing miners while keeping your crew and yourself safe.

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 17

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each



# NIOSH MATERIALS

## Cripple Creek Deep Cut (C)

For the past few days you have been sent to 2 South panel to fill in as the third shuttle car operator. This morning, however, your buggy is down. The face boss asks you to get the scoop and take seven or eight timbers to the No. 5 entry because the last shift got off sight line. The miner will be working in entry 5 while the bolter crew pins entry 4. When you get up to the face you see that Mo, the remote control continuous miner operator, has rounded off the left inby corner in order to make his first cuts in the right hand rib. Now, he has squared around enough so that you and Red, the miner helper, can set some posts on the corner. The two of you set posts along the left inby rib of No. 5 entry while the shuttle car operator waits. You are in a tight spot when Mo decides to start mining. You must decide where the best place is to stand for safety and yet perform your job effectively. You also must learn to communicate with the continuous miner operator and the rest of the crew. There are several important decisions that you need to be make that affect your safety as well as the others in your crew.

### Audience:

Remote control and extended cut miner operators and face crews

### Materials needed:

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet. These are "PENIB" and may be obtained from SICPA Customer Service, 8000 Research Way, Springfield, VA 22153, phone 1-888-742-7287

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 18

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

## Cutthrough Ventilation Arrangement (C)

Three shifts on two sections are driving entries 4,800 feet from the mains to form a retreating long-wall panel. The mine is very gassy. One section is about to cut through to the other. A number of problems develop. You need to make sure that the cutthrough proceeds safely and the ventilation for both sections remains adequate. As the problem develops, other miners make errors. If you do not correct them, lives may be lost.

**NOTE:** The *Delta Mine Cutthrough* paper and pencil exercise is a more difficult and somewhat different version of this problem.

### Audience:

Coal mine foremen, supervisors, examiners, and experienced miners

### Materials needed:

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun; phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 19

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

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# NIOSH MATERIALS

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## **Delta Mine Cutthrough (C)**

Planned cutthroughs from one mine section to another are underway over a period of several days and three shifts as a retreating long wall panel is being set up. The mine liberates large quantities of methane. You must analyze the situation, identify and correct problems, and make sure the ventilation remains adequate throughout the procedure. (The exercise is based on an actual mine disaster in which seven miners died.) Practice is provided in the critical planning, problem recognition, judgment, and decision-making skills needed to cope with a complex cutthrough procedure and the major ventilation changes that may result.

**NOTE:** *The **Cutthrough Ventilation Arrangement** exercise is an easier and somewhat different version of this problem.*

### **Audience:**

Coal mine supervisors, mine foremen, and mine examiners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each trainee, may be duplicated from the Instructor's copy  
Optional - overhead projector and overheads of the diagrams found in the instructor's copy and the problem booklet

**Cat No:** NI 20

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Electrical Shock Victim (MNM)**

*[Previously called **Lynwood W. Puckett**]*

You and Lynwood are maintenance mechanics repairing a piece of equipment in the float plant. It is night shift and dark and wet. You are on the fifth level and no one else is around. You decide to use an electric impact wrench to break a coupling on an acid mixer. A nearby wall-mounted 110-volt receptacle is dripping water. Because it is dark, Lynwood does not see the water dripping from the receptacle. You try to warn him, but he approaches the receptacle and plugs in the wrench. Then he convulses. You must decide what to do to help Lynwood and not get electrocuted yourself.

### **Audience:**

Phosphate ore, sand and gravel, crushed rock, and other ore processing plant workers

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 22

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Escape From a Mine Fire (C)**

You are the foreman on a 3 entry longwall development panel 2,500 feet from the mains, and 15,000 feet from the portal. Suddenly a cloud of smoke comes up the belt entry. As you warn and assemble the crew the smoke becomes thick. A call from the surface orders the immediate evacuation of the section. The location of the fire is unknown. You lead the miners out the intake air entry only to encounter heavy smoke after a few crosscuts. You direct the miners to don their SCSRs and continue on. One miner cannot keep up and delays the escape of the others. Soon the smoke becomes so thick that visibility is only a few inches. The portal is still over two miles away. You must help your crew escape from the mine before their SCSRs are depleted, but you also do not want to leave the one miner behind.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.



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Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 24

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Focus on Prevention: Conducting a Fire Risk Assessment (C/MNM)**

This training package outlines a group activity. During this session trainees will: 1) learn about risk assessment concepts and tools and 2) conduct a risk assessment of their work environment. The guide outlines six steps to completion of a fire risk assessment and provides two forms that can be used to document the process. References for additional information are included. Conducting this activity with groups of workers on-site will result in the identification and prioritization of fire safety hazards. This will lead increased effectiveness in fire prevention and response planning.

### **Audience:**

Any group of workers familiar with the location(s) being studied

### **Materials needed:**

Instructor's copy

**Cat No:** NI 25

**Price:** Instructor's Copy \$2.00 each

## **Haul Truck Repair Accident (C/MNM)** *[Previously called Harry Hastings]*

You are at a surface mine in a pickup truck. You see Harry placing crib blocks between the frame and the bed of a large gob truck. The operator is in the truck cab. Suddenly the bed drops down, pinning Harry. If it were not for the blocks, Harry would have been cut in two. The operator quickly raises the bed. Harry falls to the ground near the rear wheels. The radios in both the gob truck and pickup are broken. It is 20 minutes by pickup truck to the nearest help. You and the truck operator must figure out what to do for Harry or he may die.

**NOTE:** *This exercise is similar to the **Continuous Miner Accident** designed for underground miners. The **Continuous Miner Accident** role play simulation provides hands-on practice of the first aid skills taught in this exercise.*

### **Audience:**

Surface coal and metal/nonmetal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 26

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Highwall Rescue Exercise (C)**

*[Previously called Marvin Letcher Highwall]*

You are a front-end loader operator. Marvin, a coworker, approaches an unstable highwall. Suddenly a large rock falls, completely covering his legs. Marvin is trapped lying face down and screaming. Small pieces of rock continue to dribble down from the highwall. You and the other four miners present must figure out how to help Marvin while protecting yourselves. You must free Marvin, remove him from danger, and provide first aid for his serious injuries.

**NOTE:** *This exercise is similar to the **Unsupported Roof Rescue** designed for underground coal miners and its companion **Unsupported Roof Rescue** role play exercise.*

### **Audience:**

Surface coal miners

*(continued on next page)*

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# NIOSH MATERIALS

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**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 29

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

**Hot Shuttle Car (C)**

You are a shuttle car operator. After lunch you are about to get on your buggy. Your feet are wet. As you place your left hand on the canopy you get a shock. You are not a certified electrician but you have had some electrical training. You must decide what to do next.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 31

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

**I Can't Get Enough Air (C)**

You are the section foreman on the 17 Left longwall development section at the Paula Ann No. 3 mine. The section has been driven about 4,000 feet from 4 West Mains. One of the shuttle car operators took a call from the fireboss saying that there was smoke from an unknown source coming into your section. You attempt to contact someone to find out where the smoke is coming from but get no response. You and your crew start riding out of the section on the mantrip. When you encounter heavy smoke, you decide to take your crew and travel on foot in the belt entry which is on a neutral split of air. After traveling about 6 crosscuts in the belt entry, you encounter heavy smoke again, at which time you and your crew don your SCSRs. After donning the apparatus, you and your crew continue traveling outby in the belt entry. Near the mouth of the section, a miner in the group starts to have trouble breathing from his SCSR because he is "outbreathing" the device since his oxygen requirements are greater than the SCSR can supply. Soon more workers, including yourself, begin having trouble breathing. You must decide when to switch to another SCSR that you obtain from a cache along the escape route.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet. These are "PENIB" and may be obtained from SICPA Customer Service, 8000 Research Way, Springfield, VA 22153, phone 1-888-742-7287  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 32

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each



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## **Injury Rate Problem at Maxmore Mine (C)**

Injury rates at Maxmore Mine (an underground coal mine) have increased to three times the national average in the last quarter. As education, training, and safety specialists who develop and approve training plans, the trainees in your class are asked to examine a summary of the accidents for Maxmore Mine. The task is to suggest corrective actions to lower the injury rate. Next, three case studies are presented. Each case study describes attempts by one director of health and safety to reduce injuries at Maxmore Mine. The trainees are asked to judge the strengths and limitations of each approach, to decide if the program would be effective, and whether or not it should be approved. Following discussion of these initial case studies and class members' responses, the exercise principles are applied to another case study situation involving injuries to contract workers at surface mines. Finally, a homework assignment asks the trainees to apply the exercise principles to a real-world problem of their own choice where improved training and performance evaluation may be one means to reduce accident and injury rates.

