WEST VIRGINIA
SECRETARY OF STATE
BETTY IRELAND
ADMINISTRATIVE LAW DIVISION

Form #3

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OFFICE WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: BOARD OF MINER TRAINING EDUCATION AND CERTIFICATION TITLE NUMBER: 48

CITE AUTHORITY: 22A-7-5 and 22A-7-6

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 RULE BEING PROPOSED: 8

TITLE OF RULE BEING PROPOSED: CRITERIA AND STANDARDS FOR ALTERNATIVE TRAINING PROGRAMS FOR APPRENTICE COAL MINE ELECTRIANS

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

Authorized Signature

QUESTIONNAIRE

(Please include a copy of this form with each filing of your rule: Notice of Public Hearing or Comment Period; Proposed Rule, and if needed, Emergency and Modified Rule.)

DATE: July 26, 2007

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM:(*Agency Name, Address & Phone No.*) Miner Training Education and Certification

LEGISLATIVE RULE TITLE: Title 48 Series 8 - Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians

1. Authorizing statute(s) citation W.Va. Code 22A-7-5 and 22A-7-6

2. a. Date filed in State Register with Notice of Hearing or Public Comment Period:

   May 17, 2007

   b. What other notice, including advertising, did you give of the hearing?

   1. Mailed copy of regulations and notice of comment period to all West Virginia coal mine operators

   2. Posted on agency website: www.wvminesafety.org

   c. Date of Public Hearing(s) ***or*** Public Comment Period ended:

   June 22, 2007

   d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

   Attached X No comments received _____

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

July 26, 2007

f. **Name, title, address and <u>phone/fax/e-mail numbers</u>** of agency person(s) to receive all *written correspondence* regarding this rule: (Please type)

C. A. Phillips, Deputy Director / WV Office of MHST / 1615 Washington Street East / Charleston WV 25311 / 304 558-1425 or 304 957-2502 ext 52167 / caphillips@mines.state.wv.us

Barry Koerber, Assistant Attorney General / c/o WV Office of MHST / 1615 Washington Street East / Charleston WV 25311 / 304 558-1425 or 957-2502 ext 52166 / blk@wvago.gov

g. **<u>IF DIFFERENT</u> FROM ITEM 'f'**, please give **Name, title, address and phone number(s)** of agency person(s) who wrote and/or has responsibility for the contents of this rule: (Please type)

Board of Miner Training Education and Certification
1615 Washington Street East
Charleston WV 25311
304 558-1425

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

Not applicable

b. Date of hearing or comment period:

N/A

c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

N/A

d. Attach findings and determinations and reasons:

Attached N/A

SUMMARY OF RULE

This rule establishes the criteria and standards that individual training programs must meet in order to qualify as an alternative electrical training program. Specifically, this rule establishes the educational and experience framework that an individual must obtain in order to become a certified electrician in the State of West Virginia.

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians

Type of Rule: [X] Legislative [ ] Interpretive [ ] Procedural

Agency: WV Office of Miners Health Safety and Training

Address: 1615 Washington Street East
Charleston, West Virginia 25311-2126

Phone Number: 304-558-1425 Email: caphillips@mines.state.wv.us

Fiscal Note Summary

Summarize in a clear and concise manner what impact this measure will have on costs and revenues of state government.

This rule should have no impact on costs and/or revenues of state government.

Fiscal Note Detail

Show over-all effect in Item 1 and 2 and, in Item 3, give an explanation of Breakdown by fiscal year, including long-range effect.

FISCAL YEAR			
Effect of Proposal	Current Increase/Decrease (use "-")	Next Increase/Decrease (use "-")	Fiscal Year (Upon Full Implementation)
1. Estimated Total Cost	0.00	0.00	0.00
Personal Services	0.00	0.00	0.00
Current Expenses	0.00	0.00	0.00
Repairs & Alterations	0.00	0.00	0.00
Assets	0.00	0.00	0.00
Other	0.00	0.00	0.00
2. Estimated Total Revenues	0.00	0.00	0.00

Rule Title: Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians

Rule Title: Rules Governing the Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians

3. **Explanation of above estimates (including long-range effect):**
Please include any increase or decrease in fees in your estimated total revenues.

N/A

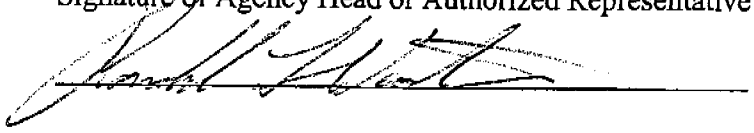
MEMORANDUM

Please identify any areas of vagueness, technical defects, reasons the proposed rule **would not** have a fiscal impact, and/or any special issues **not** captured elsewhere on this form.

N/A

Date: May 17, 2007

Signature of Agency Head or Authorized Representative



TITLE 48
EMERGENCY RULE
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION

SERIES 8
CRITERIA AND STANDARDS FOR ALTERNATIVE TRAINING PROGRAMS FOR APPRENTICE COAL MINE ELECTRICIANS

§48-8-1. General.

1.1. Scope. -- This rule establishes criteria and standards for programs, serving as an alternative to the traditional program established in the "Rules and Regulations Governing the Standards for Certification of Coal Mine Electricians," 48CSR7, for the training of apprentices to become Certified Coal Mine Electricians. This rule is only intended to regulate the structure and content of an alternative training program and it does not alter or affect any other requirement for the certification of coal mine electricians.

1.2. Authority. -- W. Va. Code §22A-7-5 and §22A-7-6.

1.3. Filing Date. -- .

1.4. Effective Date. --

§48-8-2. Definitions.

2.1. Alternative Training Program – For the purpose of this rule, the term "alternative training program" refers to a program of instruction, practical exercises and supervised, hands-on electrical work that is intended as an alternative to the traditional twelve-month program provided in the Board's Rules and Regulations Governing the Standards for Certification of Coal Mine Electricians," 48CSR7.

2.2. Apprentice Electrician -- The term "apprentice electrician" means an individual who is the holder of an apprentice electrician's card, and is in training to perform maintenance work on electrical circuits or electrically operated equipment.

2.3. Approved -- The term "approved" means in strict compliance with mining law, or in the absence of law, accepted by a recognized standardizing body or organization whose approval is generally recognized as authoritative on the subject. (Refer to W. Va. Code §22A-1-2(3)).

2.4. Certification Examinations -- The term "certification examinations" means the examinations in specific categories within these regulations which have been approved by the Board of Miner Training, Education, and Certification, and which are administered by the Office of Miners' Health, Safety and Training.

2.5. Certified Electrician -- The term "certified electrician" means any person who is:

(a) qualified as a mine electrician, and who has passed an examination administered by the Office of Miners' Health, