WEST VIRGINIA

SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

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SECRETARY OF STATE

NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AGENCY: Bd of Mine Training West Virginia ~~Department of Energy~~ TITLE NUMBER: 48

AMENDMENT TO AN EXISTING RULE: YES___, NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 1

TITLE OF RULE BEING PROPOSED: Rules and Regulations Governing the Standards for Certification of Underground Belt Examiners for Underground Coal Mines

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) H.B. 3155

SECTION 64-2-22(9)(6), PASSED ON April 7, 1987

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON THE FOLLOWING DATE: May 1, 1987

Roger T. Hall

Roger T. Hall
Administrator

PROMULGATION HISTORY ABSTRACT

WEST VIRGINIA DEPARTMENT OF ENERGY

TITLE 48 SERIES 1

Rules and Regulations Governing the Certification of Underground Belt Examiners for Underground Coal Mines

September 3, 1987	Filed as emergency rule - Office of Secretary of State - Effective upon Filing
October 24, 1987	Public hearing held No comments received
March 3, 1987	Emergency rule expired
April 3, 1987	Filed with Office of Secretary of State and Legislative Rule-Making Review Committee as proposed legislative rule
April 7, 1987	Bill of authorization (H.B. 3155) passed by Legislature
April 17, 1987	Bill of authorization (H.B. 3155) signed by Governor
May 1, 1987	Final filed with Office of Secretary of State

WEST VIRGINIA LEGISLATIVE RULE

BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

TITLE 48 · SERIES 1

SUBJECT: RULES AND REGULATIONS GOVERNING THE STANDARDS FOR CERTIFICATION OF UNDERGROUND BELT EXAMINERS FOR UNDERGROUND COAL MINES

WEST VIRGINIA LEGISLATIVE RULE

BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

TITLE 48 SERIES 1

SUBJECT: Rules and Regulations Governing the Standards for Certification of Underground Belt Examiners for Underground Coal Mines

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Title 48

~~WEST VIRGINIA~~ LEGISLATIVE RULE
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION
~~TITLE 48~~ SERIES 1

SUBJECT: Rules and Regulations Governing the Standards for Certification of Underground Belt Examiners for Underground Coal Mines

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Section 48.1.1 General

1.1 Scope - These rules and regulations pertain to the certification of belt examiners for underground coal mines pursuant to West Virginia Code 22A-2-39.

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

1.3 Effective date - These rules and regulations meet the requirements of Chapter ~~29A~~, Code of West Virginia, as amended, and become effective on May 1, 1987

1.4 Filing date - These rules ~~and regulations~~ were filed in the Office of the Secretary of State on May 1, 1987

Section 48.1.2 Definitions

2.1 Certified Belt Examiner - A certified belt examiner shall mean any person who meets the criteria outlined in Section 48.1.3 of these rules and regulations, and is issued a belt examiner certification from the West Virginia Department of Energy.

2.2 Practical Underground Mining Experience - Practical underground mining experience means experience obtained while working as an underground miner, to include any required period of apprenticeship.

2.3 All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 29A of the West Virginia Code.

Section 48.1.3 Criteria for Belt Examiners Certification

3.1 Prior to any person being issued a belt examiners certification, such applicant must: (1) possess a miner's certification (see West Virginia Administrative Regulation, Title 38, Series 8, Section 2.9,

"Guidelines for Issuing Underground Miner's Certificate"); (2) have a total of two years of practical underground mining experience; and (3) successfully complete the certification examination prescribed in Section 48.1.4 of these regulations.

NOTE: The above experience requirements are intended to ensure that such individual possesses a basic and general knowledge of the mine environment and related hazards.

Section 48.1.4 Examination Components

4.1 Examinations for belt examiner certification shall consist of the following two parts:

I. Written

A. Belt conveyor legal requirements
B. Roof control practices
C. Mine ventilation
D. Mine gases and instruments
E. Fire hazards
F. Inspection and reporting procedures

II. Practical

A. Use and care of flame safety lamp
B. Anemometer
C. Methane detector

Section 48.1.5 Application for Certification and Testing Procedures

5.1 Any person desiring to become certified as a belt examiner must complete an application for certification and submit the same to the West Virginia Department of Energy. The applicant will be notified by the nearest regional office of the time and place of the next regularly scheduled examination.

5.2 A score of 75 percent on the written part, and passage of the practical part, is required for successful passage of the exam. The practical portion of the exam and subparts thereof will be scored on a pass/fail basis.

5.3 Upon taking the examination, any person who fails to achieve a score of 75 percent on the written part, or fails the practical part, shall be required to retake the entire examination in order to receive a certificate.