**NOTE:** *Completion of the exercise requires a minimum of 8 hours of classroom work plus homework.*

### **Audience:**

Mine health and safety trainers

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheets may be duplicated from the Instructor's copy

**Cat No:** NI 33

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Investigation of a Slip/Fall Accident (C)**

The mine superintendent calls you into his office. He gives you an accident report of an employee who was injured while carrying rock dust bags from the rock dust car to a battery powered scoop. It is several days after the accident and the mine superintendent assigns you and the safety supervisor to thoroughly investigate the accident to determine all

the contributing factors. Your job is to make specific recommendations to prevent future slipping/tripping accidents.

### **Audience:**

Supervisors, safety personnel, and accident investigators

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet. These are "PENIB" and may be obtained from SICPA Customer Service, 8000 Research Way, Springfield, VA 22153, phone 1-888-742-7287

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 34

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Leroy's Feeder Accident (C)**

*[Previously called Leroy B. Perkins]*

A feeder in the tunnel under the stockpile at a coal preparation plant has failed and fallen on the belt coupling conveyor. The belt has stopped. You and two workers are moving timbers to prop and jack the failed feeder so it can be repaired. Leroy, one of your coworkers, is tired. He places himself in a dangerous position and becomes injured. You must provide first aid and remove him from the tunnel.

**NOTE:** *This exercise is similar to **Bernie's Feeder Accident** designed for phosphate ore processing plant workers and **Cleo's Longwall Accident** designed for underground coal miners. The **Cleo's Longwall Accident** role play simulation provides hands-on practice of the first aid skills required for this exercise.*

### **Audience:**

Coal preparation plant miners

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## Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 35

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Lingering Smoke Exercise (C)

*[Previously called Chester O. Peterson]*

You are one of three scoop operators. During the first part of the shift an entry was shot and partly loaded. One of the other scoop operators, Speedy, has complained that he was dizzy and sick to his stomach. Otherwise, the shift has gone on as usual. You reenter the mine after lunch and notice that some smoke is still hanging. You are worried that the ventilation may not be adequate. Soon the two scoop operators, Speedy and Chester, who are at the face, go down. You must decide what to do to help them.

## Audience:

Underground coal miners

## Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 36

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Low Coal Fire (C)

You and your helper are working in an intake air entry at the face. The coal height is 28 inches. Heavy black smoke suddenly sweeps down on you from one of the intake air entries. You must decide what to do to warn others, to get to the assembly point, and to get out. The problem becomes more complicated when one of the miners is missing.

## Audience:

Underground coal miners

## Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 37

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Main Haulage Scaling (C)

You are running the lead locomotive pulling twenty empty coal cars into 3 East. Lynnbo is running the trail locomotive behind the trip. After you put the empties on the section tippie, Lynnbo asks if you noticed the area of bad roof outby the fire car on the main line. You answer that you hadn't, and you ask Lynnbo how bad it looked. Lynnbo said he thought that the roof looked ugly to him, but since he works in the shop, it all looks ugly. This is your section and you know it has been recently rebolted. How-



# NIOSH MATERIALS

ever, you decide to look at it. You tell Lynnbo that you will follow him to the area in question. You must decide the safest course of action in determining if there is a problem, then you must decide the safest course of action to take in having the bad roof fixed.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

3-D reels - one reel for each person in the class

Viewmaster 3-D viewers - may be purchased from your local toy store or purchased directly from the manufacturer at Fisher-Price, Inc., Viewmaster Custom Sales, Customer Service, 636 Girard Avenue, East Aurora, NY 14052, phone 716-687-3899

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 38

|               |                   |             |
|---------------|-------------------|-------------|
| <b>Price:</b> | Instructor's Copy | \$2.00 each |
|               | Problem Booklet   | \$1.00 each |
|               | Answer Sheet      | \$1.00 each |
|               | One "3-D Reel"    | \$2.00 each |

**Man in the Bin (C/MNM)**

You are the weigh master at the truck dumping bin scale at a preparation plant. Jake, a truck driver, raises the bed of his truck to dump a load in a bin. The load won't dump and the truck bed won't come down. The bin appears to be full. Jake climbs into the bin on top of the coal. Suddenly the bridge of coal collapses. The 20 tons of coal in the bed of the truck slides out and buries Jake in the bin. You must decide what to do to help him without risking your life or the lives of others.

**Audience:**

Persons working at coal preparation plants and around bins of granulated materials

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 39

|               |                   |             |
|---------------|-------------------|-------------|
| <b>Price:</b> | Instructor's Copy | \$2.00 each |
|               | Problem Booklet   | \$1.00 each |
|               | Answer Sheet      | \$1.00 each |

**Pete's Predicament: Unsupported Roof (C)**

The preshift examination has been completed. The entire section has been rock dusted. John and Eddy advance the miner to the face of the No. 3 entry and begin cutting coal. Pete is standing near the right rib watching the mining machine to observe its new water spray system. A shuttle car comes up close to the right rib. After watching the miner cut coal for less than a minute, Pete starts to get worried that he is in danger of being squeezed between the continuous miner and the rib. He steps back around the corner into the right-hand crosscut which is rock dusted. Then he notices that half the crosscut is unbolted and the top is dribbling small pieces of shale! Pete cannot escape into the No. 3 entry because the miner tailboom and shuttle car block this route. He sees that the far end of the crosscut is bolted. Pete must decide what to do to escape and to warn Eddy, John, and the shuttle car operator who are in by an unbolted crosscut. After Pete and Eddy escape, John must decide whether to abandon the mining machine and make a run for safety or to stay in the miner operator compartment under the canopy.

**Audience:**

Underground coal miners

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## **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's Copy  
Answer sheets may be duplicated from the Instructor's copy

**Cat No:** NI 44

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Pipe Repair Problem (C/MNM)**

A worn section of a large overhead coal slurry pipe must be removed and replaced before the prep plant can start up. You are a laborer. You have been assigned to help two maintenance workers make the repairs. As you prepare to do the work, many hazards and potential problems are present. You must recognize the hazards and act to prevent accidents. Otherwise, you or others may be injured and property may be damaged.

## **Audience:**

Maintenance workers in preparation plants

## **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the illustrations from the Problem booklet - and the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 45

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Pit Distribution Troubleshooting (C/MNM)**

The surface mine where you work receives its power from a 138 KV utility line that is stepped down to 25 KV for pit distribution. Substations

make further reductions to 4,160 volts for operation of smaller equipment such as drills. The pit electrical distribution system has worked well. Then a problem develops. Power leaving a portable substation goes through two boxes to a drill. A ground fault occurred in the system and tripped box A. The flag was reset and the system held for about a week. Then the ground monitor trips box B. Within a few days box A trips two more times. As a mine electrician you must find and correct the electrical problem so that production and safety can be maintained.

## **Audience:**

Surface mine electricians

## **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 46

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Prep Plant Belt Problem (C/MNM)**

*[Previously called Carl T. Donaldson]*

You and Carl are maintenance workers at a coal preparation plant. A belt is misaligned because fine wet coal is sticking to the tail pulley roller. You decide to shut the belt down so the roller can be cleaned. Carl says he knows a faster way to do the job. He begins a dangerous work practice. You try to stop him, but it is too late. He gets caught between the moving tail pulley and its guard. He is hurt. You must act fast to save Carl but avoid injury to yourself.

