



WEST VIRGINIA SECRETARY OF STATE

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ADMINISTRATIVE LAW DIVISION

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Office of West Virginia
Secretary Of State

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE EXEMPT, INTERPRETIVE OR PROCEDURAL
RULE**

AGENCY: Miner Training Education And Certification TITLE-SERIES: 48-02

RULE TYPE: Legislative Exempt Amendment to Existing Rule: Yes Repeal of existing rule: No

RULE NAME: Safety Training Program for Prospective
Underground Coal Miners

CITE STATUTORY AUTHORITY: W. Va. Code 22A-6-4 and 22A-6-5

This rule is filed with the Secretary of State. This rule becomes effective on the following date:

January 5, 2022

BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENT IS TRUE AND CORRECT.

Yes

James Bailey -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.

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**TITLE 48
LEGISLATIVE EXEMPT RULE
BOARD OF MINER TRAINING, EDUCATION AND CERTIFICATION**

**SERIES 2
SAFETY TRAINING PROGRAM FOR PROSPECTIVE
UNDERGROUND COAL MINERS**

§48-2-1. General.

- 1.1. Scope. -- This rule governs safety training programs for prospective underground coal miners.
- 1.2. Authority. -- W. Va. Code §§22-6-4 and 22A-6-5.
- 1.3. Filing Date. -- September 7, 2021.
- 1.4. Effective Date. -- January 5, 2022.

§48-2-2. Criteria For Health And Safety Training Program For Prospective Underground Coal Miners In West Virginia.

2.1. An approved training program must, at 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 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 Coal Mine Health and Safety. (See Section 5 for Training 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 Office of Miners' Health Safety and Training. Alternatively, a center may elect to develop or use its own materials which must be approved by the Board of Coal Mine Health and Safety. (See Section 5 for Training Program Approval Procedures.)

2.4. Instructors for this program must be approved by the West Virginia Office of Miners' Health, Safety and Training as having demonstrated sufficient experience and/or knowledge of underground mining. (See Section 6 for Instructor Approval Procedures.)

2.5. The equipment necessary to implement this training is: appropriate equipment to present the Office of Miners' Health, Safety and Training course material; self-contained self-rescuer trainers; personal safety equipment (e.g., I.D. tags, miner's belt; hard hat; respirator; safety glasses; cap light; gloves; knee pads; boots; hearing protectors); simulation device for artificial respiration; splints; bandages; sample electrical cables, section light; personal dust sampler; slate bar; and sounding tool. Suggested equipment: 3-dimensional miniature scale model mine (cutaway); sample defective and non-defective hand tools; box for sounding demo; resin bolts; roof bolts; resin; rockdust sampler; stretcher; broken-back board; shovel; mine fuses; circuit breaker panel; sample electrical switches; methane (appropriate substitute); sample mine map; and a sample roof control plan. Access to an underground mine facility is desirable.

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

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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 Coal Mine Health and Safety assumes compliance with all equal opportunity employment requirements.

2.7. Issuance and Expiration of Initial Apprentice Miner's Cards.

2.7.1. Upon completion of the approved eighty (80) hour pre-employment training program, a permit of apprenticeship shall be issued to any person who scores at least eighty percent (80%) on the final examination administered by the West Virginia Office of Miners' Health, Safety and Training, provided that such person passes the examination within forty-five (45) days after completing the eighty (80) hour program.

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

2.7.3. 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 card is obtained within eight (8) months.

2.7.4. 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.

2.7.5. Any prospective miner who does not score at least eighty percent (80%) on the initial apprenticeship miners examination will be given a second opportunity to retake such examination, provided that such person retakes and passes the exam within forty-five (45) days after completing the eighty (80) hour program. In the event of failure on the second opportunity the prospective miner must repeat the approved eighty (80) hour pre-employment training program in order to retake the examination.

2.8. Issuance and Expiration of Renewed Apprentice Miner's Cards.

2.8.1. Apprentice miner's card may be renewed by retaking and passing with a score of a least eighty percent (80%) on the appropriate apprenticeship examination.

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

2.8.3. 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 within eight (8) months.

2.8.4. 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.

2.8.5. Any prospective miner who does not score at least eighty percent (80%) on the apprenticeship miner's examination in order to renew his/her apprentice certificate will be given a second opportunity to retake the examination, provided that such person retakes and passes the exam within thirty (30) days. In the event of failure to retake or pass the examination on the second opportunity, the prospective miner must repeat the approved eighty (80) hour pre-employment training program in order

to retake the examination.

2.9. Guidelines for Issuing Underground Miner's Certification.

2.9.1. A certificate of competency and qualification as an underground miner shall be issued to any person who has successfully completed the eighty (80) hour apprenticeship program and has at least six (6) months total experience and one hundred eight (108) shifts worked as an apprentice miner within this State and demonstrated his/her competence as a miner by scoring at least eighty percent (80%) on the underground miner's certification examination.

2.9.2. Any miner with at least six (6) months and one hundred eight (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 underground miner certification examination without attending and completing the approved eighty (80) hour pre-employment training program. If the miner passes the examination with a score at least eighty percent (80%), then that miner will be issued an underground miner's certificate. If any miner fails to achieve a score of eighty percent (80%) on the second attempt, then such miner will be required to complete the approved eighty (80) hour pre-employment training program.

2.9.3. Any miner with less than six (6) months and one hundred eight (108) shifts experience in another state must complete the eighty (80) hour pre-employment training program and work as an apprentice miner: however, the experience obtained in another state may be applied toward the six (6) month and one hundred eight (108) shifts apprenticeship period.

§48-2-3. Course Outline For Training For Prospective Underground Coal Miners.

3.1. This course outline is sequenced by instructional units for eighty (80) hours of student-teacher contact. Implementation of this program may be achieved by using the training materials available through the West Virginia Office of Miners' Health, Safety and Training. Alternatively, individual training centers may implement the outline through their own resources as approved by the Board of Coal Mine Health and Safety.

3.2. General Orientation to Mining -- Estimated Time: four (4) hours.

3.2.1. How coal is mined.

3.2.2. Types of coal mines.

3.2.3. Types of mining methods.

3.2.4. Basic coal mining terminology.

3.2.5. Uses of coal.

3.3. Introduction to General Mine Safety -- Estimated Time: four (4) hours: two and one half (2-1/2) hours for General Mine Safety; one and one half (1-1/2) hours of Self-Rescuer.

3.3.1. Preparation for underground tour.

3.3.2. Personal safety equipment.

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3.3.3. Safety procedures for riding mantrip in and/or out of mine.

3.3.4. Hazards and precautions of moving around the mine.

3.3.5. Use of the self-rescuer (demonstration and practice).

3.4. Underground Mine Tour -- Estimated Time: six (6) hours: one (1) hour for above ground briefing; four (4) hours for tour; one (1) hour for debriefing. (NOTE: If an underground tour is not possible, videos or other appropriate instructional experiences may be substituted.)

3.5. First Aid--Part One. -- Estimated Time: two (2) hours.

3.5.1. What first aid is.

3.5.2. How first aid should be administered (treat life-threatening conditions first).

3.5.3. Demonstration and practice of cardiopulmonary resuscitation (C.P.R. and AED.)

3.5.4. Demonstration and practice of mouth-to-mouth resuscitation.

3.6. Recognition and Avoidance of Electrical Hazards -- Estimated Time: four (4) hours.

3.6.1. Basic electricity.

3.6.2. Conductors and nonconductors of electricity.

3.6.3. Recognition and prevention of electrical hazards.

3.6.4. Removal and treatment of a person in contact with dangerous electrical circuits.

3.7. General Safety. -- Part One. -- Estimated Time: two (2) hours.

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

3.7.1.a. Recognition of potential accident-producing situations.

3.7.1.b. Lifting procedures for high and low coal.

3.7.1.c. Proper handling of supplies and materials.

3.8. First Aid--Part Two. -- Estimated Time: two (2) hours.

3.8.1. Demonstration and practice of different methods of artificial respiration.

3.8.2. Control of bleeding.

3.9. Mine Gases and Their Detection. -- Estimated Time: four and one half (4-1/2) hours.

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3.9.1. Types of mine gases and their effects on the human body.