5.4 The Director of the Department of Energy, Mines and Minerals Division, in conjunction with the Board of Miner Training, Education, and Certification, shall develop the application form and guidelines for processing applications and administering examinations.

PROMULGATION HISTORY ABSTRACT

WEST VIRGINIA DEPARTMENT OF ENERGY

TITLE 48 SERIES 2

Rules and Regulations Governing the Safety Training Program for Prospective Underground Coal Miners in West virginia

June 17, 1986	Filed with the Office of Secretary of State as an Emergency Rule. Effective Upon Filing.
July 14, 1986	Notice of Public Hearing and Comment Period
August 15, 1986	Public Hearing
August 22, 1986	End of Public Comment Period. No Oral or Written Comments Received
December 15, 1986	Filed with Legislative Rule-Making Review Committee and Office of Secretary of State as a Proposed Legislative Rule
January 6, 1987	Legislative Rule-Making Review Committee Met to Consider Rule
January 8, 1987	Committee Abstract Recommending Amendments
January 12, 1987	Committee Recommends Authorization of Rule as Amended
January 21, 1987	Amended Rule Filed with Office of Secretary of State
April 7, 1987	Authorization Bill HB 3155 Passed Legislature
May 12, 1987	Rule Final Filed with Office of Secretary of State

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

TITLE 48 SERIES 2

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

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

TITLE 48 SERIES 2

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

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WEST VIRGINIA ADMINISTRATIVE REGULATIONS

BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

TITLE 48 SERIES 2

Subject: Rules and Regulations Governing the Safety Training Program for Prospective Underground 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 the 12th day of May, 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 Underground 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 Procedure).

2.4 Instructors for this program must be approved by the Department of ~~Mines~~ Energy 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: audiovisual equipment, 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 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 Miners' Cards.

(a) Upon completion of the approved 80-hour pre-employment training program, a permit of apprenticeship shall be issued to any person who scores at least 75% of 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 80-hour program.

(b) The apprentice miners 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 apprenticehsip training, provided, that such training is continuous and a miners card 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 miners 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 80 hour program. In the event of failure on the second opportunity the prospective miner must repeat the approved 80 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 card may be renewed ~~(1)~~ ~~time~~ by retaking and passing with a score of at least 75% the appropriate apprenticeship examination ~~within (30) days after the expiration date of the initial apprentice miner's card~~.

(b) The renewed apprentice miner's card is valid for ~~(6)~~ (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 80-hour pre-employment training program in order to obtain a valid card.~~

~~(f)~~ (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 80-hour pre-employment training program in order to retake the examination.

2.9 Guidelines for Issuing Underground Miner's Certification.

(a) After May 1, 1976, a certificate of competency and qualification as an underground miner shall be issued to any person who has successfully completed the 80-hour apprenticeship program and has at least six (6) months total experience, being 108 shifts, worked as an apprentice miner within this State and demonstrated his competence as a miner by scoring at least 80% on the underground miner's certification examination.

(b) Any miner having six (6) months, (108 shifts) verified underground mining experience in the State of West Virginia prior to May 1, 1976, and having in their possession a first-aid certificate and mine law safety card is eligible to take the underground miner's certification examination.

(c) Any miner with at least six (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 underground miner certification examination without attending and completing the approved 80-hour pre-employment training program. If the miner passes the examination with a score at least 80%, then that miner will be issued an underground 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 80-hour pre-employment training program.

(d) Any miner with less than six months (108 shifts) experience in another state must complete the 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 month (108 shifts) apprenticeship period.

Section 3. Course Outline for Training Program for Prospective Underground Coal Miners

3.0 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 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 GENERAL ORIENTATION TO MINING Time: 4 hours

How coal is mined.
Types of coal mines.
Types of mining methods.
Basic coal mining terminology.
Uses of coal.

3.2 INTRODUCTION TO GENERAL MINE SAFETY Time: 4 hours: 2 1/2 hours for General Mine Safety, 1 1/2 hours of Self-Rescuer.

Preparation for underground tour.
Personal safety equipment.
Safety procedures for riding mantrip in and/or out of mine.
Hazards and precautions of moving around the mine.
Use of the self-rescuer (demonstration and practice).

3.3 UNDERGROUND MINE TOUR Time: 6 hours: 1 hour for above ground briefing; 4 hours for tour; 1 hour for debriefing. (NOTE: If an underground tour is not possible, films or other appropriate instructional experiences may be substituted.)

3.4 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.

