

PROMULGATION HISTORY ABSTRACT
WEST VIRGINIA DEPARTMENT OF ENERGY

TITLE 48 SERIES 3

Rules and Regulations Governing the Safety
Training Program for Prospective Surface
Coal Miners in West Virginia

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION
TITLE 48 SERIES 3

SUBJECT: RULES AND REGULATIONS GOVERNING THE SAFETY TRAINING PROGRAM FOR
PROSPECTIVE SURFACE COAL MINERS IN WEST VIRGINIA

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS

Subject: Rules and Regulations Governing the Safety Training Program for
Prospective Surface Coal Miners in West Virginia

Section 1. General

1.01 Authority - These rules and regulations are issued under authority of West Virginia Code, Chapter 22A, Article 6A 9, Section 6 in accordance with the provisions of Chapter 29A, Article 3, of the West Virginia Code.

1.02 Effective Date - These rules and regulations were promulgated on
May 12, 1987 and became effective on May 12, 1987.

1.03 Filing Date - These rules and regulations were filed in the office of the Secretary of State on May 12, 1987.

Section 2. Criteria for Health and Safety Training Program for Prospective
Surface Coal Miners in West Virginia

2.1 An approved training program must, as a minimum, include the topics described in the course outline in Section 3 and meet the training objectives specified in Section 4. The time distribution for the subjects is a suggested one which can vary as long as the training objectives are achieved.

2.2 Any participating center may suggest modifications in the course outline, but such modifications must be approved by the Board of Miner Training, Education, and Certification. (See Section 5 for Program Approval Procedures).

2.3 Training centers which offer this instruction may obtain the training materials developed specifically for the program from the West Virginia Department of Mines Energy. Alternatively, a center may elect to develop or use its own materials which must be approved by the Board of Miner Training, Education, and Certification. (See Section 5 for Approval Procedures).

2.4 Instructors for this program must be approved by the Department of Mines Energy as having demonstrated sufficient experience and/or knowledge of surface coal mining. (See Section 6 for Instructor Approval Procedures).

2.5 The training equipment necessary for implementation of the surface mine training program is as follows:

- (1) audio-visual equipment suitable for presenting 16mm films, 35mm slides, transparencies and sound slide programs;
- (2) personal safety equipment to include, as a minimum, hard hats, safety glasses, safety shoes, respirators, gloves, hearing protection, and personal dust sampler;
- (3) first-aid equipment and supplies including an appliance suitable for practicing C.P.R. and artificial respiration;

The training program suggested for instruction of the surface mine training program is as follows:

- (1) National Bituminous Coal Wage Agreement (latest copy);
- (2) copy of laws pertaining to surface mines;
- (3) samples of defective hand tools;
- (4) tools used at surface mines (e.g., sledge hammer, spiking hammer, railroad jacks, hand shovel, pick and hammer);
- (5) samples of shooting materials (e.g., blasting caps, lead wires, detonator, prime cord and anfo). All materials must be demonstration materials only;
- (6) welding equipment;
- (7) samples of electrical cable in good and bad condition.

2.6 Any person, regardless of race, creed, color, national origin, sex, or age is eligible for the training program. But it should be understood by all prospective trainees that upon completion of the training program and receipt of the permit of apprenticeship employment within the coal industry is not guaranteed. Each trainee will still be subject to their prospective employer's physical examination requirements and other employment standards. The Board of Miner Training, Education, and Certification assumes compliance with all equal opportunity employment requirements.

2.7 Issuance and Expiration of Initial Apprentice Miner's Cards

(a) Upon completion of the approved 40-hour pre-employment training program, a permit of apprenticeship shall be issued to any person who scores at least 75% on the final examination administered by the West Virginia Department of Mines Energy; Provided, that such person passes the examination within 45 days after completing the 40-hour program.

(b) The apprentice miner's card is valid for one (1) year.

(c) If an apprentice begins apprenticeship ("on the job") training as a miner prior to the expiration date on the apprentice miner card, the card will remain valid until the completion of the apprenticeship training; Provided that such training is continuous and a miner's certificate is obtained.

(d) If the apprentice does not begin apprenticeship ("on the job") training as a miner prior to the expiration date on the apprentice miner card, the card will become invalid on the expiration date.

(e) Any prospective miner who does not score at least 75% on the initial apprenticeship miner's examination will be given a second opportunity to retake such examination: Provided that such person retakes and passes the exam within 45 days after completing the 40-hour program. In the event of failure on the second opportunity the prospective miner must repeat the approved 40-hour pre-employment training program in order to retake the examination.

2.8 Issuance and Expiration of Renewed Apprentice Miner's Cards

(a) Apprentice miner's cards may be renewed ~~one (1) time~~ by retaking and passing with a score of at least 75% on the apprenticeship examination ~~within thirty (30) days after the expiration date of the initial apprentice miner's card.~~

(b) The renewed apprentice miner's card is valid for ~~six (6)~~ twelve (12) months.

(c) If an apprentice begins apprenticeship ("on the job") training as a miner prior to the expiration date on the renewed apprentice miner card, the card will remain valid until the completion of the apprenticeship training, provided that such training is continuous and a miner's certificate is obtained.

(d) If the apprentice does not begin apprenticeship ("on the job") training as a miner prior to the expiration date on the renewed apprentice miner card, the card will become invalid on the expiration date.

~~(e)~~ Upon expiration of the renewed card, a prospective miner would have to successfully complete the approved 40-hour pre-employment training program in order to obtain a valid card.

~~(#)~~ (e) Any prospective miner who does not score at least 75% on the apprenticeship miners examination in order to renew his apprentice certificate will be given a second opportunity to retake the examination, provided that such person retakes and passes the exam within 30 days after the expiration date of the initial apprentice miner's card. In the event of failure to retake or pass the examination on the second opportunity, the prospective miner must repeat the approved 40-hour pre-employment training program in order to retake the examination.