3.9.2. Methods of detection.

3.9.3. Demonstration and use of hand-held approved multi-gas detectors. The trainee needs to be familiar with how these testing devices are used; he/she does not need to be skilled in their use at this point.

3.10. Fire Prevention and Control. -- Estimated Time: three (3) hours.

3.10.1. Causes of mine fires and explosions.

3.10.2. Preventive measures.

3.10.3. Primary and alternate methods of fire control.

3.10.4. Demonstration and practice in using a portable fire extinguisher.

3.10.5. Location of fire fighting materials in the mine.

3.11. Ventilation and Mine Mapping. -- Estimated Time: five and one half (5-1/2) hours.

3.11.1. Introduction to mine ventilation systems.

3.11.2. Principal ventilation system components.

3.11.3. Methods of ventilating the working face with blowing and exhausting fan systems.

3.11.4. Minimum distances from line curtain to face and curtains to ribs.

3.11.5. Procedures for hanging check curtains.

3.11.6. Mine maps and mine map symbols.

3.11.7. Primary and alternate escapeways on mine maps and section maps.

3.12. First Aid--Part Three. -- Estimated Time: two (2) hours.

3.12.1. C.P.R. Practice.

3.12.2. Treatment of physical shock.

3.12.3. Dressing of open wounds.

3.13. Roof and Rib Control. -- Estimated Time: six (6) hours.

3.13.1. Recognition of hazardous roof and rib conditions.

3.13.2. Instruction in visual inspection.

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- 3.13.3. Demonstration and practice of the sound and vibration method of inspection.
- 3.13.4. Use of the slate bar.
- 3.13.5. Appropriate actions for new miner under hazardous roof and rib conditions.
- 3.13.6. Introduction to basic roof support systems.
- 3.13.7. Correct and incorrect installation of conventional roof supports.
- 3.13.8. Correct and incorrect installation of roof bolts.
- 3.14. Haulage and Equipment Safety. -- Estimated Time: seven (7) hours.
 - 3.14.1. Hazards and safety practices of working around, near, or on both track haulage equipment and rubber tired vehicles.
 - 3.14.2. Track haulage communication.
- 3.15. State and Federal Laws and Regulations. -- Estimated Time: two (2) hours.
 - 3.15.1. State and federal laws that pertain to a new miner.
 - 3.15.2. Drug and alcohol testing (W. Va. Code §22A-1A-1 *et seq.* and 56 CSR §19-1 *et seq.*)
- 3.16. First Aid--Part Four. -- Estimated Time: two (2) hours.
 - 3.16.1. Practice C.P.R. and artificial respiration.
 - 3.16.2. Treatment of burns, closed wounds, strains, sprains, and ruptures.
- 3.17. Miner and Operator Rights and Responsibilities. -- Estimated Time: three (3) hours.
 - 3.17.1. UMWA Contract.
 - 3.17.2. Company policies.
 - 3.17.3. Legal rights and responsibilities.
 - 3.17.4. Grievance procedures.
- 3.18. Health and Sanitation. -- Estimated Time: two (2) hours.
 - 3.18.1. Detection, causes and prevention of pneumoconiosis, hearing damage, and respirable dust disorders.
 - 3.18.2. Federal health and safety, but as it pertains specifically to health and sanitation.
- 3.19. First Aid--Part Five. -- Estimated Time: two (2) hours.

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- 3.19.1. C.P.R. and artificial respiration practice.
- 3.19.2. Treatment of fractures and dislocations.
- 3.19.3. Transporting the injured.
- 3.20. General Safety--Part Two. -- Estimated Time: four (4) hours.
 - 3.20.1. Accident causes and prevention.
 - 3.20.2. Tool care.
 - 3.20.3. Selection of appropriate tools for tasks.
 - 3.20.4. Interpersonal communications.
 - 3.20.5. Supervisor-employee relations.
 - 3.20.6. Safety attitudes.
- 3.21. General Mine Safety. -- Estimated Time: seven (7) hours.
 - 3.21.1. Hazards and related safety practices for low coal, high coal, wet mines.
 - 3.21.2. Longwall, mobile bridge conveyor system, and related hazards.
 - 3.21.3. Good housekeeping.
 - 3.21.4. Cleaning activities and related hazards around ribs, tailpieces and belts.
 - 3.21.5. Mine communication systems.
 - 3.21.6. Emergency procedures.
 - 3.21.7. When and how to build barricades and the use of refuge alternatives.
- 3.22. First Aid--Part Four. -- Estimated Time: two (2) hours.
 - 3.22.1. Location of first aid materials in an underground coal mine.
 - 3.22.1. Review and practice of first aid procedures.
- 3.23. Summary and Debriefing. -- Estimated Time: four (4) hours.
 - 3.23.1. Review of major points.
 - 3.23.2. Question and answer problem-solving session.
 - 3.23.3. Permit of apprenticeship examination.

§48-2-4. Training Objectives For Underground Coal Mine Health And Safety Training Course.

4.1. NOTE: In some instances, the objectives listed herein specify items or terms which must be included in the instruction (as in 4.2.2. and 4.2.4.) and in others, none are provided (as in 4.2.1.). When given, the items or terms indicate the minimum requirement to be met and training materials must include these items. Where none are given, it is left to the discretion of the developing organization to select the relevant subject matter to cover these objectives. Additional items or terms may be included in the instructional design where applicable to meet specific local requirements.

4.2. General Orientation to Mining -- Unit Objective. Given verbal or pictorial descriptions of different kinds of coal mines and coal mining features, equipment, and procedures, the trainee will correctly identify these, using commonly accepted nomenclature. The trainee will demonstrate knowledge of a typical underground coal mine and its organizational structure by accomplishing the following training objectives.

4.2.1. Given a list of verbal or written descriptions of different types of underground coal mine types, the trainee will match the correct description to the following three (3) types of mines; shaft mine, drift mine, and slope mine.

4.2.2. Given verbal or pictorial descriptions of the following terms, the trainee will correctly match the terms with their descriptions:

4.2.2.a. Breakthrough;

4.2.2.b. Coalbed;

4.2.2.c. Conveyor Belt (belt);

4.2.2.d. Crosscut;

4.2.2.e. Entry;

4.2.2.f. Face;

4.2.2.g. Gob;

4.2.2.h. High coal;

4.2.2.i. Low coal;

4.2.2.j. Pillar;

4.2.2.k. Pillaring;

4.2.2.l. Portal;

4.2.2.m. Retreat Mining;

4.2.2.n. Rib;

4.2.2.o. Roof (top);

4.2.2.p. Room;

4.2.2.q. Seam;