3.5 RECOGNITION AND AVOIDANCE OF ELECTRICAL HAZARDS Time: 4 hours

Basic electricity.
Conductors and nonconductors of electricity.
Recognition and prevention of electrical hazards.
Removal and treatment of a person in contact with dangerous electrical circuits.

3.6 GENERAL SAFETY PART I. Time: 2 hours

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

Recognition of potential accident-producing situations.
Lifting procedures for high and low coal.
Proper handling of supplies and materials.

3.7 FIRST AID PART II. Time: 2 hours

Demonstration and practice of Holger-Nielsen back pressure method of artificial respiration.
Control of bleeding.
*Pending inclusion of C. P. R. in M.E.S.A.'s general first aid course.

3.8 MINE GASES AND THEIR DETECTION Time: 4 1/2 hours

Types of mine gases and their effects on the human body.
Methods of detection.
Demonstration and use of hand-held methane detectors*
Demonstration and use of flame safety lamps*

3.9 FIRE PREVENTION AND CONTROL Time: 3 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 in the mine.

3.10 VENTILATION AND MINE MAPPING Time: 5 1/2 hours

Introduction to mine ventilation systems.
Principal ventilation system components.
Methods of ventilating the working face for blower and pusher fan systems.
Minimum distances from line curtain to face and curtains to ribs.
Procedures for hanging check curtains.
Mine maps and mine map symbols.
Primary and alternate escapeways on mine maps and section maps.

3.11 FIRST AID - PART III Time: 2 hours

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

3.12 ROOF AND RIB CONTROL Time: 6 hours

Recognition of hazardous roof and rib conditions.
Instruction in visual inspection.
Demonstration and practice of the sound and vibration method of inspection.
Use of the slate bar.
Appropriate actions for new miner under hazardous roof and rib conditions.
Introduction to basic roof support systems.
Correct and incorrect installation of conventional roof supports.
Correct and incorrect installation of roof bolts.

3.13 HAULAGE AND EQUIPMENT SAFETY Time: 7 hours

Hazards and safety practices of working around, near, or on both track haulage equipment and rubber tired vehicles
Track haulage communication

3.14 STATE AND FEDERAL LAWS AND REGULATIONS Time: 2 hours

State and federal laws that pertain to the new miner

*The miner trainee needs to be familiar with how these testing devices are used; he does not need to be skilled in their use at this point.

3.15 FIRST AID - PART IV Time: 2 hours

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

3.16 MINER AND OPERATOR RIGHTS AND RESPONSIBILITIES Time: 3 hours

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

3.17 HEALTH AND SANITATION Time: 2 hours

Detection, causes and prevention of pneumoconiosis, hearing damage, and respirable dust disorders
Federal health and safety, but as it pertains specifically to health and sanitation

3.18 FIRST AID - PART V Time: 2 hours

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

3.19 GENERAL SAFETY - PART II Time: 4 hours

Accident causes and prevention
Tool care
Selection of appropriate tools for tasks
Interpersonal communications
Supervisor-employee relations
Safety attitudes

3.20 GENERAL MINE SAFETY Time: 7 hours

Hazards and related safefy practices for low coal, high coal, wet mines.
Longwall, bridgewall and shortwall and related hazards.
Good housekeeping.
Cleaning activities and related hazards around ribs, tailpieces and belts.
Mine communication systems.
Emergency procedures.
When and how to build barricades.

3.21 FIRST AID - PART VI Time: 2 hours

Location of first aid materials in an underground coal mine.
Review and practice of first aid procedures.

3.22 SUMMARY AND DEBRIEFING Time: 4 hours

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

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

(Note: In some instances, these objectives listed herein specify items or terms which must be included in the instruction (as in 1.2 and 1.4) and in other, none are provided (as in 1.1). 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 agency 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.

4.1 General Orientation to Mining:

Unit Objective:

4.1.0 Given verbal or pictorial descriptions of different kinds of coal mines and coal mining features, equipment, and procedures, the miner trainee will correctly identify these, using commonly accepted nomenclature. The trainee will demonstrate knowledge of a typical underground coal mine and its organizational structure.