2.9 Surface Mine Coal Truck Driver Certification

(a) The purpose of this provision is to exempt independent (contracted) coal haulers who possess a surface coal truck driver's certificate from being required to complete the 40-hour apprenticeship program in order to drive a coal truck on surface mine property.

(b) Surface Mine Coal Truck Drivers: Surface mine coal truck drivers who possess a surface coal truck driver's certificate do not have to complete the approved 40-hour pre-employment training program in order to drive a coal truck on surface mine property.

(c) To obtain a surface coal truck driver's certificate, a prospective surface mine coal truck driver must have a first-aid card, a valid driver's license, and score at least 80% on the surface mine coal truck driver certification examination.

(d) Note: Coal truck drivers who have not completed the approved 40-hour pre-employment training program and only possess a surface coal truck driver's certificate are to be limited to just driving coal trucks while on surface mine property and not to engage in reclamation work or other mining activities. This experience will not be recognized toward a miner's certificate.

2.10 Guidelines for Issuing Surface Miner's Certification

(a) After January 14, 1977, a certificate of competency and qualification as a surface miner shall be issued to any person who has successfully completed the 40-hour apprenticeship program and has at least 6 months total experience, being 108 shifts; worked as an apprentice miner within this state and has demonstrated his competency as a miner by scoring at least 80% on the surface miner's certification examination.

(b) Any miner having 6 months (108 shifts) verified surface mining experience in the State of West Virginia prior to January 14, 1977, and having in their possession a first-aid certificate, is eligible to take the surface miner's certification examination.

(c) Any miner with at least 6 months (108 shifts) verified experience in a coal mine in another state and having in their possession a first-aid certificate is eligible to take the surface miner certification examination without attending and completing the approved 40-hour pre-employment training program. If the miner passes the examination with a score of at least 80% then that miner will be issued a surface miner's certificate.

If any miner fails to achieve a score of 80% on the second attempt, then such miner will be required to complete the approved 40-hour pre-employment training program.

(d) Any miner with less than six months (108 shifts) experience in another state must complete the 40-hour pre-employment training program and work as an apprentice miner; however, the experience obtained in another state may be applied toward the six month (108 shifts) apprenticeship period.

(e) Experience Equipment Operators: An equipment operator with experience operating surface mining equipment in an environment similar to a surface mine but having no surface mining experience is required to complete the approved 40-hour pre-employment training program. After completing such training, an experienced equipment operator may be immediately qualified as a surface miner, provided that equipment operator has verification of at least 6 months (108 shifts) experience as an operator of surface mining equipment in a similar environment and scores at least 80% on the surface miner certification examination.

Section 3. Course Outline of the Training Program for Prospective Surface Coal Mines

3.0 This course outline is sequenced by instructional units for forty (40) hours of student-teacher contact. Implementation of this program may be achieved by using the training materials available through the Department of Mines Energy. Alternatively, individual training centers may implement the outline through their own resources as approved by the Board of Miner Training, Education, and Certification.

3.1 MINER AND OPERATOR'S RIGHTS AND RESPONSIBILITIES Time: 1 hour

UMWA Contract
Company rules and regulations
Legal rights and responsibilities
Grievance procedures

3.2 STATE AND FEDERAL LAWS AND REGULATIONS Time: 1 hour

State and Federal laws that pertain to the new miner.

3.3 GENERAL ORIENTATION TO SURFACE MINING Time: 3 hours

How coal is mined
Types of surface coal mines
Types of surface mining methods
Basic surface coal mining terminology

3.4 SURFACE MINE TOUR Time: 2 hours

NOTE: If the tour is not possible, films or other appropriate instructional experiences may be substituted.

3.5 FIRST-AID PART I Time: 2 hours

What first-aid is
How first-aid should be administered (treat life-threatening conditions first)
Demonstration and practice of cardiopulmonary resuscitation*
(C.P.R. or heart massage)
Demonstration and practice of mouth-to-mouth resuscitation

NOTE: *Pending inclusion of C.P.R. in M.E.S.A.'s general first-aid course.

3.6 GENERAL SAFETY Time: 1 hour

NOTE: General safety includes non-coal mining specific safety procedures, precautions, and practices.

Recognition of potential accident-producing situations
Lifting procedures
Proper handling of supplies and materials
Accident causes and prevention
Tool care
Selection of appropriate tools for tasks
Communications

3.7 FIRST-AID PART II Time: 2 hours

Demonstration and practice of Holger-Nielson back pressure method of artificial respiration
Control of bleeding

3.8 GENERAL MINE SAFETY Time: 1 hour

Personal safety equipment
Safety procedures for cleaning coal
Good housekeeping practices

3.9 FIRST AID PART III Time: 2 hours

C.P.R. practice
Treatment of physical shock
Dressing of open wounds

3.10 HEAVY EQUIPMENT SAFETY Time: 3 hours

Bulldozer safety
Front end loader safety
Slips and falls from equipment
Shovel and dragline safety
Scraper safety
Mounting and dismounting shovels and draglines
Pre-operational checks
Safety practices around auger mining equipment
Railroad car safety at tipples
Drilling machine safety

3.11 FIRST-AID PART IV Time: 2 hours

Practice of C.P.R. and artificial respiration
Treatment of burns, closed wounds, strains, sprains, and ruptures

3.12 HAULAGE SAFETY Time: 1 hour

Haulage terms
Haulage road safety
Safe driving on haulage roads

3.13 PREPARATION PLANT AND TIPPLE SAFETY Time: 1 hour

3.14 FIRST-AID PART V Time: 2 hours

C.P.R. and artificial respiration practice
Treatment of fractures and dislocations
Transporting of injured

3.15 WELDING SAFETY Time: 2 hours

Welding terms
Welding system components and functions
Safety in handling gas cylinders
Safety when welding near flammable material
Protective equipment for welding

3.16 RECOGNITION AND AVOIDANCE OF ELECTRICAL HAZARDS Time: 1 hour

Basic electricity
Conductors and non-conductors of electricity
Recognition and prevention of electrical hazards
Removal and treatment of a person in contact with dangerous electrical circuits

3.17 FIRST AID PART VI Time: 2 hours

Location of first-aid materials at a surface coal mine.
Review and practice of first-aid procedures.

3.18 FIRE PREVENTION AND CONTROL Time: 2 hours

Causes of mine fires and explosions.
Preventive measures.
Primary and alternate methods of fire control.
Demonstration and practice in using a portable fire extinguisher.
Location of fire fighting materials at the mine.

3.19 HIGHWALL AND SPOILBANK SAFETY Time: 2 hours

Terms pertaining to highwall safety.
Recognition of highwall hazards.
Safety practices for highwall and spoilbanks.
Recognition of warning signs of dangerous highwalls and spoilbanks.

3.20 EXPLOSIVES AND BLASTING SAFETY Time: 2 hours

Blasting terms.
Safety in handling leadwires.
Hazards of thunderstorms to shooting safety.
Security for misfired shots.
Shot firer's warning.

3.21 HEALTH AND SANITATION Time: 30 minutes

Dust hazards.
Noise hazards.
Use of respirator and hearing protection.

3.22 SUMMARY AND DEBRIEFING Time: 2 1/2 hours

Review of motor points.
Question and answer problem-solving session.
Permit of apprenticeship examination.

Section 4. Training Objectives for Surface Coal Mine Health and Safety Training Course

4.1 General Orientation to Surface Mining

Unit Objective:

4.1.0 Given verbal descriptions or pictures of surface mining terms, methods, procedures and machinery, you will demonstrate your knowledge of correct and incorrect usage of these items to assure health and safety.

Training Objectives:

4.1.1 Given a list of verbal descriptions or pictures of two different types of surface coal mines, you will match each description or picture with the following types of surface mines: strip mine; auger mine.

4.1.2 Given verbal descriptions or pictures representing the following terms, you will correctly match each term with its description or picture. The terms include:

- | | |
|----------------|--------------------------------|
| a. Bench | f. Seam |
| b. Highwall | g. Spoilbank; spoilpile; spoil |
| c. Overburden | h. Tipple |
| d. Pit | i. Tram |
| e. Reclamation | |

4.1.3 Given a list of steps for surface mine operations, arranged out of sequence, you will arrange them in the correct sequence.

- | | |
|------------------------|--------------------|
| a. Clearing surface | f. Shooting coal |
| b. Drilling | g. Loading coal |
| c. Blasting overburden | h. Hauling coal |
| d. Stripping | i. Preparing coal |
| e. Clearing coal | j. Reclaiming coal |

4.1.4 Given pictures of the following surface mining equipment, you will correctly match the pictures with the following terms:

- | | |
|----------------------|------------------------------|
| a. Auger | g. Grader |
| b. Bulldozer | h. Haulage trucks |
| c. Conveyor belt | i. Scraper (pan) |
| d. Dragline | j. Shovel |
| e. Drilling machines | k. Supporting service trucks |
| f. Front-end loader | |

4.2 General Safety

Unit Objective:

4.2.0 Given pictures of safe and unsafe surface mining tools and procedures, you will select the safe tools and procedures.

Training Objectives:

4.2.1 Given pictures of hand tools in safe and unsafe conditions, you will correctly identify tools in a safe condition. Unsafe conditions include:

- | | |
|--------------------------------|---|
| a. Mushroomed or cracked heads | d. Broken points |
| b. Jagged edges | e. Dull edge or point |
| c. Cracked handles | f. Damaged insulation on electrical tools |

4.2.2 Given pictures of mining accidents, you will match each picture to the basic type of accident. Five basic types of accidents are:

- | | |
|-----------------------------|-----------------------------------|
| a. Struck by | d. Strain or sprain |
| b. Struck against | e. Exposure to harmful conditions |
| c. Caught between, in or on | |

4.2.3 Given pictures of accidents resulting in injuries to the fingers or hands and the following list of preventive measures, you will select the correct procedure to prevent each accident. Preventive measures include:

- a. Inspect materials for sharp or jagged edges, burrs, and rough or slippery surfaces.
- b. Grip objects firmly.
- c. Keep fingers away from pinch points.
- d. Wipe greasy, wet, slippery, or dirty objects before handling them.
- e. Keep hands free of oil and grease.
- f. Coordinate each working movement with fellow workmen.
- g. Use the proper tool for the job. Do not improvise.
- h. Keep hands away from moving machinery.
- i. Wear non-ragged gloves for hand protection only when gloves are not themselves a hazard.
- j. Wear snug-fitting clothes.

4.2.4 Given pictures of correct and incorrect procedures for lifting objects, you will identify the correct procedures. The correct procedures include:

- a. Keep feet parted - one alongside, one behind the object.
- b. Keep back straight.
- c. Tuck chin in.
- d. Grip object with whole hand.
- e. Tuck elbows and arms in.
- f. Keep body weight positioned directly over feet.

4.2.5 Given correct and incorrect examples of asking for instructions and giving instructions, you will select correct examples.

4.3 General Mining Safety

Unit Objective:

4.3.0 Given appropriate examples or cues, you will demonstrate your ability to perform standard safety practices and procedures, and to recognize and respond correctly to commonly found surface mine conditions.