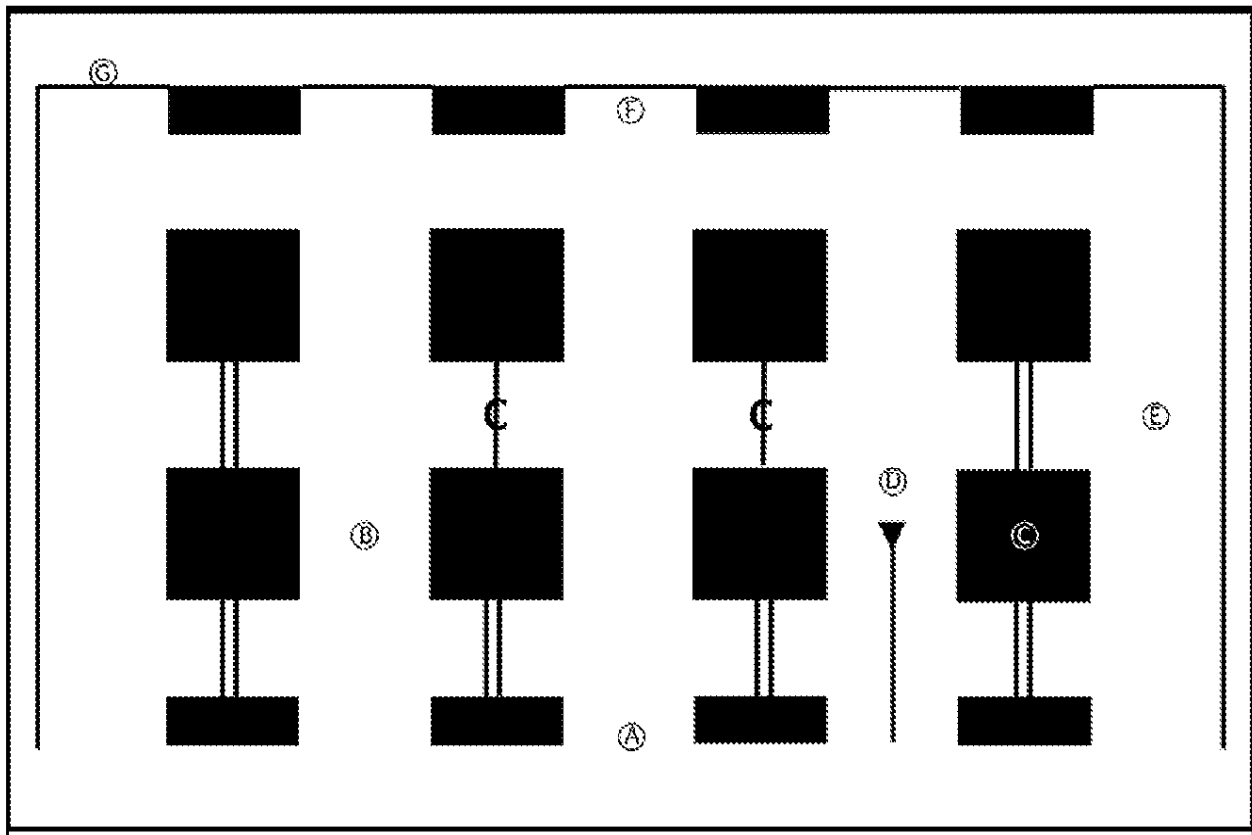
4.2.2.r. Section;

4.2.2.s. Shaft;

4.2.2.t. Preparation plant or loadout.

4.2.3. Given the simplified mine map shown in Figure 48-2 below, trainee will correctly identify and label the following mine features; room; face; pillar; crosscut and entry.

FIGURE 48-2



4.2.4. Given the positions A through G on Figure 48-2, the trainee will correctly identify the following positions:

4.2.4.a. Two (2) positions inby the last open crosscut;

4.2.4.b. Five (5) positions outby the last open crosscut;

4.2.4.c. Two (2) positions inby the end of the belt (tailpiece);

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4.2.4.d. One (1) position outby the end of the belt (tailpiece).

4.2.5. Given verbal or pictorial descriptions of each of the following methods of mining coal, the trainee will correctly identify the methods:

4.2.5.a. Continuous;

4.2.5.b. Conventional mining;

4.2.5.c. Longwall mining.

4.2.6. Given pictures of each of the following mining machines, the trainee will match the pictures with the following terms:

4.2.6.a. Shuttle car (buggy);

4.2.6.b. Loading machine;

4.2.6.c. Continuous miner;

4.2.6.d. Roof bolter;

4.2.6.e. Cutting machine;

4.2.6.f. Drilling machine;

4.2.6.g. Supply car;

4.2.6.h. Scoop;

4.2.6.i. Rock duster;

4.2.6.j. Longwall;

4.2.6.k. Locomotive (motor);

4.2.6.l. Mobile bridge conveyor systems;

4.2.6.m. Fork lift.

4.2.7. Given a partially complete organization chart depicting the chain of command from miner to superintendent in a typical underground coal mine, the trainee will correctly fill in all of the missing positions.

4.3. General Safety Unit Objective. Given pictorial representations of safe and unsafe tools and procedures, the trainee will discriminate between the safe and the unsafe. The trainee will demonstrate his/her knowledge of how to conduct a good safety meeting and how to effectively ask questions and receive instructions by accomplishing the following training objectives.

4.3.1. Given pictorial examples of hand tools in safe and unsafe conditions, the trainee will identify

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the tools in unsafe condition. Examples of the unsafe conditions include the following:

- 4.3.1.a. Mushroomed or cracked heads;
- 4.3.1.b. Jagged edges;
- 4.3.1.c. Cracked handles;
- 4.3.1.d. Broken points;
- 4.3.1.e. Dull edge or point;
- 4.3.1.f. Uninsulated electrical tools.

4.3.2. Given visual examples of common tasks performed underground and of common hand tools, the trainee will correctly match each task with the proper tool or tools to accomplish it. The examples include:

- 4.3.2.a. "Tasks";
 - 4.3.2.a.1. Driving nails or spads;
 - 4.3.2.a.2. Cutting posts;
 - 4.3.2.a.3. Scaling loose material;
 - 4.3.2.a.4. Setting screw jacks;
 - 4.3.2.a.5. Removing guards from equipment;
 - 4.3.2.a.6. Setting posts;
 - 4.3.2.a.7. Cutting supply binders and bands.
- 4.3.2.b. "Tools";
 - 4.3.2.b.1. Shovel;
 - 4.3.2.b.2. Spad driver;
 - 4.3.2.b.3. Saw;
 - 4.3.2.b.4. Axe;
 - 4.3.2.b.5. Wrench;
 - 4.3.2.b.6. Screwdriver;
 - 4.3.2.b.7. Hammer;

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- 4.3.2.b.8. Snips;
- 4.3.2.b.9. Slate bar;
- 4.3.2.b.10. Crow bar;
- 4.3.2.b.11. Channel locks and pliers;
- 4.3.2.b.12. Pipe wrench;
- 4.3.2.b.13. Utility knife.

4.3.3. Given visual examples of correct and incorrect ways of carrying hand tools such as a shovel, crow bar, ladder, hatchet, axe, and sledge hammer for both low and high coal, the trainee will select the correct carrying modes.

4.3.4. Given visual examples of common mining accidents, the trainee will correctly match each example to the basic type of accident represented. The five (5) basic types of accidents are:

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

4.3.5. Given a visual example of an example of an accident resulting in an injury to the fingers or hands and the following list of preventative measures, the trainee will select the correct procedure to prevent the accident per the examples given:

- 4.3.5.a. Inspect materials for slivers, jagged edges, burrs, and rough or slippery surfaces;
- 4.3.5.b. Get a firm grip on the object;
- 4.3.5.c. Keep fingers away from pinch points;
- 4.3.5.d. Wipe off greasy, wet, slippery, or dirty objects before handling them;
- 4.3.5.e. Keep hands free of oil and grease;
- 4.3.5.f. Coordinate each working movement with fellow workers;
- 4.3.5.g. Use the proper tool for the job. Do not improvise;
- 4.3.5.h. Keep hands away from moving machinery;
- 4.3.5.i. Wear non-ragged gloves for hand protection only when gloves are not a hazard;

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4.3.5.j. Wear snug-fitting clothes.

4.3.6. Given a pictorial representation of the six (6) steps for lifting objects in high coal mines, arranged out of sequence, the trainee will rearrange the pictures in their correct sequence. The six (6) steps for lifting, in sequence, are:

4.3.6.a. Keep feet parted--one alongside, one behind the object;

4.3.6.b. Keep back straight;

4.3.6.c. Tuck chin in;

4.3.6.d. Grip the object with the whole hand;

4.3.6.e. Tuck elbows and arms in;

4.3.6.f. Keep body weight directly over feet.

4.3.7. Given a pictorial representation of the steps for lifting objects in a low coal mine, arranged out of sequence, the trainee will rearrange the pictures in their correct sequence. The steps for lifting in low coal, in sequence, are:

4.3.7.a. Get a buddy to help whenever possible;

4.3.7.b. Use a mechanical aid when possible;

4.3.7.c. Keep knees parted -- one alongside the object and one behind;

4.3.7.d. Keep back straight;

4.3.7.e. Tuck the chin in so that the neck, head, and back are in a straight line;

4.3.7.f. Grip the object with the whole hand;

4.3.7.g. Tuck elbows and arms in near body;

4.3.7.h. Keep body weight over knees;

4.3.7.i. Lift the upper leg and arm muscles;

4.3.7.j. Shift knees when turning with a load -- avoid twisting the body;

4.3.7.k. Do not make sudden turns while lifting.