Training Objectives:

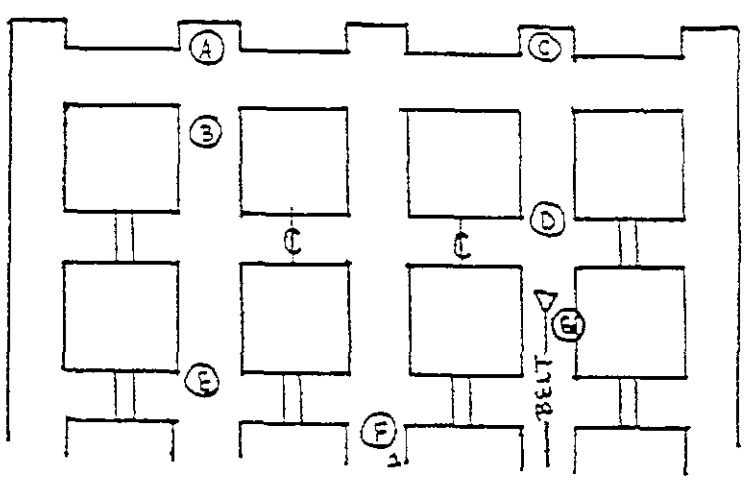
4.1.1. Given a list of verbal or written descriptions of different types of underground coal mine types, the miner trainee will match the correct description to the following three types of mines: shaft mine, drift mine, and slope mine.

4.1.2 Given verbal or pictorial descriptions of the following terms, the trainee will correctly match at least fifteen of the terms with their descriptions:

a. Breakthrough
b. Coalbed
c. Conveyor Belt (belt)
d. Crosscut
e. Entry
f. Face
g. Gob
h. High Coal
i. Low Coal
j. Pillar
k. Pillaring
l. Portal
m. Retreat Mining
n. Rib
o. Roof (top)
p. Room
q. Seam
r. Section
s. Shaft
t. Tipple

4.1.3. Given the simplified mine map shown in Figure A., trainee will correctly identify and label the following mine features: room; face; pillar; crosscut; and entry.

FIGURE A



4.1.4 Given the positions A through G on Figure A, trainee will correctly identify at least six out of the following ten positions:

a. Two positions inby the last open crosscut
b. Five positions outby the last open crosscut
c. Two positions inby the end of the belt (tailpiece)
d. One position outby the end of the belt (tailpiece)

4.1.5 Given verbal or pictorial descriptions of each of the following five methods of mining coal, the trainee will correctly identify at least three of the following five methods:

a. Continuous
b. Conventional mining
c. Longwall mining
d. Shortwall mining
e. Bridgewall mining

4.1.6 Given eleven pictures of each of the following mining machines, the trainee will match at least eight of the eleven pictures with the following term:

a. Shuttle car (buggy)
b. Loading machine
c. Continuous miner
d. Roof bolter
e. Cutting machine
f. Drilling machine
g. Supply car
h. Scoop
i. Rock duster
j. Longwall
k. Locomotive (motor)

4.1.7 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.

4.2 General Safety:

Unit Objective:

4.2.0 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 knowledge of how to conduct a good safety meeting and how to effectively ask questions and receive instructions.

Training Objectives:

4.2.1 Given pictorial examples of hand tools in safe and unsafe conditions, the trainee will identify the tools in unsafe condition. Examples of the unsafe conditions include the following:

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

4.2.2 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:

Tasks	Tools
Driving nails or spads	Shovel
Cutting posts	Spad driver
Scaling loose material	Saw
Setting screws	Axe
Removing protective shields from equipment	Wrench
Setting posts	Screwdriver
Cutting supply binders and bands	Hammer
	Snips
	Slate bar
	Crow bar

4.2.3 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 at least 75% of the correct carrying modes.

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

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

4.2.5 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 for at least 70% of the examples given:

a. Inspect materials for slivers, jagged edges, burrs, and rough or slippery surfaces.
b. Get a firm grip on the object.
c. Keep fingers away from pinch points.
d. Wipe off 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 a hazard themselves.
j. Wear snug-fitting clothes.

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

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

4.2.7 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:

a. Get a buddy to help whenever possible.
b. Use a mechanical aid when possible.
c. Keep knees parted, one alongside the object and one behind.
d. Keep your back straight.
e. Tuck the chin in so that the neck, head, and back are in a straight line.
f. Grip the object with the whole hand.
g. Tuck elbows and arms in near body.
h. Keep body weight over knees.
i. Lift the upper leg and arm muscles.
j. Shift knees when turning with a load; avoid twisting the body.
k. Do not make sudden turns while lifting.

4.2.8 Given sixteen pictures illustrating correct and incorrect methods for handling the following supplies, the trainee will select at least seven of eight of the correct methods:

a. Rails
b. Concrete blocks
c. Headers
d. Roof bolts
e. Cribbing
f. Tubing
g. Crossbars
h. Planks and timbers

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

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

4.3 General Mine Safety

Unit Objective:

4.3.0 Given appropriate examples or cues, the trainee will demonstrate his knowledge of a Mine Emergency Plan, his knowledge of and ability to perform standard safety practices and procedures, and his ability to recognize and respond correctly to common, unsafe underground conditions.