4.3.1 Given pictures of assorted personal mine equipment and clothing, you will select the appropriate items for work at a surface mine. Appropriate items include:

- | | |
|---|--|
| a. Hard hat | d. Safety glasses or goggles |
| b. Safety shoes or boots | e. Respirators |
| c. Snug-fitting clothing and long hair control. | f. Hearing protection |
| | g. Non-ragged correctly to commonly found surface mine conditions. |

4.3.2 Given verbal descriptions of common tasks performed at the surface mine and pictures of common hand tools, you will match each task with the proper tool or tools to accomplish it. Examples include:

- a. Sledge hammer - track work at tippie
- b. Railroad jacks - close railroad cars
- c. Hand shovel - clean cars and coal
- d. Pick - working inside bin
- e. Axes - cutting timber
- f. Hand tools - mechanical work
- g. Hand tools - electrical work

4.3.3 Given verbal descriptions of correct and incorrect procedures for cleaning coal, you will identify the correct procedures. Correct procedures include:

- a. Be alert for moving equipment
- b. Pay close attention to highwall and spoilbank, especially if coal is being shot.

4.3.4 Given pictures of correct and incorrect housekeeping practices that relate to slips, falls, and fire hazards, you will select the correct pictures.

4.4 Recognition and Avoidance of Electrical Hazards

Unit Objective:

4.4.0 Given verbal information or pictures, you will demonstrate your knowledge of electrical hazards and related safety procedures and practices. You will demonstrate knowledge and understanding of common terms concerning surface mine electrical systems.

Training Objectives:

4.4.1 Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture:

- | | |
|-------------------------|--------------------------|
| a. Electrical conductor | c. Electrical insulation |
| b. Ground/Grounding | d. Power cables |

4.4.2 Given pictures illustrating correct and incorrect methods of removing a person from contact with a dangerous electrical circuit, you will select the correct methods.

4.4.3 Given pictures of electrical accidents and verbal descriptions of causes, you will match each accident with its cause. These causes include:

- a. Improper grounding of electrical machinery
- b. Failure to wear proper protective equipment
- c. Failure to cut power on the system before starting repair
- d. Inattention to existence of power line near work areas
- e. Performing of electrical repair and maintenance tasks by unauthorized or unqualified people

4.5 Fire Prevention and Control

Unit Objective:

4.5.0 Given appropriate cues and illustrated examples, you will demonstrate understanding of surface mine fire hazards and their control. You will demonstrate your knowledge of the rules pertaining to the location and operation of fire fighting equipment and your ability to apply that knowledge appropriately.

Training Objective:

4.5.1 Given pictures or verbal descriptions of potential fire hazards, you will select those hazards at the surface mine. Potential fire hazards include:

- a. Open flame
- b. Electrical failures
- c. Inadequately maintained equipment or equipment failure
- d. Improper equipment refueling methods

4.5.2 Given pictures or verbal descriptions of locations of a surface mine, you will select those locations where the law requires storage of fire fighting equipment. These locations are:

- a. Equipment
- b. Temporary and permanent electrical installations
- c. Oil storage areas
- d. Welding, cutting, and soldering areas
- e. Tipple

4.5.3 Given correct and incorrect statements concerning general principals of firefighting, you will select the correct statements. Correct statements include:

- a. Warn fellow workers and sound fire alarm if there is evidence of a fire.
- b. Know the location and use of available fire fighting equipment.
- c. Shut off power in case of an electrical fire.
- d. Direct stream of water or chemical at the base of the fire (not in the case of an oil or gas on water fire).
- e. Apply water or chemical in a rapid sweeping action starting at the edge of the fire and working inward.
- f. Keep yourself from being cut off by the fire so that you can retreat if necessary.
- g. Do not enter a smoke filled area.

4.6 Heavy Equipment Safety

Unit Objective:

4.6.0 Given written statements or pictures of working conditions on or near surface mine heavy equipment, you will recognize safe surface mine practices and demonstrate your knowledge of safety principles and procedures.

Training Objectives:

4.6.1 Given pictures or verbal descriptions of safe and unsafe practices for operating bulldozers, you will select the safe practices. These practices include:

- a. Keep the dozer safe distances from an overhanging edge.
- b. Keep a safe distance from the edge of a highwall or embankment.
- c. Exercise extreme caution when working or tramping on steep slopes.
- d. Only operate equipment you are familiar with and authorized to.

- e. Use caution when working near trees so that branches do not whip back on you.
- f. Use caution when tramping backwards.
- g. Pay attention to task at hand.

4.6.2 Given pictures or verbal descriptions of safe and unsafe practices for operating front-end loaders, you will select the safe practices. These practices include:

- a. Travel downgrades at safe speeds.
- b. Use caution when tramping over wet, frozen or rutted surfaces; and loose areas around the edges
- c. Only operate equipment that you are familiar with and are authorized to operate.
- d. Pay attention and know where others are at all times.

4.6.3 Given pictures of conditions associated with heavy equipment, you will select the conditions that could cause slips or falls.

4.6.4 Given pictures or verbal descriptions of safe and unsafe practices for working around shovels and draglines, you will select the safe practices. Safe practices include:

- a. Place yourself in a safe position when performing maintenance
- b. Repair or inspect equipment when it is not operating
- c. Be sure your clothes are snug-fitting so you are not caught on moving equipment

4.6.5 Given pictures or verbal descriptions of safe and unsafe practices for working around drilling machines, you will select the safe practices. These practices include:

- a. Use a respirator and safety glasses at all times.
- b. Keep the boom in a safe position when tramping.
- c. Keep your hands and fingers out of pinch points.

4.6.6 Given pictures or verbal descriptions of correct and incorrect methods of mounting and dismounting draglines and shovels, you will select the correct methods. The correct methods include:

- a. Notify operator before mounting or dismounting.
- b. Use ladders when required.
- c. Never put your hands on the track.

4.6.7 Given correct and incorrect statements of the pre-operational checks that should be performed on equipment, you will select the correct checks. Correct checks include:

- a. Check tires for proper inflation and safe condition.

- b. Check for required safety equipment on machine (guards on fans, fire extinguisher).
- c. Secure loose items.
- d. Check steering system for proper operation:
 - Service system
 - Emergency system
- e. Check braking system for proper operation:
 - Service system
 - Parking brake
- f. Check windows:
 - Clean
 - View not blocked by cracks
- g. Check air pressure for proper operating range.
- h. Check fluid levels:
 - Hydraulic oil
 - Engine oil
 - Coolant
- i. Check visibility aids for good condition:
 - Mirrors
 - Headlights and running lights
 - Warning lights or flashers
- j. Check backup alarm for operation.
- k. Report to proper authority when a malfunction occurs that requires shop maintenance.
- l. All gauge readings correct:
 - Engine temperature
 - Engine oil pressure and temperature
 - Transmission oil pressure and temperature
 - Hydraulic pressure

4.6.8 Given pictures of machines that have been prepared safely or unsafely for maintenance work, you will select those that are safely prepared. The safe preparations include:

- a. Machine on level, dry ground, and away from traffic.
- b. Wheels or tracks chocked.
- c. Buckets or blades supported with blocks, when raised for work.
- d. Raised truck beds secured with safety pins, safety bars, or blocked.

4.6.9 Given pictures or verbal descriptions of precautions to be taken when working on or near auger mining equipment, you will select appropriate precautions. Precautions include:

- a. Be clear when the operator moves the auger.
- b. Take precautions against falling off the auger machine or into the flight.
- c. Check highwall and spoilbank conditions frequently.
- d. Assure clothes are snug fitting.
- e. Never smoke around auger holes.
- f. Test for methane regularly.

4.6.10 Given verbal descriptions of pictures of correct and incorrect practices when operating or working close to scraper (pans); you will select the correct practices. The correct practices include:

- a. Check loading area, haul road and fill area for dangerous conditions.
- b. Travel with pan close to the ground.
- c. When parking or not working, lower the pan to the ground.

4.6.11 Given pictures or verbal descriptions of safe and unsafe practices for oilers or draglines and shovels, you will select the safe practices. These safe practices include:

- a. Grease shovels and draglines when machine is not in operation.
- b. Only one person should do signalling.
- c. Mount and dismount equipment only when stopped.

4.6.12 Given pictures or verbal descriptions of safe and unsafe practices entering auger holes, you will select the safe practices. Safe practices include:

1. A certified person will examine the face of the highwall for a distance of at least 25 feet on each side of the auger hole immediately before any person enters the hole. Any hazards found will be corrected before any persons enter the auger hole.
2. A responsible person will be assigned to observe the highwall for possible movement while any person is entering or is in the auger hole.
3. A qualified person will test for oxygen deficiency and methane with an approved type testing device at the collar of the hole before any persons enter.
4. Only a qualified person will be allowed to enter an auger hole and frequent tests for methane and oxygen deficiency will be made in the hole with approved type devices. If more than 2 percent of methane or less than 19.5 percent of oxygen is found, no further work will be performed in the hole until the atmosphere has been made safe.
5. The person entering the hole will wear a lifeline that extends to the hands of a person on the surface who will be someone other than the person assigned to observe the highwall.
6. The person entering the hole will examine and test the interior surfaces for dangers from falling materials. Any hazards found will be corrected immediately or the hole will be vacated.
7. Internal combustion engines in the vicinity of the auger hole will be stopped while any person is entering, exiting, or in the hole.

8. The results of the examination and action taken, date, time, and reasons for entering the hole will be recorded in a book, which shall be kept at the mine.

4.7 Haulage Safety

Unit Objective:

4.7.0 Given appropriate examples and cues, you will demonstrate understanding of the safety rules, practices and procedures pertaining to surface mine haulage operations and equipment.

4.7.1 Given verbal descriptions or pictures representing the following terms, you will correctly match each term with it's description or picture.

- a. Haulage
- b. Haulage road
- c. On-road haulage
- d. Off-road haulage

4.7.2 Given appropriate examples and cues, you will demonstrate understanding of the safety rules, practices, and procedures pertaining to surface mine haulage operations and equipment.

- a. Driving too fast
- b. Limited visibility
- c. Steep grades
- d. Making first trip of the day or first trip into a new area
- e. Tailgating

4.7.3 Given pictures or verbal descriptions of good and bad haulage road characteristics, you will select the good characteristics. Good characteristics include:

- a. Sufficient haulage road width.
- b. Adequate road drainage.
- c. Proper road maintenance.
- d. Free from obstructions and debris.
- e. Adequate signs and markings.

4.7.4 Given verbal statements or pictures representing correct and incorrect haulage road rules and practices, you will select the correct rules or practices. Correct rules and practices include:

- a. Loaded trucks have the right-of-way.
- b. Park where other vehicles can pass easily.
- c. Pass only when permitted and where vehicle power allows.

4.8 Preparation Plant and Tipple Safety

Unit Objective:

4.8.0 Given appropriate verbal, written, and pictorial examples of safety precautions and practices to use when working in or around tipples or prep plants, you will demonstrate your knowledge and understanding of these precautions and practices.

Training Objectives:

4.8.1 Given verbal descriptions or pictures representing the following terms, you will correctly match each term with its description or picture.

- a. Tipple
- b. Bin
- c. Preparation plant
- d. Car dropper
- e. Belt takeup
- f. Belt drive
- g. Slate picker

4.8.2 Given pictures of tipple equipment, you will select the equipment that is the main cause of accidents to miners. The correct selection is conveyor belts.

4.8.3 Given safe and unsafe practices related to slips and falls at the tipple, you will select the safe practices. Safe practices include:

- a. Exercise caution when walking on icy or wet surfaces.
- b. Use handrails
- c. Keep walkways clear and free of stumbling hazards.
- d. Never jump off an elevated area.

4.8.4 Given verbal descriptions or pictures of correct and incorrect ways of assuring electrical equipment has been locked out and made safe prior to maintenance, you will select the correct ways.

4.8.5 Given verbal descriptions or pictures of correct and incorrect procedures when crossing conveyor belts, you will select the correct procedures.