## **Audience:**

Persons who work around conveyor belts in preparation plants, mines, and similar places



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**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 47

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

**Problem in the Shop (C/MNM)**

*[Previously called Good Ole Bill]*

You have recently been transferred to another mine and assigned to supervise the eight mechanics in the maintenance shop. The mine superintendent is worried about tool pilferage and loss in your department. Soon after you are on the job you hear rumors that Bill, the best and most senior mechanic in the group, has been stealing tools. A crisis develops when equipment must be repaired, but the critical tool needed to do the job is missing. Other mechanics say Bill knows where the tool is. You must decide what to do to maintain safety and production and to deal with the problem of the missing tool. A few weeks later, you observe Bill transporting a set of company tools off the mine property in his personal truck. You must decide what to do.

**Audience:**

First line supervisors, mine maintenance personnel, mechanics, and miners

**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 48

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

**Problem on Dragline #1 (C/MNM)**

You are the operator of Dragline #1. The dragline has been losing power. After making some checks, you report damage to the trailing cable about 100 feet from the machine. An electrician and his helper come to troubleshoot. They determine that the cable needs repaired due to damage by a bulldozer working in the area. The electrician is in a hurry. He engages in unsafe work practices. You try to stop him, but he ignores you. Soon there is an accident. You must figure out how to rescue the electrician without electrocuting yourself and then provide first aid to save his life.

**Audience:**

Surface metal/nonmetal and coal miners

**Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 49

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

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## **Problem on the Belt Line (C/MNM)** *[Previously called J. J. Johnson]*

You and J. J. are alone. You are walking up an 825-foot slope with a 17-degree incline because the conveyor belt drive has broken down. Ten feet from the top, J. J. clutches his chest and sits down. He is in pain and has trouble breathing. You are the only one there to help him. You have to decide what to do.

**NOTE:** *This exercise is similar to **Problem on the Catwalk (Coal)** designed for surface coal miners and **Problem on the Catwalk (Phosphate)** designed for phosphate ore, sand and gravel, and crushed stone processing plant workers.*

### **Audience:**

Underground coal and metal/nonmetal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 50

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Problem on the Catwalk (C)** *[Previously called J. J. Smith]*

You and J. J. are climbing up the catwalk of an 825-foot-long conveyor belt to the top of a clean coal silo. You are inspecting the belt for damage. Ten feet from the top, J. J. clutches his chest and sits down. He is in pain and has trouble breathing. You are the only one there to help him. You have to decide what to do.

**NOTE:** *This exercise is similar to **Problem on the Beltline** designed for underground coal and metal/nonmetal miners and **Problem on the Catwalk (Phosphate)** designed for*

*phosphate ore, sand and gravel, and crushed stone processing plant workers.*

### **Audience:**

Surface coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 51

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Problem on the Catwalk (Phosphate) (MNM)** *[Previously called J. J. Parsons]*

You and J. J. are climbing up the catwalk of an 815-foot-long conveyor belt to the top of a product storage bin. You are inspecting the belt for damage. Ten feet from the top, J. J. clutches his chest and sits down. He is in pain and has trouble breathing. You are the only one there to help him. You have to decide what to do, and whether to go for help or stay with him.

**NOTE:** *This exercise is similar to **Problem on the Catwalk (Coal)** designed for surface miners and **Problem on the Beltline** designed for underground coal and metal/nonmetal miners.*

### **Audience:**

Surface metal/nonmetal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax



# NIOSH MATERIALS

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of  
the Master Answer Sheet and Scoring Key  
found in the Instructor's copy

**Cat No:** NI 52

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Raggs and Curly Guarding Exercise (C)

A recent inspection, conducted by an insurance company, has identified some problems with machine guarding around the mobile conveyor system at a surface coal mine. The superintendent asks that you, a chief mechanic, conduct a more thorough inspection and document your findings. You are to report back to the superintendent with recommendations that will be part of a company-wide machine guarding policy. The superintendent assigns "Curly," who just recently became a mechanic helper, to accompany you. You are to take this opportunity to teach him safe machine guarding practices. You travel through the complex and begin to document your findings.

### Audience:

Surface coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
3-D reels - one reel for each person in the class  
Viewmaster 3-D viewers - may be purchased from your local toy store or purchased directly from the manufacturer at Fisher-Price, Inc., Viewmaster Custom Sales, Customer Service, 636 Girard Avenue, East Aurora, NY 14052, phone 716-687-3899  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 53

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each

Answer Sheet \$1.00 each  
One "3-D Reel" \$2.00 each

## Roof Control at Intersections Exercise (C)

Two underground coal miners are asked to advance the power center, mobile equipment, and trailing cables in the working section. While surveying their assignment, they notice coal spalling along the left rib of the belt entry. They must investigate and determine if a problem exists with roof and rib conditions and the diagonal measurements of several intersections. They are to take any corrective actions that might be necessary.

### Audience:

Underground coal miners

### Materials needed:

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 54

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## Roof Fall Entrapment (C)

A group of miners are extracting pillars in an unsafe manner. There is only one escapeway from the area where they are working. Earlier roof falls have blocked the other escapeways. The top is bad in the one entry being used for the haul road. The posts and crossbars that support it at the intersection of a crosscut begin to sag so much that the shuttle car you are driving can't come out from the face. The foreman yells at you to tell the miners to get out. But it is too late! As you are about to come out there is a large roof fall that completely blocks the one escapeway. You and the other miners are lucky. No one is hurt, but now you must decide what to do.

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# NIOSH MATERIALS

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**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 55

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

**Roof Support in a Primary Escapeway (C)**

*[Previously called D. R. Light]*

On a recent run of the escapeways, the section boss notices that the brow of a high fall area has begun to deteriorate. On this particular day, the face boss asks the miner operator and helper to follow the escapeway out from the face and take down any loose top at the high fall area. After correcting this problem the workers encounter another hazardous roof condition nearby. This involves deterioration of the immediate roof around the bolt heads as a result of moisture in the mine air.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

3-D reels - one reel for each person in the class

Viewmaster 3-D viewers - may be purchased

from your local toy store or purchased directly from the manufacturer at Fisher-Price, Inc., Viewmaster Custom Sales, Customer Service, 636 Girard Avenue, East Aurora, NY 14052, phone 716-687-3899

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 56

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

One "3-D Reel" \$2.00 each

**Safety Talk: The Emergency Communication Triangle (C/MNM)**

This safety talk focuses on the content of emergency warning messages. Research shows that when an emergency occurs, people often do not get the information they need in order to take appropriate action. This safety talk presents a procedure using mental cues that can be used by senders and receivers of emergency warnings. Graphics for use during the talk and references are included.

**Audience:**

All mining employees at all experience levels.

Examples and illustrations are taken from the underground coal mining industry, but the training can be tailored to any work setting by substituting appropriate examples.