Training Objectives:

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

a. Mine Emergency Plan
b. Check-in procedure
c. Check-out procedure
d. Mantrip
e. Tram
f. Danger board

4.3.2 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:

a. Identification tag (ID check)
b. Hard hat
c. Safety shoes or belts
d. Snug-fitting clothing and long hair control
e. Safety glasses or goggles
f. Electric cap lamp
g. Miner's belt
h. Self-rescuer
i. Non-ragged gloves
j. Knee pads (for low coal)
k. Leg bands

4.3.3 Given pictorial examples of safe and unsafe methods of boarding and riding a conveyor belt, the trainee will select the safe methods.

4.3.4 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:

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

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

4.3.6 Given pictures illustrating underground coal mine hazards, the trainee will correctly identify at least eleven of the following fifteen hazards:

a. Holes
b. Pools of water
c. Low roof bolts and crossbars
d. Timbers
e. Trailing cables
f. Moving equipment
g. Trolley wires
h. Low roof
i. Uneven bottom
j. Poor housekeeping
k. Loose coal or rock
l. Track
m. Uneven rib
n. Check curtains
o. Overhangs

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

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

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

a. Provide head clearance and wear knee pads in low coal.
b. Know where equipment is or where it is going.
c. Anticipate the movement of trailing cables.
d. Use caution when lifting.
e. Assure equipment operators know your location.
f. Keep your body in position for an easy escape.

4.3.10 Given pictures illustrating wet mine hazards, the trainee will correctly match at leasat 75% of the hazards with correct safe-guarding procedures. The safe-guarding procedures include:

a. Stand on rubber pads for insulation at a power station.
b. Wear rubber or insulated gloves and rubber boots.
c. Wear clothing suitable for wet conditions.

4.3.11 Given pictures illustrating correct and incorrect procedures for shoveling the belt, the trainee will select at least 75% of the correct procedures. The correct procedures include:

a. Shovel coal onto the belt in the same direction the belt is moving.
b. Keep clothing fitting snugly to prevent catching on the moving belt.
c. Stop the belt before shoveling coal from under it.
d. Keep long hair confined to prevent it from being caught by moving parts.
e. Use a closed-handle shovel to prevent the miner from being pulled into the belt.

4.3.12 Given pictures illustrating both correct and incorrect procedures for shoveling the tailpiece, the trainee will select at least 75% of the correct procedures. Correct procedures include:

a. Turn off belt before shoveling around the tailpiece.
b. Do not touch electric cables or electric motor with the shovel.
c. Watch out for tramming shuttle cars.
d. See that guards are in place.
e. Remove guard only on instructions of supervisor and replace guard after work is completed.

4.3.13 Given pictures illustrating correct and incorrect procedures for shoveling the rib, the trainee will select at least 75% of the correct procedures. Correct procedures include:

a. Check rib for bad conditions and take appropriate action.
b. Do not stand too close to rib while shoveling loose coal.
c. Watch out for tramming equipment.
d. Don't shovel under bare trolley wire.

4.3.14 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.

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

a. Stand clear when the operator moves the jacks forward.
b. Take caution against falling into the pan belt.
c. Stand on the intake side when the cutting device is operating.
d. Stay under the roof supports.

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

a. When you hear three shots, pound hard 10 times.
b. Rest fifteen minutes and repeat.
c. When you hear 5 shots, you have been located.

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

a. Correct the unsafe condition (if possible).
b. Report to foreman.

4.3.18 Given a diagram of the following five cap light signals to be communicated, the miner trainee will match the correct communication signal (or flagging) to at least three of the five:

a. Move left
b. Move right
c. Come here
d. Yes (go)
e. No (stop)

4.3.19 Given correct and incorrect statements regarding blasting, the miner trainee will select at least 50% of the correct statements. Correct statements include:

a. Only certified "shot firers" are permitted to place explosives at the blast site and do the actual blasting.
b. Noncertified men are permitted to transport explosives to the working section.
c. Do not enter the smoke or dust cloud that follows blasting.
d. Stand clear when you hear the shotfirer yell his warning.

4.4 Ventilation and Mine Mapping

Unit Objective:

4.4.0 Given the appropriate verbal or pictorial examples, the trainee will demonstrate his knowledge of the principles of mine ventilation and the hazards it is designed to counter. The trainee will demonstrate his knowledge of the nomenclature of mine ventilation. He will demonstrate his understanding of mine maps, their symbology, and his ability to interpret them correctly.