4.3.8. Given pictures illustrating correct and incorrect methods for handling the following supplies, the trainee will select the correct methods:

4.3.8.a. Rails;

4.3.8.b. Concrete blocks;

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- 4.3.8.c. Headers;
- 4.3.8.d. Roof bolts;
- 4.3.8.e. Cribbing;
- 4.3.8.f. Tubing;
- 4.3.8.g. Crossbars;
- 4.3.8.h. Planks and timbers.

4.3.9. Given pictorial examples of good and bad safety meetings, the trainee will select the good examples.

4.3.10. Given verbal examples of correct and incorrect methods of asking questions and receiving instructions, the trainee will select the correct methods.

4.4. General Mine Safety -- Unit Objective. Given appropriate examples or cues, the trainee will demonstrate his/her knowledge of the Mine Emergency Plan, his/her knowledge of and ability to perform standard safety practices and procedures, and his/her ability to recognize and respond correctly to common, unsafe underground conditions by accomplishing the following training objectives.

4.4.1. Given verbal descriptions of the following terms, the trainee will correctly match each term with its description:

- 4.4.1.a. Mine emergency plan;
- 4.4.1.b. Check-in procedure;
- 4.4.1.c. Check-out procedure;
- 4.4.1.d. Mantrip;
- 4.4.1.e. Tram;
- 4.4.1.f. Danger board.

4.4.2. Given pictures of assorted personal mine equipment and clothing, and instructed to select those items necessary for entry into an underground coal mine, the trainee will select the necessary items for underground mining. These necessary items consist of:

- 4.4.2.a. Identification tag (ID check);
- 4.4.2.b. Hard hat;
- 4.4.2.c. Safety shoes;
- 4.4.2.d. Snug-fitting reflective clothing and long hair control;

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- 4.4.2.e. Safety glasses or goggles;
- 4.4.2.f. Electric cap lamp;
- 4.4.2.g. Miner's belt;
- 4.4.2.h. Appropriate gloves;
- 4.4.2.i. Knee pads (for low coal);
- 4.4.2.j. Leg bands;
- 4.4.2.k. Tracking device;
- 4.4.2.l. Self-contained self-rescuer and lifeline;
- 4.4.2.m. Communication device/radio;
- 4.4.2.n. Proximity detection system.

4.4.3. Given pictorial examples of safe and unsafe methods of boarding and riding a mantrip car, the trainee will select the safe procedures. Safe procedures include:

- 4.4.3.a. If possible, climb in or out of mantrip on opposite side of trolley wire; if not possible, keep away from trolley wire;
- 4.4.3.b. Board mantrip car when it is stopped;
- 4.4.3.c. Keep all parts of body inside the mantrip car;
- 4.4.3.d. Place bucket and loose tools in a place where they won't slide from a sudden start or stop;
- 4.4.3.e. Wear safety glasses;
- 4.4.3.f. Visually check clearance between self and trolley wire and self and top periodically in open mantrip car;
- 4.4.3.g. Don't step on rails or stand between mantrip cars.

4.4.4. Given pictorial examples of cap lamps and battery meters with various readings, the trainee will select those with an acceptable battery charge.

4.4.5. Given pictures illustrating underground coal mine hazards, the trainee will correctly identify the following hazards:

- 4.4.5.a. Holes;
- 4.4.5.b. Pools of water;

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4.4.5.c. Low roof bolts and crossbars;

4.4.5.d. Timbers;

4.4.5.e. Trailing cables;

4.4.5.f. Moving equipment;

4.4.5.g. Trolley wires;

4.4.5.h. Low roof;

4.4.5.i. Uneven bottom;

4.4.5.j. Poor housekeeping;

4.4.5.k. Loose coal or rock;

4.4.5.l. Track;

4.4.5.m. Uneven rib;

4.4.5.n. Check curtains;

4.4.5.o. Overhangs.

4.4.6. Given pictorial examples of correct and incorrect ways of crossing conveyor belts, the trainee will select the correct ways.

4.4.7. Given pictorial examples of correct and incorrect methods of crossing a track with cars blocking the way, the trainee will select the correct methods.

4.4.8. Given a list of appropriate methods to guard against high and/or low coal hazards, the trainee will correctly match the depicted hazards with the correct precautionary measure. These precautionary measures include:

4.4.8.a. Provide head clearance and wear knee pads in low coal;

4.4.8.b. Know where equipment is or where it is going;

4.4.8.c. Anticipate the movement of trailing cables;

4.4.8.d. Use caution when lifting;

4.4.8.e. Assure equipment operators know your location;

4.4.8.f. Keep your body in position for an easy escape.

4.4.9. Given pictures illustrating wet mine hazards, the trainee will correctly match the hazards with the correct safe-guarding procedures. The safe-guarding procedures include:

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4.4.9.a. Stand on rubber mats for insulation at a power station;

4.4.9.b. Wear rubber or insulated gloves and rubber boots;

4.4.9.c. Wear clothing suitable for wet conditions.

4.4.10. Given pictures illustrating correct and incorrect procedures for shoveling the belt, the trainee will select the correct procedures. The correct procedures include:

4.4.10.a. Shoveling coal onto the belt in the same direction the belt is moving;

4.4.10.b. Keep clothing fitting snugly to prevent catching on the moving belt;

4.4.10.c. Keep long hair confined to prevent it from being caught by moving parts;

4.4.10.d. Use a straight handle shovel to prevent being pulled into the belt.

4.4.11. Given pictures illustrating both correct and incorrect procedures for shoveling the tailpiece, the trainee will select the correct procedures. Correct procedures include:

4.4.11.a. Turn off belt before shoveling around the tailpiece unless properly guarded;

4.3.11.b. Do not touch electric cables or electric motor with the shovel;

4.4.11.c. Watch out for tramming shuttle cars;

4.4.11.d. See that guards are in place;

4.4.11.e. Remove guarding only on instructions of supervisor, after locking and tagging, and replace guarding after work is completed.

4.4.12. Given pictures illustrating correct and incorrect procedures for shoveling the rib, the trainee will select the correct procedures. Correct procedures include:

4.4.12.a. Check rib for bad conditions and take appropriate action;

4.4.12.b. Do not stand or kneel too close to rib while shoveling loose coal;

4.4.12.c. Watch out for tramming equipment;

4.4.12.d. Do not shovel under bare trolley wire.

4.4.13. Given pictures of both good and bad housekeeping practices with respect to loose coal, oily rags, debris, and storage of supplies, the trainee will correctly select the pictures showing good practices.

4.4.14. Given pictures illustrating safe and unsafe practices for working near longwall equipment operation, the trainee will select the safe practices. Safe practices include:

4.4.14.a. Stand clear when the operator moves the shields forward;

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4.4.14.b. Take caution against falling into the pan line conveyor;

4.4.14.c. Stand on the intake side when the shearer is operating;

4.4.14.d. Stay under the roof supports;

4.4.14.e. Deenergizing procedures for longwall shields.

4.4.15. Given three (3) verbal examples of signaling procedures to use where escape to the surface has been blocked by a mine fire and barricading has been completed, the trainee will select the correct signaling procedure to use. The correct signaling procedures consist of:

4.4.15.a. When you hear three (3) shots, pound hard ten (10) times;

4.4.15.b. Rest fifteen (15) minutes and repeat;

4.4.15.c. When you hear five (5) shots, you have been located.

4.4.16. Given a list of correct and incorrect procedures to take if an unsafe condition is discovered, the trainee will select the two (2) correct procedures. The correct procedures are:

4.4.16.a. Correct the unsafe condition (if possible and/or qualified);

4.4.16.b. Report to foreman.

4.4.17. Given a diagram of the following five (5) cap light signals to be communicated, the trainee will match the correct communication signal (or flagging) to the following:

4.4.17.a. Move left;

4.4.17.b. Move right;

4.4.17.c. Come here;

4.4.17.d. Yes (go);

4.4.17.e. No (stop).