**Materials needed:**

Instructor's copy

Optional - Overhead projector and transparencies of the nine illustrations included in the

Instructor's copy

Optional - Stickers to serve as memory aids

**Cat No:** NI 57

**Price:** Instructor's Copy \$2.00 each

**Sammy's Loose Roof Decisions (C)**

*[Previously called Sammy Spadd]*

During your routine survey work as a transitman, you observed in recent weeks that an idle section in 2 North mains, about 3 miles from the portal, has been experiencing serious roof problems. One of the mine engineers stated that the problems were



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# NIOSH MATERIALS

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due to the sudden presence of slips in the roof running in the direction of mining. Several falls and significant downtime have forced the company to reconsider the development of 2 North. The general superintendent informs you and Sammy that the company will reactivate the idled section beginning next shift. You are to enter the mine and set sights in 2 North to re-orient all the entries by 45 degrees to the east before the regular daylight crew arrives. You are beginning your work when you notice a section of top lower than the surrounding area. You must decide whether this is a problem that can wait or if it should be taken care of immediately.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

3-D reels - one reel for each person in the class

Viewmaster 3-D viewers - may be purchased from your local toy store or purchased directly

from the manufacturer at Fisher-Price, Inc.,

Viewmaster Custom Sales, Customer Service,

636 Girard Avenue, East Aurora, NY 14052,

phone 716-687-3899

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key

found in the Instructor's copy

**Cat No:** NI 58

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

One "3-D Reel" \$2.00 each

**Scoop Accident, First Aid Problem (C)**

*[Previously called Paul Pancake]*

After nine months of unemployment, Joe has completed the required training to reenter the mines and also completed an advanced first aid course. He has

been hired as an experienced roof bolter at a drift mine. This is his first day on the job. A scoop loaded with supplies pulls up and six other miners start climbing on top of it. Two miners get into the bucket next to the supplies. Joe is instructed to ride on top of the scoop. The mine roof is low and the roadway is rough. As the scoop approaches the dinner hole, someone screams "Stop!" Paul has fallen off. Paul is lying on his back in a puddle of water on the mine floor, just behind the scoop bucket. The scoop has run over him. There is blood on both of Paul's legs just below the knees. No one takes charge. Joe must decide what to do.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key

found in the Instructor's copy

**Cat No:** NI 59

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

**Smoke on the Section (C)**

*[Previously called Cecil]*

Big Tim and Cecil are working on a super section. Cecil is in No. 1 entry (return air course) at the face replacing bits on a continuous miner when heavy smoke comes down on them from somewhere on the section. Cecil has a filter self-rescuer. Tim left his in No. 8 entry. Cecil must find a way to help Tim, plan a good route to travel through the smoke to warn others and get help, and help locate and fight the fire.

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**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 60

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

**Tipple Heater Exercise (MNM)**

You are a qualified electrician with 5 years of experience. Freezing weather has been causing problems on the tipple. The tipple boss wants an electrical heater installed immediately. Your supervisor, the chief electrician, is too busy to help and the company electrical engineer is on vacation. He tells you to take care of it. You must determine the power and wiring requirements for the heater, and you must work within the National Electrical Code standards.

**Audience:**

Surface or underground metal/nonmetal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 61

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

**Trailing Cable Electrical Problem (C/MNM)**

Sam, the shuttle car operator, has dumped two buggies of coal and is going back to the miner for another when the breaker trips, stopping the buggy. The breaker is reset, but begins to trip repeatedly. Sam and the section electrician must use safe work practices to find and correct the electrical problem.

**Audience:**

Mine Electricians

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheets may be duplicated from the Instructor's copy

**Cat No:** NI 62

**Price:** Instructor's Copy \$2.00 each

Problem Booklet \$1.00 each

Answer Sheet \$1.00 each

**Trailing Cable Repair (C)**

You are the roof bolter operator. You report damage to the bolter's trailing cable and are waiting for it to be repaired and spliced. Fix-It, the electrician, and his helper come to repair the cable. Their procedures worry you. The mine floor is wet. There is an accident. You are the only one around to help.

**Audience:**

Underground coal miners

**Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

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412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of



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# NIOSH MATERIALS

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the Master Answer Sheet and Scoring Key  
found in the Instructor's copy

**Cat No:** NI 63

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Traumatic Arm Amputation (C) - Role Play**

While unloading at the feeder-breaker, a shuttle car operator reaches over the sideboard into the shuttle car to pull out a piece of strap iron. As he reaches into the shuttle car, his leg strikes the control that raises the shuttle car boom. The sideboard raises up quickly, moves past the canopy, and cuts off his right arm at the shoulder. He staggers out of the operator's compartment, holding his left hand over the stump of his right arm. He slumps down against the rib, bleeding heavily. His severed arm is still in the box of the shuttle car. Someone stops the feeder. You witness the entire accident which takes place in just a few seconds. You must act fast or the shuttle car operator will die.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

**Cat No:** NI 65

**Price:** Instructor's Copy \$2.00 each

## **Traumatic Head Injury (C)**

You are a scoop operator. Your cousin, Bud, operates another scoop. While Bud is backing his scoop out of #1 entry, you hear his hat strike a low overhanging brow, followed by his cursing. He is okay. Later you go up to the scoop which is stopped in the area of the overhang. The scoop is not running. You find Bud slumped over in the cab. Now you must decide what to do to help Bud.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

Calhoun: phone 412-386-5901, fax

412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 66

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Travel Through Smoke (C)**

You are the section foreman on a 4 entry longwall development panel that has been driven about 4,000 feet from the mains. You are in the track entry checking supplies with the utility man when you smell smoke. You find that the smoke is not originating on your section. You call the dispatcher to find out the source of the smoke but he does not know and tells you he will try to find out. You assemble your crew, don your SCSRs, board the mantrip, and begin riding out of the section in the alternate (secondary) escapeway. You want to travel as far as possible on the mantrip since this is the fastest and easiest way out of the mine. You travel about 3,000 feet until the smoke becomes so thick that you can't see to continue. You stop the mantrip and lead your crew into the primary escapeway where the smoke is not as heavy and continue your escape on foot. You travel about 1,100 feet in the primary escapeway until you reach clear air in the mains and discover that you are outby the fire.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy

Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy

Answer sheet - 1 for each group of 3 to 5 persons working the exercise

Developing pens - 1 for each answer sheet.

Information may be obtained from Bobbie

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412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

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# NIOSH MATERIALS

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 67

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Unsupported Roof Rescue (C)**

*[Previously called Marvin R. Letcher]*

You are the pinner operator. Your helper, Marvin, goes under unsupported roof. As you yell to him to get back, there is a roof fall. It catches Marvin's legs. He is lying face down and screaming. The roof is dribbling across the whole entry. You must figure out how to rescue and help Marvin without getting yourself or other miners injured.

**NOTE:** *This exercise is similar to **Highwall Rescue** designed for surface miners. A companion, **Unsupported Roof Rescue** role play, is also available.*

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 70

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Unsupported Roof Rescue (C) - Role Play**

*[Previously called Marvin R. Letcher role play]*

You are the pinner operator. Your helper, Marvin, goes under unsupported roof. As you yell to him to get back, there is a roof fall. It catches Marvin's

legs. He is lying face down and screaming. The roof is dribbling across the whole entry. You must figure out how to rescue and help Marvin without getting yourself or other miners injured. You have slate bars, roof jacks, a mine first aid kit, a mine phone, and two other miners who can help. Your rescue and first aid performance will be rated against a checklist by the instructor and your classmates.

**NOTE:** *This role play version provides hands-on practice of the first aid skills involved in the **Highwall Rescue Exercise** and **Unsupported Roof Rescue** exercises.*

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Answer sheet - 1 for each trainee, may be duplicated from the Instructor's copy

**Cat No:** NI 71

**Price:** Instructor's Copy \$2.00 each  
Answer Sheet \$1.00 each

## **Vulcan Mine Ignition (C)**

You are the on-side shuttle car driver. Just after lunch you pull across the last open crosscut ready to go into the No. 4 entry to load coal from the continuous miner. Just as you notice the line is down, an orange fireball covers up the continuous miner in the entry, the miner operator, his helper, and the foreman. After the fireball dies down, through the white smoke in the entry, you can see one miner down and the other two walking around by the continuous miner. You must decide what to do.

**NOTE:** *The companion exercise, **Vulcan Mine Recovery**, continues the problem that is in this exercise. The two exercises may be used in sequence or independently.*

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.



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# NIOSH MATERIALS

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Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 72

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Vulcan Mine Recovery (C)**

You are the mine foreman. When you return from an errand, you learn there has been a large face ignition in the Vulcan mine. The 001 section crew has come out of the mine with three injured miners. The injured miners have been sent to a hospital by ambulance. You must decide what to do to prevent any further damage or injuries, to report the ignition, to learn about conditions in the mine, and to safely restore the section and the mine to operation.