Training Objectives:

4.4.1 Given verbal or pictorial descriptions of the following terms, the trainee will correctly match 75% of the terms with their descriptions:

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

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

4.4.3 Given a list of distances, the miner 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 feet from the face to the curtain.

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

4.4.5 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:

a. Select a place in the entry suitable for travel.
b. Remove uneven ribs or protruding brows.
c. Remove any other loose objects.
d. Install line brattice to minimize air leakage.

4.4.6 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.

4.4.7 Given a mine map, the miner trainee will correctly label each of the following:

a. Intake air
b. Return air
c. Regulator
d. Overcast
e. Undercast
f. Belt
g. Track
h. Permanent Stopping
i. Escapeway
j. Check curtain
k. Line curtain
l. Door

4.4.8 Given mine maps of two working sections, one with an isolated intake escapeway and one without, the trainee will draw lines on each map indicating the appropriate escapeways for each of two fire locations.

4.5 Recognition and Avoidance of Electrical Wires

Unit Objective:

4.5.0 Given verbal or pictorial examples, the trainee will demonstrate his knowledge of electrical hazards and of their related safety procedures and practices. He will demonstrate his knowledge of common terms concerning mine electrical systems.

Training Objectives:

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

a. Alternating current (AC)
b. Bonding
c. Conductor
d. Direct current (DC)
e. Distribution (plug) box
f. Feeder circuits
g. Fuse/Circuit breaker
h. Ground
i. Insulation
j. Nip station
k. Nips
1. Power cables
m. Splice
u. Trailing cables
o. Transformer
p. Trolley wire

4.5.2 Given pictures or items commonly used or found in a mine, the trainee will separate conductors from non-conductors of electricity.

4.5.3 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.

4.5.4 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.

4.5.5 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:

a. Broken cable
b. Partially broken cables
c. Damaged insulation
d. Defective splice

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

4.6 Prevention and Control of Mine Fires and Explosions

Unit Objective:

4.6.0 Given the appropriate cues and illustrated examples, the trainee will demonstrate his knowledge of fire hazards and their control. He will demonstrate his knowledge of the rules pertaining to the location and operation of fire fighting equipment and his ability to apply that knowledge appropriately.

Training Objectives:

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

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

4.6.2 Given a list of mine locations, the trainee will select at least six out of eight locations where State Law requires fire fighting equipment to be stored. These locations are:

a. Temporary and permanent electrical installations
b. Oil storage areas
c. All loading points
d. Areas where welding, soldering, or cutting is being done
e. Within twenty-five feet of wooden doors where power lines pass
f. Track haulage and face equipment (portable extinguishers only)
g. Along belt conveyors
h. At each working section

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

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

4.6.4 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:

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.
b. Rock dust shall be applied to include the last open crosscut of rooms and entries and to within forty feet of the face.

4.7 Mine Gas Identification and Detection

Unit Objective:

4.7.0 Given the appropriate cues and examples, the trainee will demonstrate his knowledge of the hazards of common mine gases, method of detection of these hazards, and the protective measures required by law.

Training Objectives:

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

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

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

4.7.3 Given pictures of flame safety lamp with different flame heights and colors, the trainee will correctly select the illustrations of each of the following conditions:

a. Safe atmosphere
b. Oxygen deficiency atmosphere
c. Methane containing atmosphere

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

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

a. All face equipment operators must test for methane before energizing equipment and every twenty minutes during operation.
b. All equipment operators must test for methane before tramming into a working face.
c. Mine formen/fire bosses must check for methane before each shift and at least once every two hours during the shift.

4.7.6 Given a verbal list of percentages of methane concentrations in the face area, the trainee will match the maximum allowable methane concentration in the face area to the following action that must be taken as defined by law:

a. 1.5% methane - disconnect electrical power.
b. 1.0% methane - change ventilation.
c. 1.5% methane - evacuate personnel from endangered area.

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

4.7.8 Given a verbal list of intervals ranging from five miuutes to five hours, the trainee will select the correct interval for the protective capacity of the self-rescuer in a one percent concentration of carbon monoxide.

4.7.9 Given pictorial examples of the eight steps involved in donning the self-rescuer, arranged out of sequence, the trainee will arrange the steps in correct sequence. The steps, in sequence, are:

a. Open self-rescuer by firmly pulling lever to break canister seal.
b. Remove cover and discard.
c. Remove from container.
d. Grip rubber tips of mouthpiece firmly between teeth, making an airtight seal with lips around mouthpiece.
e. Close nostrils with the nose clip.
f. Place headstrap on head.
g. Replace hat.
h. Breathe only through rescuer.