4.4.18. Given correct and incorrect statements regarding blasting, the trainee will select the correct statements. Correct statements include:

4.4.18.a. Only certified "Shot Firers" are permitted to place explosives at the blast site and do the actual blasting;

4.4.18.b. Persons that are not certified shot firers but who are permitted by ATF are also permitted to transport explosives to the working section;

4.4.18.c. Do not enter the smoke or dust cloud that follows blasting;

4.4.18.d. Stand clear when you hear the shotfirer yell his/her warning.

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4.5. Ventilation and Mine Mapping -- Unit Objectives. Given the appropriate verbal or pictorial examples, the trainee will demonstrate his/her knowledge of the principles of mine ventilation and the hazards it is designed to counter. The trainee will demonstrate his/her knowledge of the nomenclature of mine ventilation. He/she will demonstrate his/her understanding of mine maps, their symbols, and his/her ability to interpret them correctly by accomplishing the following training objectives.

4.5.1. Given verbal or pictorial descriptions of the following terms, the trainee will correctly match the terms with their descriptions:

- 4.5.1.a. Air split (split of air);
- 4.5.1.b. Anemometer;
- 4.5.1.c. Auxiliary ventilation;
- 4.5.1.d. Bleeder system;
- 4.5.1.e. Blowing fan;
- 4.5.1.f. Brattice cloth (line curtain, line brattice, rag);
- 4.5.1.g. Bug dust (float dust);
- 4.5.1.h. Door;
- 4.5.1.i. Main fan;
- 4.5.1.j. Methane;
- 4.5.1.k. Overcast/undercast;
- 4.5.1.l. Check curtain (fly curtain, curtain);
- 4.5.1.m. Dilute;
- 4.5.1.n. Escapeway;
- 4.5.1.o. Exhaust fan;
- 4.5.1.p. Intake;
- 4.5.1.q. Regulator;
- 4.5.1.r. Return;
- 4.5.1.s. Stopping.

4.5.2. Given verbal or pictorial examples of a number of airborne coal mining hazards, the trainee will correctly identify the two (2) that are reduced by ventilation. These hazards are methane and dust.

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4.5.3. Given a list of distances, the trainee will select the maximum allowable distance between the line curtain and the face when auxiliary ventilation is not used. The maximum allowable distance is ten (10) feet from the face to the curtain.

4.5.4. Given pictures of correct and incorrect examples of a mine ventilation at a working face, the trainee will select the correct examples.

4.5.5. Given a list of the steps involved in hanging check curtains which are arranged out of sequence, the trainee will arrange the steps in their proper sequence. The steps, in sequence, are:

4.5.5.a. Select a place in the entry suitable for travel;

4.5.5.b. Remove uneven ribs or protruding brows;

4.5.5.c. Remove any other loose objects;

4.5.5.d. Install line brattice to minimize air leakage.

4.5.6. Given a series of correct and incorrect statements regarding who may adjust regulators and when they may be adjusted, the trainee will select the correct statements.

4.5.7. Given a mine map, the trainee will correctly label each of the following:

4.5.7.a. Intake air;

4.5.7.b. Return air;

4.5.7.c. Regulator;

4.5.7.d. Overcast;

4.5.7.e. Undercast;

4.5.7.f. Belt;

4.5.7.g. Track;

4.5.7.h. Permanent Stopping;

4.5.7.i. Escapeway;

4.5.7.j. Check curtain;

4.5.7.k. Line curtain;

4.5.7.l. Door;

4.5.7.m. Self-contained self-rescuer cache;

4.5.7.n. Refuge alternative or shelter.

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4.5.8. Given mine maps of two (2) working sections, one (1) with an isolated intake escapeway and one (1) without, the trainee will have a working knowledge of the appropriate escapeways for each of the two (2) fire locations.

4.6. Recognition and Avoidance of Electrical Cables -- Unit Objective. Given verbal or pictorial examples, the trainee will demonstrate his/her knowledge of electrical hazards and of their related safety procedures and practices. He/she will demonstrate his/her knowledge of common terms concerning mine electrical systems by accomplishing the following training objectives.

4.6.1. Given verbal or pictorial descriptions of the following terms, the trainee will correctly match each term with its description:

4.6.1.a. Alternating Current (AC);

4.6.1.b. Bonding;

4.6.1.c. Conductor;

4.6.1.d. Direct current (DC);

4.6.1.e. Distribution (plug) box;

4.6.1.f. Feeder circuits;

4.6.1.g. Fuse/Circuit breaker;

4.6.1.h. Ground;

4.6.1.i. Insulation;

4.6.1.j. Nip station;

4.6.1.k. Nips;

4.6.1.l. Power cables;

4.6.1.m. Splice;

4.6.1.n. Trailing cables;

4.6.1.o. Transformer;

4.6.1.p. Trolley wire.

4.6.2. Given pictures of items used or found in a mine, the trainee will separate conductors from nonconductors of electricity.

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

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4.6.4. Given an assortment of pictorial examples of correct and incorrect methods of carrying conductive materials near the trolley wire, the trainee will select the correct methods.

4.6.5. Given pictorial examples of cables in good condition and bad, the trainee will select the cables in good condition. The samples in bad condition include:

- 4.6.5.a. Severed cable;
- 4.6.5.b. Partially severed conductor;
- 4.6.5.c. Damaged insulation;
- 4.6.5.d. Defective splice.

4.6.6. Given an assortment of pictorial examples of both safe and unsafe practices near and around power centers, the trainee will select the safe practices.

4.7. Prevention and Control of Mine Fires and Explosions -- Unit Objective. Given the appropriate cues and illustrated examples, the trainee will demonstrate his/her knowledge of fire hazards and their control. He/she will demonstrate his/her knowledge of the rules pertaining to the location and operation of fire fighting equipment and his/her ability to apply that knowledge appropriately by accomplishing the following training objectives.

4.7.1. Given pictorial and verbal examples of hazardous conditions in an underground mine, the trainee will identify the hazards that may cause mine fires and explosions. Principal causes include:

- 4.7.1.a. Open flame;
- 4.7.1.b. Inadequate ventilation;
- 4.7.1.c. Electrical failures;
- 4.7.1.d. Inadequately maintained equipment;
- 4.7.1.e. Friction by malfunctioning conveyor belt;
- 4.7.1.f. Improper blasting procedures.

4.7.2. Given a list of mine locations, the trainee will select locations where state law requires fire fighting equipment to be stored. These locations are:

- 4.7.2.a. Temporary and permanent electrical installations;
- 4.7.2.b. Oil storage areas;
- 4.7.2.c. All loading points;
- 4.7.2.d. Areas where welding, soldering, or cutting is being done;
- 4.7.2.e. Within twenty-five (25) feet of wooden doors where power lines pass;

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- 4.7.2.f. Track haulage;
- 4.7.2.g. Along belt conveyors;
- 4.7.2.h. At each working section.

4.7.3. Given correct and incorrect statements concerning general principles of fire-fighting, the trainee will select the correct statements. Correct statements include:

- 4.7.3.a. Warn fellow workers and sound the fire alarm where there is one;
- 4.7.3.b. Know how to use available firefighting equipment and where located;
- 4.7.3.c. Shut off power if it is an electrical fire;
- 4.7.3.d. Direct stream of water or chemical at the base of the fire;
- 4.7.3.e. Apply water or chemical in a rapid sweeping action starting at the edge of the fire and working inward;
- 4.7.3.f. Keep yourself out by the fire so that you can escape if necessary;
- 4.7.3.g. Do not enter a smoke filled area unless properly trained and equipped.

4.7.4. Given correct and incorrect verbal statements regarding the state law on rock dusting in underground mines, the trainee will select the correct statements. The correct statements include:

- 4.7.4.a. Rock dust must be applied and maintained upon the roof, floor and sides of all operating sections, haulageways, parallel entries connected by open crosscuts and back entries.
- 4.7.4.b. Rock dust shall be applied to include the last open crosscut of rooms and entries and to within forty (40) feet of the face.