**NOTE:** *The companion **Vulcan Mine Ignition** precedes the problem that is addressed in this exercise. The two exercises may be used in sequence or independently. This exercise has no correct answer feedback. Rather, it requires the trainee to work completely through the problem, receiving only the feedback that would be available in a real situation. Therefore, the instructor must display the answer key at the conclusion of the exercise. Trainees must then check the accuracy of their responses. Group discussion of the problem should follow.*

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)

Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 73

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

## **Water Line Repair (C)**

You and your supervisor, Big Tom Bell, are repairing a water line in the belt entry of a mine. You are 1,200 feet from the portal and 800 feet from the nearest phone which is in by your position at the tailpiece. You smell something that smells like burning coal. Tom sends you into the return air entry to get a tool from the scoop you drove in. When you come back into the belt entry, Tom is unconscious. You feel sick and weak. You must decide what to do to help Tom and yourself.

### **Audience:**

Underground coal miners

### **Materials needed:**

Instructor's copy  
Problem booklet - 1 for each trainee, may be duplicated from the Instructor's copy  
Answer sheet - 1 for each group of 3 to 5 persons working the exercise  
Developing pens - 1 for each answer sheet.  
Information may be obtained from Bobbie Calhoun: phone 412-386-5901, fax 412-386-5902 or email [minetraining@cdc.gov](mailto:minetraining@cdc.gov)  
Optional - overhead projector and overheads of the Master Answer Sheet and Scoring Key found in the Instructor's copy

**Cat No:** NI 74

**Price:** Instructor's Copy \$2.00 each  
Problem Booklet \$1.00 each  
Answer Sheet \$1.00 each

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# INFORMATIONAL REPORTS REPORTES INFORMATIVOS

This section is an alphabetical listing of available Informational Reports (IRs).

There are no products in this section available in Spanish.

(No hay ningún producto disponible en español en esta sección.)

**Informational Reports (IRs) are an on-going series of scientific and technical publications produced by MSHA. IRs are free of charge. Use the order blank in the back of this catalog to request IRs. Please order by IR number and title.**

## **Analysis of Noise Reduction With Earmuff Hearing Protectors Under Field Conditions—Coal and Metal/Nonmetal**

Reviews 540 field tests comparing A-weighted noise levels measured inside and outside a variety of earmuff hearing protectors. The report concludes that the earmuff's effectiveness in reducing noise frequently falls far short of the manufacturer's NRR (noise reduction rating).

MSHA 1994 42 pp  
Cat No: IR 1221  
Price: Free of charge

## **Calibration and Maintenance Procedures for Coal Mine Respirable Dust Samplers**

Describes the standard procedures used by MSHA for calibration of currently approved personal samplers and associated equipment and for maintenance of this equipment. Supersedes IR 1121.

MSHA 1996 19 pp  
Cat No: IR 1240  
Price: Free of charge

## **Comparison of Infrared Absorbances for Standard Samples Prepared From Sieved and Nonsieved Quartz Reference Materials**

MSHA analyzes respirable coal mine dust samples for quartz content as part of their program to enforce environmental dust levels as mandated by the 1977 Act. A quartz reference material is necessary to prepare calibration curves for the quantitative measurement of the mineral. This report

summarizes results of a study conducted to determine if the calibration of x-ray diffraction instrumentation was significantly different after particles larger than 10 micrometers in size were removed from the reference material.

MSHA 1994 11 pp  
Cat No: IR 1223  
Price: Free of charge

## **Comparison of Noise Exposure Measurements Conducted With Sound Level Meters and Noise Dosimeters Under Field Conditions (C/MNM)**

Makes absolute and relative comparisons between the measuring positions where noise dosimeters and sound level meters are used in assessing noise exposures.

MSHA 1995 32 pp  
Cat No: IR 1230  
Price: Free of charge

## **Dust Sampling and Laboratory Testing Procedures After Underground Coal Mine Explosions**

Summarizes the methods for collecting samples of the coal and remaining dust taken after an underground coal mine explosion, and discusses the information obtained by analysis of each sample.

MSHA 1996 14 pp  
Cat No: IR 1239  
Price: Free of charge

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# INFORMATIONAL REPORTS

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## **Effect of Threshold on Noise Dosimeter Measurements and Interpretation of Their Results, The**

Discusses the various functions of the noise dosimeter, and why data collected with instruments that function at one set threshold level may differ from that collected with an instrument that uses a different, or no, threshold level. Recommendations are made to provide assistance in selecting the threshold level of the dosimeter in order to achieve the desired objective of the noise dose measurement.

MSHA 1994 16 pp

Cat No: IR 1224

Price: Free of charge

## **Evaluation of Gases From Mine Explosions by Elemental Balancing, The**

Introduces a new index, called the (H/C) Index, used in investigations of fire and explosions to determine fuel composition.

MSHA 1996 31 pp

Cat No: IR 1231

Price: Free of charge

## **Evaluation of Muff Type Hearing Protectors as Used in the Mining Industry—Coal and Metal/Nonmetal**

Summarizes results of a study conducted to evaluate muff type hearing protector devices (HPDs) worn by miners working in a mining environment. The study concludes that field performance of muff type HPDs is significantly less than that predicted by the Environmental Protection Agency Noise Reduction Rating.

MSHA 1994 21 pp

Cat No: IR 1222

Price: Free of charge

## **Field Evaluations of Hearing Protection Devices at Surface Mining Environments — Coal and Metal/Nonmetal**

Summarizes the results of a study conducted to evaluate the effectiveness of earmuff type hearing protection devices and their predictability when they were being worn by miners performing normal work duties.

MSHA 1994 31 pp

Cat No: IR 1213

Price: Free of charge



## **Fracture Mechanic Approach to Understanding Supports in Underground Coal Mines, The**

This report introduces a technique for understanding supports in underground coal mines. The report describes the latest advances in software development and an in-depth example of the fracture mechanics approach. An improved yielding technique incorporating a three-stage process for strain-softening is included.

MSHA 2001 68 pp

Cat No: IR 1263

Price: Free of charge

## **Injury Experience in Coal Mining, 1995-2001**

Reviews in detail the occupational injury and illness experience of coal mining in the United States for the years listed below. Summary reference tabulations are included at the end of the report.

|             |         |        |
|-------------|---------|--------|
| <b>1995</b> | IR 1242 | 397 pp |
| <b>1996</b> | IR 1253 | 384 pp |
| <b>1997</b> | IR 1258 | 375 pp |
| <b>1998</b> | IR 1265 | 384 pp |
| <b>1999</b> | IR 1272 | 371 pp |
| <b>2000</b> | IR 1279 | 378 pp |
| <b>2001</b> | IR 1302 | 367 pp |

Price: Free of charge

## **Injury Experience in Metallic Mineral Mining, 1995-2001**

Reviews the occupational injury and illness experience of metallic mineral mining in the United States for the years listed below. Summary reference tabulations are included at the end of the report.

|             |         |        |
|-------------|---------|--------|
| <b>1995</b> | IR 1243 | 286 pp |
| <b>1996</b> | IR 1254 | 285 pp |
| <b>1997</b> | IR 1261 | 284 pp |
| <b>1998</b> | IR 1266 | 280 pp |
| <b>1999</b> | IR 1273 | 273 pp |
| <b>2000</b> | IR 1280 | 274 pp |
| <b>2001</b> | IR 1303 | 257 pp |

Price: Free of charge



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# INFORMATIONAL REPORTS

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## **Injury Experience in Nonmetallic Mineral Mining (Except Stone and Coal), 1995-2001**

Reviews the occupational injury and illness experience of nonmetallic mineral mining (except stone and coal) in the United States for the years listed below. Summary reference tabulations are included at the end of the report.