4.8.6 Given pictures of correct and incorrect procedures for shoveling coal onto a conveyor belt, you will select the correct procedures. Correct procedures include:

- a. Work facing the direction of belt travel.
- b. Keep clothes snug-fitting so that they won't catch on belt.
- c. Turn belt off before shoveling coal from under belt head.
- d. Keep guards in place at the belthead or taildrive.
- e. Keep long hair confined to prevent it from being caught by moving parts.

4.8.7 Given verbal descriptions or pictures of safe and unsafe practices when working with railroad cars at tipples, you will select the safe practices. Safe practices are:

- a. Assume a safe body position.
- b. Position yourself where you can operate the brake on either car when possible.
- c. Assure coupler alignment is correct.
- d. Maintain adequate clearance between the edge of the car and obstacles.
- e. Pay attention and notify others of changes in operational routine.
- f. Assure brakes are set on remaining cars when dropping operations begin.

4.9 Miner and Operator Rights and Responsibilities

Unit Objective:

4.9.0 Given appropriate operator and miner rights and responsibilities governing current UMW contract, grievance procedures and company rules and regulations, you will demonstrate your ability to recognize and understand them as they pertain to a new surface miner.

Training Objectives:

4.9.1 Given correct and incorrect statements regarding operator responsibilities to the miners' employment, health, and safety as specified in the 1974 Bituminous Wage Agreement, you will select the correct statements. Correct statements include:

The operator is responsible to:

- a. Provide a safe and healthful place to work.
- b. Provide continuous employment.
- c. Provide proper supervision so that employees can work safely and men and equipment can work efficiently.
- d. Provide sufficient supplies and materials at proper locations for the employees' safety and the safety of the equipment.
- e. Provide specific job training.

4.9.2 Given correct and incorrect statements regarding miners' responsibilities to his employment, health, and safety, you will select the correct statements. Correct statements include:

The miner is responsible to:

- a. Work with operator in making the mine a safe and healthy place to work.
- b. Supply the labor and know how to properly operate equipment and other work.
- c. Protect and safeguard the company's equipment and property.
- d. Comply with company rules and state and federal laws.
- e. Work regularly.

4.9.3 Given correct and incorrect statements regarding grievance procedures for settlement of health or safety disputes as specified in the 1974 Bituminous Wage Agreement, you will select the correct statements.

4.9.4 Given correct and incorrect statements regarding discharge procedures as specified in the 1974 Bituminous Wage Agreement, you will select the correct statements.

4.9.5 Given correct and incorrect statements regarding the following employee benefits as specified in the 1974 Bituminous Wage Agreement, you will select the correct statements. Benefits include:

- | | |
|--------------------|-----------------------|
| a. Bereavement pay | e. Vacations |
| b. Jury duty | f. Paid holidays |
| c. Reporting pay | g. Clothing allowance |
| d. Sick pay | |

4.10 State and Federal Laws and Regulations

Unit Objective:

4.10.0 Given the appropriate cues, you will demonstrate your knowledge and understanding of the laws and regulations pertaining to the certification of miners, health and safety standards and inspection for surface mines.

Training Objectives:

4.10.1 Given correct and incorrect statements or pictures representing the law pertaining to smoking, smoking materials or intoxicants, you will select the correct picture or statement.

4.10.2 Given correct and incorrect statements regarding the requirements for a permit of apprenticeship you will select the correct statements. Permit requirements include:

- a. Completion of a forty-hour course of instruction in surface mining.
- b. Satisfactory completion of an examination conducted by the West Virginia Department of Mines Energy.

4.10.3 Given correct and incorrect statements regarding certification requirements, you will select the correct statements. Certification requirements include: --

- a. At least six months experience.
- b. Successful completion of an examination conducted by the West Virginia Department of Mines Energy.

4.10.4 Given correct and incorrect statements about the penalties prescribed by law for willful violations of any health and safety standard by a miner or an operator, you will select the correct statements.

4.10.5 Given correct and incorrect statements regarding mining related job titles, which include responsibility for inspection of surface coal mines, you will select the correct statements. This list includes state and federal officials, safety committeemen and company officials.

4.10.6 Given correct and incorrect statements about employment regulations which apply to employment as an apprentice miner (red hat) at a surface mine, you will select the correct statements.

- a. An apprentice must wear a red hat for six months to identify him as an inexperienced miner.
- b. An apprentice must be under the immediate supervision of a certified miner or foreman.

4.10.7 Given correct and incorrect statements about the term immediate supervision, you will select the correct statements.

4.11 Welding Safety

Unit Objective:

4.11.0 Given verbal descriptions or pictures of welding systems and components found at the surface mines, you will recognize and understand their function. You will also recognize the safe practices that prevent injury to welders and to others who work around cutting or welding operations.

Training Objectives:

4.11.1 Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture. The terms are:

- a. Gas welding
- b. Arc welding
- c. Cutting
- d. Flash burn

4.11.2 Given verbal descriptions or pictures of the basic gas welding system and statements about the components' functions, you will match each component with its function. The components are:

- a. Oxygen cylinder
- b. Fuel gas cylinder
- c. Pressure reducing regulator
- d. Hoses
- e. Torch

4.11.3 Given correct and incorrect verbal statements concerning how to safely open and close valves and to use gas welding equipment, you will select the correct statements.

4.11.4 Given pictures or verbal descriptions of safe and unsafe methods of handling compressed gas cylinders, you will select the safe methods.

4.11.5 Given verbal descriptions or pictures of safe and unsafe materials placed near welding operations, you will identify the unsafe materials. The unsafe materials include:

- a. Flammable gas
- b. Fuel vapors (gasoline)
- c. Liquids (gasoline; oil)
- d. Dust (coal dust)

4.11.6 Given pictures of welders and helpers dressed properly and improperly, you will select those dressed properly.

4.12 Highwall and Spoilbank Safety

Unit Objective:

4.12.0 Given appropriate cues, you will demonstrate your understanding and recognition of the terms associated with highwall and spoilbank safety hazards, precautions, and procedures.