4.7.10 Given pictorial examples of correct and incorrect procedures for testing the M.S.A. W65 and the Drager Self-Rescuer units for airtightness and damage, the trainee will select the correct procedures.

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

a. Miners must be issued self-rescuer units by the mine operator.
b. The unit must either be worn or kept within easy reach (3 feet) at all times while the miner is underground.
c. Miners must be retrained in the use of the self-rescuer at least once a year.

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

4.8 Roof and Rib Control

Unit Objective:

4.8.0 Given the appropriate visual and auditory examples, the trainee will demonstrate his knowledge of correct rib and roof control practices and procedures. He will recognize geological formations commonly encountered underground that are hazardous. He will recognize both visual and auditory cues that denote either a potential or existing hazard.

Training Objective:

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

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

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

a. Cracks
b. Slips
c. Kettle bottoms
d. Fossil stumps
e. Inverted horsebacks (hogbacks)
f. Clay veins
g. Water emissions or moisture-laden
h. Rolls
i. Brows
j. Dribbling or sluffing off of coal from ribs
k. Improperly installed roof bolts
l. Bending of crossbars or posts; bits of bark loosened by pressure on posts or timbers
m. Hearing roof or rib working (popping or cracking)
n. Posts creaking and roof bolts pinging

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

a. Visual inspection of top and ribs
b. Sound and vibration method of inspection

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

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

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

4.9 Miner and Operator Rights and Responsibilities

Unit Objective:

4.9.0 Given appropriate operator and miner rights and responsibilities governing current U.M.W. contract, grievance procedures and company rules and regulations, recognize and understand them as they pertain to the entry level coal miner. (NOTE: The following objectives are suggested for possible inclusion in a training program and, as such, are not included in the criterion test package.)

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

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, the trainee will select the correct statements. Correct statements include:

a. Work with the 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 concerning a miner's right to not work under conditions he believes are abnormally and immediately dangerous beyond the normal hazards of operation as specified in the 1974 West Virginia Underground Coal Mine Safety Laws, the trainee will select the correct statements.

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

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

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

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

4.9.7 Given correct and incorrect statements regarding the job bidding procedures as specified in the 1974 Bitumiuous Wage Agreement, the trainee will select the correct statement.

4.9.8 Given correct and incorrect statements regarding work restrictions during the first ninety days of employment as specified in the 1974 Bituminous Wage Agreement, the trainee will select the correct statements.

4.10 State and Federal Laws Pertaining to Mining

Unit Objective:

4.10.0 Given the appropriate cues, the trainee will demonstrate his knowledge of the laws and regulations pertaining to the certification of miners health and safety standards, and inspections.

Training Objectives:

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

a. Certified
b. Qualified
c. Permissible equipment

4.10.2 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 may enter the mine only after the fireboss has declared it safe.

4.10.3 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.

4.10.4 Given verbal descriptions of ten jobs in an underground mine, the trainee will correctly select the six which require special certification or qualifications. These are:

a. Underground Mine Forman/Fire Boss
b. Assistant Underground Mine Forman/Fire Boss
c. Shot Firer
d. Mine Electrician
e. Mine Mechanic
f. Belt Examiner

4.10.5 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. The penalty is not more than two hundred and fifty dollars for each violation.

4.10.6 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 a health and safety standard occurs. The penalty is not more than three thousand dollars for each violation.

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

a. Any working section more than 1,500 feet from the main portal.
b. Automatic elevators.
c. Haulage equipment.
d. Every 4,000 feet in a return airway that has been designated as an escapeway.

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

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.

4.11 Haulage and Equipment Safety

Unit Objective:

4.11.0 Given the appropriate examples and cues, the trainee will demonstrate understanding of the safety rules, practices, and procedures pertaining to haulage and haulageway equipment.

Training Objectives:

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

a. Backpoling
b. Clearance side
c. Dispatcher
d. Mainline
e. Manholes
f. Shelter hole
g. Tight side
h. Track haulageways
i. Trip
j. Trolley wire

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

a. Twenty-four inch clearance from the farthest projection on the clearance side.
b. Clearance side free of debris or materials.

4.11.3 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:

a. Warning lights and reflective signs are used to warn against low head clearance.
b. Mark or point out switches.