|             |         |        |
|-------------|---------|--------|
| <b>1995</b> | IR 1244 | 305 pp |
| <b>1996</b> | IR 1255 | 300 pp |
| <b>1997</b> | IR 1262 | 290 pp |
| <b>1998</b> | IR 1267 | 291 pp |
| <b>1999</b> | IR 1274 | 297 pp |
| <b>2000</b> | IR 1281 | 290 pp |
| <b>2001</b> | IR 1304 | 289 pp |

Price: Free of charge

## **Injury Experience in Sand and Gravel Mining, 1995-2001**

Reviews in detail the occupational injury and illness experience of sand and gravel mining in the United States for the years listed below. Summary reference tabulations are included at the end of the report.

|             |         |        |
|-------------|---------|--------|
| <b>1995</b> | IR 1246 | 111 pp |
| <b>1996</b> | IR 1257 | 109 pp |
| <b>1997</b> | IR 1259 | 112 pp |
| <b>1998</b> | IR 1269 | 114 pp |
| <b>1999</b> | IR 1276 | 114 pp |
| <b>2000</b> | IR 1283 | 108 pp |
| <b>2001</b> | IR 1305 | 107 pp |

Price: Free of charge

## **Injury Experience in Stone Mining, 1995-2001**

Reviews in detail the occupational injury and illness experience of stone mining in the United States for the years listed below. Summary reference tabulations are included at the end of this report.

|             |         |        |
|-------------|---------|--------|
| <b>1995</b> | IR 1245 | 519 pp |
| <b>1996</b> | IR 1256 | 522 pp |
| <b>1997</b> | IR 1260 | 521 pp |
| <b>1998</b> | IR 1268 | 531 pp |
| <b>1999</b> | IR 1275 | 527 pp |
| <b>2000</b> | IR 1282 | 533 pp |
| <b>2001</b> | IR 1306 | 518 pp |

Price: Free of charge

## **Installation of MSHA-Accepted Ground Wire Monitors, Guidelines for the (C)**

Contains manufacturers' installation diagrams for underground impedance monitors, underground continuity monitors, and surface monitors.

MSHA 1996 128 pp

Cat No: IR 1241

Price: Free of charge

## **Introduction to Operator Air Sampling Programs**

The first in a series of reports assisting mine operators in determining the adequacy of their control measures and in planning for effective monitoring of their employees' exposure to silica dust and other airborne contaminants.

MSHA 1999 23 pp

Cat No: IR 1250

Price: Free of charge

## **Magnitude of the Noise-Induced Hearing Loss Problem in the Mining Industries, The**

Prolonged exposure to hazardous noise levels results in a person developing noise-induced hearing loss (NIHL). The analysis in this report demonstrates conclusively that NIHL is a major health problem affecting the mining industries.

MSHA 1994 18 pp

Cat No: IR 1220

Price: Free of charge

## **Material Instability Hazards in Mine-Processing Operations**

Many accidents occur in the mining industry because of instability of material during handling and processing operations. This report provides information on safe working procedures at stockpiles and surge piles.

MSHA 1994 10 pp

Cat No: IR 1212

Price: Free of charge

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# INFORMATIONAL REPORTS

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## **Noise Exposure in U.S. Coal Mines**

This paper presents the mean and standard deviation of over 60,000 full-shift noise dose measurements for various underground and surface coal mining occupations. The report also compares and contrasts the levels with historical noise exposure measurements for selected coal mining occupations that were published in the 1970s.

MSHA 1994 46 pp

Cat No: IR 1214

Price: Free of charge

## **Presentations From the 1992 Coal Mining Impoundment Informational Meeting**

This report contains 15 presentations about issues involved in design and construction of dams associated with coal mining.

MSHA 1993 175 pp

Cat No: IR 1206

Price: Free of charge

## **Trouble-Shooting Guide for Roof Support Systems, A**

Provides a logical sequence to resolving the most common problems encountered with roof supports.

MSHA 1996 104 pp

Cat No: IR 1237

Price: Free of charge



# HISTORICAL MATERIALS

## MATERIALES HISTÓRICOS

The videotapes and training materials in this section have become dated due to their age, changes in technology, or changes in mining regulations. The materials are still available because they may represent the sole source of some of the information. Portions of the materials may be used as is; however, the dated portions should be pointed out when presenting them in a training or informational situation. Training materials marked with an asterisk (\*) are currently being revised. These will be advertised in a future catalog or supplement.

There are no products in this section available in Spanish. **(No hay ningún producto disponible en español en esta sección.)**

### HISTORICAL VIDEOTAPES (VIDEOCINTAS)

#### **Air We Breathe in Industrial Environments, The (C/MNM)**

Discusses composition and importance of air in relation to various working environments. Describes industrial health (breathing) hazards encountered. Explains need for evaluation of working conditions, for observation of safety precautions and for protection of workers from noxious gases and oxygen deficiency by using protective equipment and proper ventilation.

BuM 1972 16 min

Cat No: VC 841

Price: \$8.00

#### **Breathe and Live: Ventilation in Metal and Nonmetal Mines**

Focuses on why mine ventilation systems are an underground miner's personal lifeline. Shows components of mine ventilation systems (including main and booster fans, air curtains, ventilation tubes, doors and regulators). Emphasizes importance of good maintenance. Re-creates several fatal accidents caused by contaminated air, inadequate ventilation or failure to warn workers away from unventilated "dead end" zones. Stresses importance of frequent safety checks with instruments which measure quality and quantity of ventilating air (a responsibility of mine management).

BuM 1973 21 min

Cat No: VC 845

Price: \$8.00

#### **Cabs and Canopies for Your Safety (C)**

Points out need for cabs and canopies on underground mining equipment to protect miners from

falls of roof and ribs. Uses scenes taken after three actual roof fall accidents (in which fallen coal and rock covered the mining equipment). Demonstrates that, in each case, the operator escaped unharmed because of the protective canopy on the machine. Presents in-the-mine interviews with the operators involved in these near-fatal accidents – workers relate what happened and why they are convinced the canopies saved their lives.

MESA 1974 10 min

Cat No: VC 854

Price: \$8.00

#### **Coal Dust: Hazards and Controls**

Explains some of the more serious dangers of coal mine dust and its effect on the health and safety of both underground and surface miners. Uses actual mining operations, live action footage and detailed animation to show various ways coal dust is produced, consequences of long-term exposure (black lung) and how dust can be controlled in the mining environment. Shows several methods of dust sampling. Demonstrates various ventilation techniques, water sprays and other dust suppression devices. Emphasizes use of proper face ventilation and water sprays to effectively remove, dilute and suppress airborne dust. Examines advantages of these control devices and systems as applicable to different mining methods and situations. Recommends ongoing dust sampling and evaluation programs be in place at all mines.

MSHA Rev 1980 14 min

Cat No: VC 829

Price: \$8.00

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# HISTORICAL MATERIALS

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## **Electrical Hazards in Underground Coal Mining**

Points out some of the more prevalent electrical hazards which may be encountered in underground coal mining. Re-creates accidents involving operating, maintaining and repairing electrical power distribution centers, switching gear, cables and other high-voltage equipment. Stresses proper training and qualifications for miners working on electrical installations, machinery and circuits. Describes proper work procedures which should be followed at all times – if electricity is to be effectively and safely utilized in underground coal mining.

MESA 1975 13 min

Cat No: VC 857

Price: \$8.00

## **Electrical Lock-Out Procedures (C/MNM)**

Accidental starting of equipment or the energizing of electrical power circuits has caused many injuries and fatalities in the mining and milling industry. Re-creates some of these accidents and points out potential hazards connected with specific jobs. Emphasizes need for immediate and thorough training in proper lock-out procedures for all personnel who work with or around electrical installations (including personnel who operate electric-powered machinery and equipment).

MESA 1976 11 min

Cat No: VC 864

Price: \$8.00

## **Extensible Line Curtain (C)**

This program shows an innovative procedure that uses extensible line curtain for coal mine face ventilation.