4.8. Mine Gas Identification and Detection -- Unit Objective. Given the appropriate cues and examples, the trainee will demonstrate his/her knowledge of the hazards of common mine gases, method of detection of these hazards, and the protective measures required by law by accomplishing the following training objectives.

4.8.1. Given verbal descriptions relating to mine atmosphere, the trainee will match each term with the correct description:

- 4.8.1.a. Carbon monoxide;
- 4.8.1.b. Carbon dioxide;
- 4.8.1.c. Oxygen deficiency;
- 4.8.1.d. Firedamp;
- 4.8.1.e. Blackdamp.

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4.8.2. Given pictures of methane detectors showing a variety of readings, the trainee will correctly select those depicting dangerous concentrations of methane.

4.8.3. Given pictorial illustrations of correct and incorrect procedures for checking for unsafe methane or oxygen deficiency atmosphere, the trainee will identify the correct procedures.

4.8.4. Given correct and incorrect statements regarding who must test for methane, the trainee will select the correct statements. Correct statements include:

4.8.4.a. All face equipment operators must test for methane before energizing equipment and every twenty (20) minutes during operation;

4.8.4.b. All equipment operators must test for methane before tramming in or inby the last open crosscut;

4.8.4.c. Mine foremen/fire bosses must check for methane before each shift and at least once every two (2) hours during the shift.

4.8.5. Given verbal list of percentages of methane concentrations in the working place, the trainee will match the maximum allowable methane concentration in the working place to the following action that must be taken as defined by law:

4.8.5.a. 1.0% methane--change ventilation;

4.8.5.b. 1.5% methane--disconnect electrical power and evacuate personnel from endangered area.

4.8.6. Given correct and incorrect verbal or pictorial examples of situations when a self-contained self-rescuer may be used, the trainee will select the correct examples of situations when a self-contained self-rescuer may be used.

4.8.7. Given pictorial examples of donning procedures for the variety of self-contained self-rescuers, arranged out of sequence, the trainee will arrange the steps in correct sequence

4.8.8. Given pictorial examples of correct and incorrect procedures for testing/checking the particular self-contained self-rescuer units for airtightness and damage, the trainee will select the correct procedures.

4.8.9. Given correct and incorrect statements regarding State and Federal regulations for the self-contained self-rescuer, the trainee will select the correct statements. State and Federal regulations include:

4.8.9.a. Miners must be issued self-contained self-rescuer units by the mine operator;

4.8.9.b. The self-contained self-rescuer must either be worn or kept within easy reach (three (3) feet) at all times while the miner is underground;

4.8.9.c. Miners must be retrained in the use of the self-contained self-rescuer at least once every ninety (90) days.

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4.8.10. Given correct and incorrect verbal statements regarding the principal purpose of a self-contained self-rescuer unit, the trainee will select the correct description.

4.9. Roof and Rib Control -- Unit Objective. Given the appropriate visual and auditory examples, the trainee will demonstrate his/her knowledge of correct rib and roof control practices and procedures. He/she will recognize geological formations commonly encountered underground that are hazardous. He/she will recognize both visual and auditory cues that denote either a potential or existing hazard by accomplishing the following training objectives.

4.9.1. Given pictorial and verbal descriptions for the following terms, the trainee will correctly match each term with its description:

- 4.9.1.a. Canopies;
- 4.9.1.b. Cap blocks;
- 4.9.1.c. Shields;
- 4.9.1.d. Conventional roof support system;
- 4.9.1.e. Crib;
- 4.9.1.f. Crossbar;
- 4.9.1.g. Expansion bolts;
- 4.9.1.h. Headers;
- 4.9.1.i. Jacks;
- 4.9.1.j. Planks;
- 4.9.1.k. Resin bolts;
- 4.9.1.l. Roof control plan;
- 4.9.1.m. Roof bolt;
- 4.9.1.n. Roof bolt support system;
- 4.9.1.o. Safety post;
- 4.9.1.p. Slate;
- 4.9.1.q. Temporary supports;
- 4.9.1.r. Timber;
- 4.9.1.s. Automated temporary roof support (ATRS);

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4.9.1.t. Mobile roof supports (MRS).

4.9.2. Given visual and auditory examples of safe and hazardous roof and rib conditions, the trainee will select those which are hazardous. Hazardous conditions include:

4.9.2.a. Cracks;

4.9.2.b. Slips;

4.9.2.c. Kettle bottoms;

4.9.2.d. Inverted horsebacks (hogbacks);

4.9.2.e. Clay veins;

4.9.2.f. Water emissions or moisture-laden;

4.9.2.g. Rolls;

4.9.2.h. Brows;

4.9.2.i. Dribbling or sloughing off of coal from ribs;

4.9.2.j. Improperly installed roof bolts;

4.9.2.k. Bending of crossbars or posts; bits of bark loosened by pressure on posts or timbers;

4.9.2.l. Hearing roof or rib working (popping or cracking);

4.9.2.m. Posts creaking and roof bolts pinging;

4.9.2.n. Yielding or pressure loading of hydraulic supports.

4.9.3. Given correct and incorrect statements regarding when to perform the following procedures, the trainee will select the correct statements:

4.9.3.a. Visual inspection of tops and ribs;

4.9.3.b. Sound and vibration method of inspection.

4.9.4. Given pictorial examples of correct and incorrect methods of sounding the roof, the trainee will select the correct methods.

4.9.5. Given pictorial examples of correct and incorrect methods of using a slate bar, the trainee will select the correct methods.

4.9.6. Given pictorial examples of properly and improperly installed conventional roof supports, the trainee will select the correctly installed supports.

4.10. Miner and Operator Rights and Responsibilities -- Unit Objective. Given appropriate operator and

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miner rights and responsibilities pursuant to the Federal Mine Safety and Health Act of 1977, the Mine Improvement and New Emergency Response Act of 2006 (MINER Act), and Title 30 of the Code of Federal Regulations (30CFR), the trainee will recognize and understand them. Additional rights and responsibilities found in contractual or company policy may also be incorporated into this training unit. (NOTE: The following objectives are suggested for possible inclusion in a training program and, as such, are not included in the criterion test package.)

4.10.1. Given correct and incorrect statements regarding operator responsibilities pursuant to federal law, the trainee will select the correct statements. Correct statements include:

4.10.1.a. Provide a safe and healthful place to work;

4.10.1.b. Provide continuous employment;

4.10.1.c. Provide supervision so that employees can work safely, and employees and equipment can work efficiently;

4.10.1.d. Provide sufficient supplies and materials at proper locations for the employees' safety and safety of the equipment;

4.10.1.e. Provide specific job training.

4.10.2. Given correct and incorrect statements regarding miners' responsibilities to their employment, health, and safety, the trainee will select the correct statements. Correct statements include:

4.10.2.a. Work with the operator in making the mine a safe and healthy place to work;

4.10.2.b. Supply the labor and know how to properly operate equipment and other work;

4.10.2.c. Protect and safeguard the company's equipment and property;

4.10.2.d. Comply with company rules and state and federal laws;

4.10.2.e. Work regularly.

4.10.3. Given correct and incorrect statements concerning a miner's right to not work under conditions he/she believes are abnormally and immediately dangerous beyond the normal hazards of operation as specified in the applicable West Virginia Underground Coal Mine Safety Laws, the trainee will select the correct statements.

4.10.4. Given correct and incorrect statements regarding grievance procedures for settlement of health or safety disputes as specified in an applicable United Mine Workers' of America Wage Agreement, the trainee will select the correct statements.

4.10.5. Given correct and incorrect statements regarding discharge procedures as specified in an applicable United Mine Workers' of America Wage Agreement, the trainee will select the correct statements.

4.10.6. Given correct and incorrect statements regarding the following employee benefits as specified in an applicable United Mine Workers' of America Wage Agreement, the trainee will select the

correct statements. Benefits include:

- 4.10.6.a. Bereavement payment;
- 4.10.6.b. Christmas bonus;
- 4.10.6.c. Jury duty;
- 4.10.6.d. Reporting pay;
- 4.10.6.e. Sick pay;
- 4.10.6.f. Vacations;
- 4.10.6.g. Paid holidays;
- 4.10.6.h. Clothing allowance.