Training Objectives:

4.12.1 Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture. The terms include:

- a. Scaling
- b. Undercutting
- c. Weathering
- d. Crack
- e. Slip

4.12.2 Given pictures of highwall hazards and statements describing the hazards, you will match each picture with the correct statement. State ments include:

- a. Freezing and thawing of a highwall.
- b. Loose material in a highwall.
- c. Overhanging trees or material on top of a highwall.
- d. Cracks in a highwall.
- e. Heavy rain causing erosion of a highwall.
- f. Presence of auger holes or deep mines in or at a highwall.

4.12.3 Given verbal descriptions or pictures of safe and unsafe practices near highwalls and spoilbanks, you will select the safe practices. Safe practices include:

- a. Proper highwall inspection.
- b. Safe body position.
- c. Constant attention.

4.12.4 Given pictures of correct and incorrect warning signs that precede falls of highwalls or spoilbanks, you will select the correct signs. Signs include:

- a. Falling material (working)
- b. Visual movement of spoilbank (will be slow at first)
- c. Cracks in the highwall.
- d. Content of material in spoilbank (if more than 50% of spoil is sand or other fine material, its condition is likely to be unstable).

4.13 Explosives and Blasting Safety

Unit Objective:

4.13.0 Given visual and verbal presentations of safe blasting methods and procedures, you will demonstrate your ability to recognize correct shooting and handling procedures and methods.

Training Objectives:

4.13.1 Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture. These terms include:

- a. Blasting cap
- b. Fertilizer (blasting agent)
- c. Primer cord
- d. Magazine
- e. Detonator

4.13.2 Given verbal descriptions or pictures of safe and unsafe practices in handling lead wires, you will select the safe practices. Safe practices include:

- a. Lead wires protected from power conductors.
- b. Lead wires beyond 20 feet from bare power lines.
- c. Lead wires protected from thunderstorms and lightning.

4.13.3 Given correct and incorrect statements that explain why lead wires are to be kept electrically connected together prior to shooting, you will select the correct statements.

4.13.4 Given correct and incorrect statements of the steps to be taken in the event of a misfired shot, you will select the correct statements.

4.13.5 Given correct and incorrect examples of actions to be taken upon hearing the shot firer's signal, you will select the appropriate action to be taken.

4.13.6 Given correct and incorrect statements that identify the hazards created by overshooting and undershooting overburden, you will select the correct statements. The correct statements are:

- a. The fractured material in new highwall creates a potential rock fall hazard.
- b. The new face is broken, causing weathering to accelerate and increasing rock fall possibility.

4.13.7 Given correct and incorrect statements regarding the operation of two-way radio equipment near blasting areas, you will select the correct statements. Correct statements include:

- a. Two-way radio equipment shall be turned off prior to the handling and use of electric detonators.
- b. Turn off two-way radio within 650 feet of a blasting area.

4.14 Health and Sanitation

Unit Objective:

4.14.0 Given appropriate cues and visual or verbal examples, you will demonstrate your understanding of the hazards of, and protection against coal dust and excessive noise at the surface mines.

Training Objectives:

4.14.1 Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture. The terms are:

- a. Personal dust sampler
- b. Respirable dust
- c. Respirator

4.14.2 Given verbal descriptions or pictures of correct and incorrect procedures for using a respirator, you will select the correct procedures.

4.14.3 Given correct and incorrect statements regarding prolonged exposure to high noise levels, you will select the correct statements that indicate prolonged exposure to high noise levels can cause damage to your hearing.

4.15 First Aid

Unit Objective:

4.15.0. Given the proper cues, verbal descriptions or pictures, or supplies and equipment, you will demonstrate your knowledge of and ability to administer emergency medical attention when it is required. You will demonstrate your

ability to recognize and correctly define common terms relating to the certain emergency medical procedures properly and in correct sequence.

Training Objectives:

4.15.1 Given verbal descriptions or pictures of the following terms, you will correctly match each term with its description or picture. The terms are:

- | | |
|---------------------------|---------------------------------|
| a. Artificial respiration | l. Strains |
| b. First aid | m. Sprains |
| c. Fainting | n. Rupture (hernia) |
| d. Open wounds | o. 1st, 2nd, & 3rd degree burns |
| e. Abrasions | p. Scalds |
| f. Dislocation | q. Incision |
| g. Simple fracture | r. Laceration |
| h. Compound fracture | s. Puncture wound |
| i. Splint | t. Bruises |
| j. Pressure points | u. Shock |
| k. Closed wounds | |

4.15.2 Given the following steps for administering first aid, arranged out of sequence, you will arrange them in correct sequence.

- a. Locate the injury.
- b. If needed, give artificial respiration.
- c. Look for and control bleeding.
- d. Treat for physical shock.
- e. Treat wounds and burns.
- f. Look for fractures and apply appropriate treatment.
- g. Transport patient.

4.15.3 Given an appliance used for artificial respiration practice, you will correctly demonstrate:

- a. Mouth-to-mouth artificial respiration.
- b. Back pressure method of artificial respiration.

4.15.4 Given a chart of the human body with various points marked on it, you will select the points that represent pressure points.

4.15.5 Given a chart of the human body marked with locations of serious wounds and possible pressure points, you will select the correct pressure point to control bleeding for each wound.

4.15.6 Given pictures of the steps in applying a tourniquet, arranged out of sequence, you will arrange them in correct sequence. The correct sequence of steps for applying a tourniquet are:

- a. Use a strong, wide piece of cloth.
- b. Select a solid, padded object and wrap the arm or leg with it next to the arterial pressure point.
- c. Tie a half knot on the distal portion (away from center of body) of the arm or leg.
- d. Insert a strong stick over the half knot and tie it in place.
- e. Twist the stick to apply pressure until bleeding slows.
- f. Loosen tourniquet after 10 minutes.
- g. If bleeding begins again, tighten tourniquet after a few seconds.
- h. Tell doctor when and how long tourniquet was applied.