MSHA 1986 15 min

Cat No: VC 897

Price: \$8.00

## **Fire Fighting in the Mineral Industry (MNM)**

Concerns techniques of fire fighting in noncoal mining and related industries. Shows the classifications of fires (A, B, and C). Provides instruction on proper use of various types of extinguishers. Demonstrates how to control fires by “sealing them off” with foam, asphalt, and other chemical sealants.

BuM 1970 16 min

Cat No: VC 827

Price: \$8.00

## **Haulage Safety in Low-Coal Mines**

Depicts how accidents can be prevented (or can happen) during underground transportation of personnel, coal and supplies through tunnels in low-coal mines. Contrasts safe haulage practices with accidents. Uses staged “near misses” to show consequences of carelessness.

BuM 1971 15 min

Cat No: VC 839

Price: \$8.00

## **Hazard Recognition and Avoidance in Surface Coal Mining**

Miners who are inexperienced and unfamiliar with the working environment, equipment and mining procedures are often exposed to potential safety hazards for which they are largely unprepared. Describes some of the more common dangers encountered (including failure of highwalls and spoil banks, slips and falls, drilling and blasting and not wearing or using proper safety clothing or equipment). Addresses machinery/vehicle, mechanical/electrical, welding/cutting and other maintenance/repair hazards. Gives examples of danger signs and warnings which usually precede a hazard. Outlines safety precautions needed to avoid the hazard. Emphasizes miners must learn how to recognize and avoid unsafe conditions and situations by staying alert, obeying company safety rules and following safe working practices at all times.

MSHA 1980 9 min

Cat No: VC 891

Price: \$8.00



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# HISTORICAL MATERIALS

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## **Hazard Recognition and Avoidance in Underground Coal Mines**

Underground coal mining is an inherently hazardous occupation, but one which can be made relatively safe if miners learn to recognize and avoid the associated hazards. Identifies some of the more common dangers (including unsafe acts and conditions) miners may encounter while carrying out their everyday work assignments. Demonstrates safe work practices and procedures needed to avoid such problems and pitfalls. Urges miners to stay alert, work safely and report unsafe conditions they cannot correct.

MSHA 1981 11 min  
Cat No: VC 893  
Price: \$8.00

## **Illumination in Underground Coal Mines**

Traces development of underground mine illumination from the earliest days of candles and carbide lamps to today's more efficient and safer electric lighting equipment. Demonstrates adequate lighting which helps miners better see equipment, other workers and roof and rib conditions (and to perform their jobs more safely). Shows various types of permissible lighting (being tested and used in both underground working places and surface laboratories). Explains light-measuring techniques and methods of evaluating lighting systems. Informs viewers of requirements of Federal illumination regulations and how these apply to specific mining situations.

MSHA 1980 15 min  
Cat No: VC 871  
Price: \$8.00

## **Magic of Fire, The (C/MNM)**

Deals with fire, its composition, uses and control. Tabletop displays and laboratory demonstrations illustrate how fires and explosions occur. Describes the safe use and control of commonly used gases and flammable liquids. Shows various industrial fires (and fire hazards in the home) and gives instructions on fire prevention.

BuM 1965 23 min  
Cat No: VC 809  
Price: \$8.00

## **Management's Role in Health and Safety (C)**

Presents a well-planned and well-executed mine health and safety program in action. Uses scenes at both underground and surface facilities. Outlines a safety program (in detail) and its application to on-the-job safety situations and related mining operations. Defines management's responsibility for the health and safety of miners. Points out various environmental health problems and safety hazards. Offers possible solutions (with emphasis on effective safety training).

BuM 1972 15 min  
Cat No: VC 842  
Price: \$8.00

## **Oh! My Aching Back (C/MNM)**

Back injuries from lifting objects that are too heavy and/or from using incorrect lifting techniques are a common occurrence in many industries. Shows workers the correct method of lifting (including good posture, positioning and smooth application of lifting power). Uses flexible training models (which simulate the human backbone, muscles and ligaments) to illustrate how strains occur and how discs are "pinched." Utilizes live-action scenes in underground mines and industrial plants to emphasize the need for proper lifting and handling of working tools and materials.

BuM 1965 21 min  
Cat No: VC 810  
Price: \$8.00

## **Open-Pit Mining Hazards (MNM)**

Moving machinery and moving earth supply the basic ingredients for a variety of possible hazards in mining ore from open pits. Uses staged accidents (involving dump trucks, power shovels, front-end loaders, rail haulage and highwall blasting) to show what happens as the result of workers' carelessness, overlooked safety precautions and/or unsafe machinery and mining methods. Explains why the accidents happened and stresses the correct and safe way to perform various mining jobs to prevent future accidents.

BuM 1967 17 min  
Cat No: VC 816  
Price: \$8.00

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# HISTORICAL MATERIALS

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## **Operation of the Quest Micro-15 Noise Dosimeter (C/MNM)**

Describes the Quest Micro-15 Noise Dosimeter and the functions of its component parts, the operation and use of the instrument for field compliance measurements, and how to perform field calibration and general maintenance procedures.

MSHA 1988 28 min  
Cat No: VC 931  
Price: \$8.00

## **Orientation and Indoctrination of Safe Workmen (MNM)**

Follows a group of new employees through preemployment testing, hiring and actual working situations. The industry is a gypsum products manufacturing plant, but the orientation and indoctrination policies and procedures may easily be applied to other mining or manufacturing organizations. Takes viewers on a tour of the plant and follows new employees through interviews, physical examinations, classroom instruction and on-the-job training sessions. Stresses job safety as an integral part of production. Highlights the value of accident prevention training for all employees.

BuM 1966 27 min  
Cat No: VC 813  
Price: \$8.00

## **REAP — Roof and Rib Fatalities — Coal**

These videos discuss the Roof and Rib Fatalities for 1992-1994, and classify each fatality under one of three general causes:

1. Failure to comply with the approved roof control plan;
2. Failure of the roof control system; and
3. Traveling or working inby supported roof.

MSHA 15 min each  
Cat No: VC 849 (1992)  
VC 825 (1993)  
VC 876 (1994)  
Price: \$8.00 each title

## **Repeat Violation Reduction Program (C/MNM)**

Presents a systematic approach to looking at citations and orders issued at an operation in order to

determine their root cause and ways to eliminate them.

MSHA 1989 25 min  
Cat No: VC 880  
Price: \$8.00

## **Roof Bolting in Coal Mines**

Stresses the importance of roof bolting to the coal mining industry. Explains principles and purposes of roof bolting. Uses working models, laboratory demonstrations, actual underground applications and tests. Shows how mining operations and bolting methods are coordinated and emphasizes safety throughout the roof control process.

BuM 1973 19 min  
Cat No: VC 808  
Price: \$8.00

## **Safety Practices in Low-Coal Mining**

Uses live-action underground photography to show special hazards workers must guard against in thin-seam mines. Illustrates how restricted work space, curtailed field of vision and cramped body position can intensify danger when working with fast-moving, high-powered machines. Emphasizes teamwork, alertness, and "know-how."

BuM 1971 15 min  
Cat No: VC 840  
Price: \$8.00

## **Slope Stability of Waste Dams and Embankments (C/MNM)**

The disposal of mining waste and refuse is an ever increasing problem. Maintaining the stability and safety of waste storage facilities is part of that problem. Points out importance of properly designed and constructed waste dams and embankments to show the destructive aftermath of coal wastebank failures and landslides. Combines animation sequences with ground-level and aerial photography to explain various types of slope failures, describe inherent and potential hazards and outline a constructive program of inspection, detection and correction. Demonstrates on-site monitoring methods (some methods using off-site computer analyses).

MSHA 1979 28 min  
Cat No: VC 870  
Price: \$8.00



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# HISTORICAL MATERIALS

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## **Supervisor's Responsibilities in Roof Control (C)**

Helps front line underground coal mine supervisors understand what their duties are to the miners, as well as to management, concerning safety in the working place.