4.10.7. Given correct and incorrect statements regarding the job bidding procedures as specified in an applicable United Mine Workers' of America Wage Agreement, the trainee will select the correct statements.

4.11. State and Federal Laws Pertaining to Mining -- Unit Objective. Given the appropriate cues, the trainee will demonstrate his/her knowledge of the laws and regulations pertaining to the certification of miners' health and safety standards and inspections by accomplishing the following training objectives.

4.11.1. Given verbal descriptions of the following terms, the trainee will correctly match each term with its description.

- 4.11.1.a. Certified;
- 4.11.1.b. Qualified;
- 4.11.1.c. Permissible equipment.

4.11.2. Given correct and incorrect statements concerning when a miner may lawfully enter a mine, the trainee will select the correct statement. The correct statement is that he/she may enter the mine only after the fireboss has declared it safe.

4.11.3. Given correct and incorrect pictorial examples or verbal statements regarding smoking, smoking materials, and intoxicants in all underground coal mines, the trainee will select the correct illustrations or statements.

4.11.4. Given verbal descriptions of ten (10) jobs in an underground mine, the trainee will correctly select those which require special certification or qualifications. These are:

- 4.11.4.a. Underground Mine Foreman/Fire Boss;
- 4.11.4.b. Assistant Underground Mine Foreman/Fire Boss;

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4.11.4.c. Shot Firer;

4.11.4.d. Mine Electrician;

4.11.4.e. Mine Mechanic;

4.11.4.f. Belt Examiner;

4.11.4.g. Diesel Operator;

4.11.4.h. Diesel Mechanic.

4.11.5. Given verbal descriptions of penalties, the trainee will correctly select the penalty prescribed by law for a willful violation of any health and safety standard by a coal miner. This is known as an individual personal assessment or I.P.A. The penalty is not more than two hundred fifty dollars (\$250.00) for each violation.

4.11.6. Given a list of penalties, the trainee will correctly select the penalty prescribed by law to an operator of a coal mine in which a violation of health and safety standards occurs. The penalty is not more than five thousand dollars (\$5,000.00) for each violation.

4.11.7. Given a list of criminal penalties, the trainee will correctly select the criminal penalty prescribed by law that applies when any person who, without the authorization of the operator or Director, knowingly removes, attempts to remove, tampers with, or attempts to tamper with a self-contained self-rescuer, lifeline, wireless emergency communication device, wireless tracking device, or related equipment with the intent to permanently deprive the operator of the device or equipment.

4.11.8. Given verbal descriptions of locations in an underground coal mine, the trainee will correctly select the four (4) locations where a two-way communications system must be located. The four (4) locations requiring the system are:

4.11.8.a. Any working section more than one thousand five hundred (1,500) feet from the main portal;

4.11.8.b. Automatic elevators;

4.11.8.c. Haulage equipment;

4.11.8.d. Every four thousand (4,000) feet in a return airway that has been designated as an escapeway.

4.11.9. Given verbal descriptions of employment regulations, the trainee will correctly select regulations which apply to employment as an apprentice miner (red hat) which includes:

4.11.9.a. An apprentice must wear a red hat for six (6) months to identify him/her as an inexperienced miner;

4.11.9.b. An apprentice must be under the immediate supervision of a certified miner or foreman.

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4.11.10. Given correct and incorrect statements regarding work restrictions during the first one hundred twenty (120) days of employment as specified in W. Va. Code §22A-2-12(b), the trainee will select the correct statements.

4.12. Haulage and Equipment Safety -- Unit Objective. Given the appropriate examples and cues, the trainee will demonstrate an understanding of the safety rules, practices, and procedures pertaining to haulage and haulageway equipment by accomplishing the following training objectives.

4.12.1. Given verbal or pictorial descriptions of the following terms, the trainee will correctly match each term with its description.

4.12.1.a. Backpoling;

4.12.1.b. Clearance side;

4.12.1.c. Dispatcher;

4.12.1.d. Mainline;

4.12.1.e. Manholes;

4.12.1.f. Shelter hole;

4.12.1.g. Tight side;

4.12.1.h. Track haulageways;

4.12.1.i. Trip;

4.12.1.j. Trolley wire.

4.12.2. Given pictorial examples of safe and unsafe conditions and clearances of the clearance side of track haulageways, the trainee will select the safe examples. Safe examples include:

4.12.2.a. Twenty-four (24) inch clearance from the farthest projection on the clearance side;

4.12.2.b. Clearance side free of debris or materials.

4.12.3. Given correct and incorrect statements concerning the purpose of warning lights and reflective lights installed along haulage roads, the trainee will select the correct statements. Correct statements include:

4.12.3.a. Warning lights and reflective signs are used to warn against low head clearances;

4.12.3.b. Mark or point out switches.

4.12.4. Given pictorial examples of safe and unsafe nontrack haulageways, the trainee will select each unsafe example. Unsafe examples include:

4.12.4.a. Bottom irregularities;

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4.12.4.b. Debris;

4.12.4.c. Wet and muddy conditions.

4.12.5. Given pictorial or verbal examples of equipment operations, the trainee will select at least three (3) major operational checks that must be conducted before haulageway equipment can be operated. These checks include:

4.12.5.a. Brakes must be well maintained and functional;

4.12.5.b. Lights must illuminate;

4.12.5.c. Warning devices must work;

4.12.5.d. Lifting bar and jack must be present on all track equipment;

4.12.5.e. Cable must be in good condition.

4.12.6. Given the preoperational steps, arranged out of sequence, that must be performed before power may be applied to nonbattery equipment, the trainee will rearrange the steps in sequence. The steps in sequence are:

4.12.6.a. Check roof and ribs of working area;

4.12.6.b. Make methane tests of the area;

4.12.6.c. Check to assure equipment control switch is in the OFF position;

4.12.6.d. Inspect condition of trailing cable;

4.12.6.e. Be certain the correct breaker switch is selected;

4.12.6.f. Check for free and unobstructed movement of controls;

4.12.6.g. Check to assure the machine-mounted components of the proximity detection system and wearable device are working, if so equipped.

4.12.7. Given the preoperational steps, arranged out of sequence, that must be performed before power may be applied to battery-powered equipment, the trainee will rearrange the steps in sequence. The steps in sequence are:

4.12.7.a. Check roof and ribs of working area;

4.12.7.b. Make methane tests of the area;

4.12.7.c. Inspect condition of battery connection;

4.12.7.d. Check for free and unobstructed movement of controls;

4.12.7.e. Check operation of camera or other approved device, if so equipped.

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4.12.8. Given verbal or pictorial examples of correct and incorrect operational checks to be performed before tramping a piece of equipment into a face area, the trainee will select the correct operational checks. The correct operational checks are:

4.12.8.a. Check roof and ribs of working area;

4.12.8.b. Make methane test of area;

4.12.8.c. Inspect condition of trailing cable.

4.12.9. Given pictorial examples of safe and unsafe practices while working near, under, or around booms, the trainee will select the safe examples.

4.12.10. Given pictorial examples of safe and unsafe practices while working near or around operating face equipment, the trainee will select the safe examples.

4.12.11. Given pictorial examples of safe and unsafe practices while stepping across cables, the trainee will select the safe examples.

4.12.12. Given pictorial examples of safe and unsafe practices while working on or around track haulage equipment, the trainee will select the safe examples.

4.12.13. Given verbal or pictorial examples of both safe and unsafe equipment movements, the trainee will select the safe practices. Unsafe practices include:

4.12.13.a. Not using warning devices when tramping through check curtains;

4.12.13.b. Tramping too fast;

4.12.13.c. Hitting bumps, ruts, holes;

4.12.13.d. Making first trip of the day or first trip into a new area without first checking conditions;

4.12.13.e. Going under brows;

4.12.13.f. Stopping or parking near check curtains.

4.13. Health and Sanitation -- Unit Objective. Given the appropriate cues and visual or verbal examples, the trainee will demonstrate his/her understanding of the hazards of and protection against coal dust and excessive noise by accomplishing the following training objectives.