4.15.7 Given verbal descriptions or pictures of correct and incorrect causes of physical shock, you will select the correct causes. The correct causes include:

- | | |
|-------------------------------|--|
| a. Severe loss of blood | e. Anxiety |
| b. Intense pain | f. Poisonous gases |
| c. Severe or extensive injury | g. Sight of blood or injury to fellow worker |
| d. Burns | |

4.15.8 Given verbal descriptions of physical and emotional reactions, you will select the symptoms of physical shock. These symptoms include:

- | | |
|-------------------------------|----------------------|
| a. Chalk-like appearance | c. Shallow breathing |
| b. Dull or anxious expression | d. Cold, moist skin |

4.15.9 Given pictures of correct and incorrect procedures for treating physical shock, you will select the correct procedures. The correct procedures include:

- | | |
|-----------------------------------|-------------------------|
| a. Lay the victim flat | d. Loosen clothing |
| b. Elevate feet six inches | e. Keep the victim warm |
| c. Clear mouth of foreign object. | |

4.15.10 Given pictures of correct and incorrect procedures for treating open wounds, you will select the correct procedures. The procedures are:

- a. Stop the bleeding.
- b. Cut or tear away the clothing around the wound.
- c. Wipe away foreign particles from wound with a piece of sterile gauze.
- d. Cover entire wound with sterile compresses or gauze.
- e. Apply bandages securely.

4.15.11 Given pictures of correct and incorrect methods of dressing wounds, you will select the correct methods. The wounds include:

- | | |
|-----------------|----------------|
| a. Head wounds | d. Leg wounds |
| b. Injured eyes | e. Foot wounds |
| c. Arm wounds | f. Hand wounds |

4.15.12 Given pictures of correct and incorrect treatments for closed wounds, you will select the correct treatments for closed wounds.

4.15.13 Given pictures of correct and incorrect procedures for treating a rupture or hernia in the abdomen, you will select the correct procedures. The procedures are:

- a. Lay the victim flat on his back and draw his knees up.
- b. Center one narrow cravat bandage along the top of the thighs halfway between the hips and knees.
- c. Pass the ends around the thighs and cross them under the bend in the knees.
- d. Carry the ends around the ankles and tie them in front and between the ankles.
- e. Place a pillow or rolled up blanket under the knees.
- f. Place a second cravat bandage underneath the padding and bring the ends up over the thighs near the knees and tie them securely.
- g. If swelling remains, place a cold appliance over the site.

4.15.14 Given pictures of correct and incorrect methods of treating foreign bodies in the eyes, ears, nose, and throat, you will select the correct methods.

4.15.15 Given pictures of correct and incorrect procedures for general care and treatment of non-chemical burns, you will select the correct procedures. The correct procedures include:

- a. Remove clothing from burned area (unless clothing sticks to the skin).
- b. Cover burn with cool, moist dressing.
- c. Cover the victim with a blanket.
- d. Treat for shock.

4.15.16 Given pictures of correct and incorrect treatments for fractures of the following parts of the body: head, neck, back, rib, pelvis, arm, hand, leg, and foot, you will select the correct treatments.

4.15.17 Given pictures of correct and incorrect methods of moving an injured person from a surface mine, you will select the correct method.

4.15.18 Given a list of places at a surface mine, you will select the places where first-aid equipment must be located. Correct places are:

- a. At or near each working place that coal is being mined.
- b. At each preparation plant.
- c. At shops.
- d. At other surface installations that regularly employ 10 or more people.

4.16 Training Course Measurement Criteria

Unit Objective:

4.16.0 The purpose of the Likert scale attitude tests is to measure attitudinal changes of the trainees as a result of this course. This will be accomplished by administration of this test before and after the training.

4.16.1 Given a ten item Likert scale attitude test at the beginning and end of the course, the trainee will display positive attitudes toward coal mining by scoring 70% or higher.

4.16.2 Given a ten item Likert scale attitude test at the beginning and end of the course, the trainee will display a positive attitude toward safety by scoring at least 70% on the test.

Section 5. Approval Procedures for Training Programs

5.1 All training centers planning to participate in the forty (40) hour training effort must be approved by the Board of Miner Training, Education, and Certification. Each prospective training center must send to the Department of Mines Energy, Room E151, State Capitol Complex 1615 Washington Street, E., Charleston, West Virginia 25305 25311, Attention: Board of Miner Training, Education, and Certification the following information:

- a. Address and location of the training center.
- b. Description of equipment and facilities available.
- c. List of participating instructors (see Section 6 for Approval Procedures for Instructors).
- d. Classroom dimensions and approximate number of students per class.
- e. Name and address of person(s) responsible for training program.

5.2 Any training center not using the training course available through the Department of Mines Energy must obtain approval of its program by submitting the additional information:

- a. An outline of the proposed course showing how it meets the criteria established by the Board of Miner Training, Education, and Certification.
- b. A list of instructional material to be used (e.g., films, programmed material, etc.) and noting where it would be used within the instructional sequence.
- c. A description of the instructional methods to be used throughout the course (e.g., lecture demonstration, personalized instruction, team teaching, etc.).

Section 6. Approval Procedures for Instructors

6.1 Each instructor who will be teaching the forty (40) hour course must seek approval by the Department of Mines Energy by sending the following

information to the Department of Mines Energy, Room E-151, State Capitol
Complex 1615 Washington Street, E., Charleston, West Virginia 25305 25311:

- a. A summary of the individual's teaching experience and related credentials (e.g.: M.E.S.A. teaching certificates)
- b. A description of the individual's work experience, surface mining or otherwise, in sufficient detail to determine the individual's exposure to the unit operations of coal mining.
- c. The content area(s) in the training program for which he/she will be responsible.
- d. The name and address of the person who should be notified as to the candidate's approval or disapproval.