MSHA 1988 11 min  
Cat No: VC 919  
Price: \$8.00

## **Supervisory Training Series (MNM)**

Series is designed to motivate metal mine supervisory personnel to stress safety in all facets of the mining process.

The two videotapes may be shown independently or as a series (in the following sequence).

- **Man and His Habits (MNM)**  
Depicts how careless habits may endanger safety at home and on the job. Shows workers how to acquire safe work habits by practicing safety everywhere.

BuM 1969 13 min  
Cat No: VC 822  
Price: \$8.00

- **Safety Consciousness (MNM)**  
Demonstrates how various people at work and play develop safe behavior in their daily activities.

BuM 1969 10 min  
Cat No: VC 824  
Price: \$8.00

## **Transportation and Communication in Underground Coal Mines**

Emphasizes importance of being able to recognize and avoid potential safety hazards in underground mine transportation. Reenacts different accidents involving the transporting of workers and materials. Describes various underground mine communication systems. Uses on-the-job scenes to explain the purpose of communication systems in overall mining operations. Conveys the underlying safety lesson that both transportation and communication are es-

sential to all underground mining operations. Stresses that the health and safety of mine workers is often dependent upon the safe and proper use of these systems.

MSHA 1981 9 min  
Cat No: VC 892  
Price: \$8.00

## **Underground Coal Mine Blasting**

Begins with the safe storage of permissible explosives, detonators and blasting devices in surface and underground facilities. Progresses through the transportation and handling stages (and up to the actual blasting of the coal face itself). Shows and explains how the shot firer safely performs the complete blasting operation (preparing the primers, loading the shotholes, stemming, wiring and firing the round). Demonstrates the compressed air method of blasting coal. Illustrates (through animation) what takes place inside the shothole when an Airdox shell is "fired." Stresses safe work practices throughout.

MESA 1975 19 min  
Cat No: VC 856  
Price: \$8.00

## **Why Roof Control Plans (C)**

Roof and rib falls are still the most dangerous hazard an underground coal miner faces. The premise of this film is that the hazard can be prevented or reduced by following an approved roof control plan. Explains basic plans, gives examples and describes plan implementation. Demonstrates important items included in the plan (such as types of support, areas covered and rock strata diagrams) under actual mining conditions. Shows mining equipment and materials, bolting machines, roof bolts and timbers in use. Urges miners to become familiar with their mine's roof control plan.

MSHA 1981 16 min  
Cat No: VC 874  
Price: \$8.00

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# HISTORICAL MATERIALS

## HISTORICAL TRAINING MATERIALS (MATERIALES DE ENTRENAMIENTO)

### **Chemistry, Analysis and Interpretation of Mine Atmospheres (C/MNM)**

Instructor's guide for teaching mine gases, sampling of mine fires, gas sampling methods, hand-held detection devices and mathematical calculations of mine gases as a result of mine fires.

MSHA 1988 108 pp

Cat No: IG 69

Price: Free of charge (1 book)

\$4.00 (each additional copy)

### **Coal Dust**

Examines health and safety hazards of coal dust in underground mines. Presents theory and procedures for mine ventilation and worker protection. Printed in two volumes: Work Book and Answer Book.

MESA 1976 130 pp

Cat No: PI 9

Price: Free of charge (1 set)

\$4.00 (each additional set)

### **Coal Mine Roof and Rib Control**

Manual covers the most dangerous hazard to underground coal miners – fall of roof and ribs. Describes geology of coal and rock strata. Explains effects of mining on strata. Covers methods of support and roof control plans. Gives some coverage to inspection and testing of roof and ribs and prevention of roof and rib fall accidents.

MSHA 1980 49 pp

Cat No: SM 18

Price: Free of charge (1 book)

\$2.00 (each additional copy)

### **How to Tailor Off-The-Shelf Training Materials\* (C/MNM)**

Designed to assist trainers. Offers suggestions on personalizing off-the-shelf training materials.

WV University Mining Extension

Service 1981 47 pp

BuM Contract JO188069

MSHA Reprint 1983

Cat No: IG 8

Price: Free of charge (1 book)

\$2.00 (each additional copy)

### **Industrial Hygiene for the Mining Industry\* (C/MNM)**

Describes basic concepts of industrial hygiene and human physiology and how they are affected by mining conditions. Also includes material on measuring instruments and devices used in industrial hygiene.

MSHA 1986 243 pp

Cat No: PI 12

Price: Free of charge (1 book)

\$5.00 (each additional copy)

### **Introduction to Underground Coal Mining\***

Covers basic mining operations and hazards, mine safety and health, safe practices in mining, and Federal mine laws.

MESA 1977 265 pp

Cat No: PI 1

Price: Free of charge (1 book)

\$5.00 (each additional copy)

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# HISTORICAL MATERIALS

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## Laboratory Safety (C/MNM)

Gives an overview of accident causes and accident prevention techniques when dealing with energy sources and hazardous materials found in laboratories.

**Note to Trainer:** Designed primarily for entry level laboratory workers.

MESA 1976 27 pp

Cat No: SM 26

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Milling and Crushing\* (MNM)

Reviews health and safety hazards associated with milling and crushing operations.

MESA 1978 200 pp

Cat No: PI 4

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## Mine Gases (C)

Examines the various atmospheric components found in underground mines and describes the hazards of methane, carbon monoxide, sulfur dioxide, hydrogen sulfide, etc.

MESA 1977 207 pp

Cat No: PI 2

Price: Free of charge (1 book)

\$5.00 (each additional copy)

## Mine Ventilation\* (C/MNM)

Reviews the basic elements of mine ventilation. Emphasizes the importance of good ventilation for a safe and healthy work environment.

MSHA Rev 1986 43 pp

Cat No: SM 20

Price: Free of charge (1 book)

\$2.00 (each additional copy)

## Roof and Rib Control\* (C)

Examines the nature of a mine roof and describes measures that can be taken to minimize the danger of roof and rib falls in underground mines.

MSHA 1982 113 pp

Cat No: PI 3

Price: Free of charge (1 book)

\$4.00 (each additional copy)

## Small Mines Training\* (C)

General information designed to improve the effectiveness of supervisory personnel. Intended for all levels of coal mine management. Complete set of materials contains:

### Books

Managing Maintenance 52 pp

Human Relations Skills at Work 39 pp

Managing a Section 37 pp

Complying With Part 48 55 pp

Conducting Your Own Training 35 pp

Elements of Management

Planning 41 pp

Developing a Comprehensive

Safety Program 46 pp

WV University Mining

Extension Service

(subcontractor to HUMRRO) 1982

BuM Contract JO188053 HUMRRO

E81-0303 WVU

1982

Cat No: IG 11

Price: \$6.00 (7 books)

## Surface Mining\*

Examines hazards common to surface mines, including heavy equipment operations, highwalls, slips and falls, explosives and plant operation. Printed in two volumes: Work Book and Answer Book.

MESA 1976 235 pp

Cat No: PI 10

Price: Free of charge (1 book)

\$5.00 (each additional copy)

## Underground Coal Haulage and Transportation

Focuses on safety hazards of the various haulage systems used in underground mines to transport miners, coal, equipment, and supplies.

MSHA 1983 203 pp

Cat No: PI 7

Price: Free of charge (1 book)

\$5.00 (each additional copy)



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| <b>DVD</b> | <b>Digital Versatile Disc</b> | <b>PI</b> | <b>Programmed Instruction Books</b> |
| <b>IG</b>  | <b>Instructional Guide</b>    | <b>SM</b> | <b>Safety Manuals</b>               |
| <b>IR</b>  | <b>Informational Reports</b>  | <b>VC</b> | <b>Videotapes</b>                   |
| <b>NI</b>  | <b>NIOSH</b>                  |           |                                     |

*New items are shown in bold type.*

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