4.11.4 Given pictorial examples of safe and unsafe non-track haulageways, the trainee will select each unsafe example. Unsafe examples include:

a. Bottom irregularities
b. Debris
c. Wet and muddy conditions

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

a. Brakes must be well maintained and functional.
b. Lights must illuminate.
c. Warning devices must work.
d. Lifting bar and jack must be present on all track equipment.
e. Cable must be in good condition.

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

a. Check roof and ribs of working area.
b. Make methane tests of the area.
c. Check to assure equipment control switch is in OFF position.
d. Inspect condition of trailing cable.
e. Be certain the correct breaker switch is selected.
f. Check for free and unobstructed movement of controls.

4.11.7 Given the pre-operational 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:

a. Check roof and ribs of working area.
b. Make methane tests of the area.
c. Inspect condition of battery connection.
d. Check for free and unobstructed movement of controls.

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

a. Check roof and ribs of working area.
b. Make methane test of area.
c. Inspect condition of trailing cable.

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

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

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

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

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

a. Not using warning device when tramming through check curtains.
b. Tramming too fast.
c. Hitting bumps, ruts, or holes.
d. Making first trip of the day or first trip into a new area without first checking conditions.
e. Going under brows.
f. Stopping or parking near check curtains.

4.12 Health and Sanitation

Unit Objective:

4.12.0 Given the appropriate cues and visual or verbal examples, the trainee will demonstrate his understanding of the hazards of and protection against coal dust and excessive noise.

Training Objectives:

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

a. Personal dust sampler.
b. Pneumoconiosis (black lung).
c. Respirable dust.
d. Respirator.
e. Ear protectors.
f. Porta-potties

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

4.13 First Aid

Unit Objective:

4.13.0 Given the requisite cues and verbal or pictorial illustrations, the trainee will demonstrate his knowledge of and ability to administer emergency medical attention when it is required. He will demonstrate his ability to recognize and correctly define common words relating to the administration of first aid. He will demonstrate his ability to perform certain emergency medical procedures properly and in correct sequence. He will demonstrate his ability to employ effectively common first aid equipment and supplies.

Training Objectives:

4.13.1 Given verbal or pictorial descriptions of the following terms, the trainee will correctly match at least fifteen of the terms to their descriptions.

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

4.13.2 Given the following steps for administering first aid, arranged out of sequence, the trainee will rearrange 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
f. Look for fractures and apply appropriate treatment
g. Treat burns
h. Transport patient

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

a. Mouth to mouth artificial respiration
b. Back pressure method of artificial respiration
c. Heart massage

4.13.4 Given a chart of the human body, the trainee will correctly place a "P" on at least eight of the eleven pressure points for one side of the body.

4.13.5 Given a chart of the human body and four locations of serious wounds, the trainee will place an "X" at the correct pressure point to control bleeding for each wound.

4.13.6 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:

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 outside 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 the tourniquet was applied.

4.13.7 Given verbal and pictorial examples of possible causes of physical shock, the trainee will correctly select at least four of the following causes:

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

4.13.8 Given verbal descriptions of physical and emotional reactions, the miner trainee will select at least three of the symptoms of physical shock. Physical shock symptoms include:

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

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

a. Lay the victim flat.
b. Elevate feet six inches.
c. Clear mouth of foreign objects.
d. Loosen clothing.
e. Keep the victim warm and dry.

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

4.13.11 Given correct and incorrect pictorial examples of methods for dressing wounds, the trainee will select the correct method for at least three of the following:

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

4.13.12 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.

4.13.13 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:

a. Lay the patient flat on his back with his knees drawn up.
b. Center one narrow cravat bandage across 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.

4.13.14 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.

4.13.15 Given the four 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:

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

4.13.16 Given the correct methods of treating the following types of fractures: head, neck, back, rib, pelvis, arm, hand, leg, and foot, the miner trainee will match the correct method with at least six fractures.

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

4.13.18 Given a list of places in a mine, select the two places where first aid equipment must be located. This list includes:

a. At the bottom of each regularly travelled slope or shaft or at the main entrance to the mine when the shafts or slope bottoms are less than one thousand feet from the surfaces.
b. At a point in each working section, not more than 500 feet outby the active working face or faces.

4.14 Training Course Measurement Criteria

4.14.1 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.

4.14.2 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 eighty (80) 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 4 for Approval Procedures for Instructors).
d. Classroom dimensions and approximate number of students per class.

5.2 Any training center not using the training course available through the Department of ~~Mines~~ Energy must obtain approval of it's 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 eighty (80) hour course must seek approval by the Department of ~~Mines~~ Energy by sending the following information to the Department of ~~Mines~~ Energy, ~~Room~~ ~~E151~~, ~~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, underground 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.