4.13.1. Given verbal descriptions of the following terms, the trainee will match each term with its description:

4.13.1.a. Personal dust sampler;

4.13.1.b. Pneumoconiosis (black lung);

4.13.1.c. Respirable dust;

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4.13.1.d. Respiratory protection;

4.13.1.e. Hearing protection;

4.13.1.f. Portable toilets;

4.13.1.g. Personal dust monitor (PDM).

4.13.2. Given verbal and pictorial examples of correct and incorrect procedures of using the respirator, the trainee will select the correct procedures.

4.14. First Aid -- Unit Objectives. Given the requisite cues and verbal or pictorial illustrations, the trainee will demonstrate his/her knowledge of and ability to administer emergency medical attention when it is required. He/she will demonstrate his/her ability to recognize and correctly define common words relating to the administration of first aid. He/she will demonstrate his/her ability to perform certain emergency medical procedures properly and in correct sequence. He/she will demonstrate his/her ability to employ effectively common first aid equipment and supplies by accomplishing the following training objectives.

4.14.1. Given verbal or pictorial descriptions of the following terms, the trainee will match the terms to their descriptions.

4.14.1.a. Artificial respiration;

4.14.1.b. First aid;

4.14.1.c. Fainting;

4.14.1.d. Open wounds;

4.14.1.e. Abrasions;

4.14.1.f. Dislocation;

4.14.1.g. Closed fracture;

4.14.1.h. Open fracture;

4.14.1.i. Splint;

4.14.1.j. Pressure points;

4.14.1.k. Closed wounds;

4.14.1.l. Strains;

4.14.1.m. Sprains;

4.14.1.n. Rupture (hernia);

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4.14.1.o. 1st, 2nd, & 3rd degree burns;

4.14.1.p. Scalds;

4.14.1.q. Incision;

4.14.1.r. Laceration;

4.14.1.s. Puncture wound;

4.14.1.t. Bruises.

4.14.2. Given the following steps for administering first aid, arranged out of sequence, the trainee will rearrange them in correct sequence: The steps in sequence are:

4.14.2.a. Locate the injury;

4.14.2.b. If needed, give artificial respiration;

4.14.2.c. Look for and control bleeding;

4.14.2.d. Treat for physical shock;

4.14.2.e. Treat wounds;

4.14.2.f. Look for fractures and apply appropriate treatment;

4.14.2.g. Treat burns;

4.14.2.h. Transport patient.

4.14.3. Given an appliance used for artificial respiration and C.P.R. practices, the trainee will correctly demonstrate:

4.14.3.a. Mouth-to-mouth artificial respiration;

4.14.3.b. Mouth-to-mask and bag-valve-mask methods of respiration.

4.14.4. Given a chart of the human body, the trainee will correctly identify the eleven (11) pressure points for one side of the body.

4.14.5. Given a chart of the human body and four (4) locations of serious wounds, the trainee will correctly identify the correct pressure point to control bleeding for each wound.

4.14.6. Given pictorial examples of the steps in applying a tourniquet, arranged out of sequence, the trainee will rearrange them in correct sequence. The steps for applying a tourniquet in sequence are:

4.14.6.a. Use a strong, wide piece of cloth;

4.14.6.b. Select a solid, padded object and wrap the arm or leg with it next to the arterial

pressure point;

4.14.6.c. Tie a half knot on the outside of the arm or leg;

4.14.6.d. Insert a strong stick over the half knot and tie it in place;

4.14.6.e. Twist the stick to apply pressure until bleeding stops;

4.14.6.f. Place the time the tourniquet was applied on the patient.

4.14.7. Given verbal and pictorial examples of possible causes of physical shock, the trainee will correctly select the following causes:

4.14.7.a. Severe loss of blood;

4.14.7.b. Intense pain;

4.14.7.c. Severe or extensive injury;

4.14.7.d. Burns;

4.14.7.e. Anxiety;

4.14.7.f. Poisonous gases;

4.14.7.g. Sight of blood or injury to fellow worker.

4.14.8. Given verbal descriptions of physical and emotional reactions, the trainee will select the symptoms of physical shock. Physical shock symptoms include:

4.14.8.a. Chalk-like appearance;

4.14.8.b. Dull or anxious expression;

4.14.8.c. Shallow breathing;

4.14.8.d. Cold, moist skin.

4.14.9. Given a pictorial example of procedures for treating physical shock, arranged out of sequence, the trainee will rearrange them in the following sequence:

4.14.9.a. Lay the victim flat;

4.14.9.b. Elevate feet six (6) inches;

4.14.9.c. Clear mouth of foreign objects;

4.14.9.d. Loosen clothing;

4.14.9.e. Keep the victim warm and dry.

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4.14.10. Given pictorial examples of procedures for treating open wounds, arranged out of sequence, the trainee will rearrange the procedures in the following correct sequence. The procedures, in sequence, are:

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

4.14.11. Given correct and incorrect pictorial examples of methods for dressing wounds, the trainee will select the correct method for the following:

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

4.14.12. Given pictorial examples of good and bad practices of the treatment for closed wounds, the trainee will select the correct first aid activities for closed wounds.

4.14.13. Given the steps for treating a rupture or hernia in the abdomen, arranged out of sequence, the trainee will rearrange the steps in correct sequence. The steps, in sequence, are:

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

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4.14.14. Given pictorial examples of correct and incorrect methods of treating foreign bodies in the eyes, ears, nose and throat, or windpipe, the trainee will select the correct examples.

4.14.15. Given the four (4) steps of general care treatment for non-chemical burns, arranged out of sequence, the trainee will arrange the steps in correct sequence. The steps, in sequence, are:

4.14.15.a. Remove clothing from burned area (unless it sticks to the skin);

4.14.15.b. Cover burn with cool, moist dressing;

4.14.15.c. Cover the victim with a blanket;

4.14.15.d. Treat for shock.

4.14.16. Given the correct methods of treating the following types of fractures: head, neck, back, rib, pelvis, arm, hand, leg, and foot, the trainee will match the correct method with the fracture.

4.14.17. Given visual examples of correct and incorrect ways of transporting an injured person out of a mine, the trainee will select the correct method.

4.14.18. Given a list of places in a mine, the trainee will select the two (2) places where first aid equipment must be located. The list includes:

4.14.18.a. At the bottom of each regularly traveled slope or shaft or at the main entrance to the mine when shafts or slope bottoms are less than one thousand (1,000) feet from the surface;

4.14.18.b. At a point in each working section, not more than five hundred (500) feet outby the active working surface face or faces.

§48-2-5. Approval Procedures For Training Programs.

5.1. All training centers planning to participate in the eighty (80) hour training effort must be approved by the Board of Coal Mine Health and Safety. Each prospective training center must send to the main office of the Office of Miners' Health, Safety and Training, Attention: Board of Coal Mine Health and Safety, the following information:

5.1.1. Address and location of the training center;

5.1.2. Description of equipment and facilities available;

5.1.3. List of participating instructors (See Section 6 for Approval Procedures for Instructors);

5.1.4. Classroom dimensions and appropriate number of students per class.

5.2. Any training center not using the training course available through the Office of Miners' Health, Safety and Training must obtain approval of its program by submitting the following additional information:

5.2.1. An outline of the proposed course showing how it meets the criteria established by the Board of Coal Mine Health and Safety;

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5.2.2. 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;

5.2.3. A description of the instructional methods to be used throughout the course (e.g., lecture demonstration, personalized instruction, team teaching, etc.).

§48-2-6. Approval Procedures For Instructors.

6.1. Each instructor who will be teaching the eighty (80) hour course must seek approval from the Office of Miners' Health, Safety and Training by sending the following information to the main office of the Office of Miners' Health, Safety and Training:

6.1.1. A summary of the individual's teaching experience and related credentials (e.g., MSHA teaching certificates);

6.1.2. A description of the individual's work experience, underground mining or otherwise, in sufficient detail to determine the individual's exposure to the unit operations of coal mining;

6.1.3. The content area(s) in the training program for which he/she will be responsible;

6.1.4. The name and address of the person who should be notified as to the candidate's approval or disapproval.

FORM MAY BE OBTAINED FROM THE AGENCY'S WEBSITE.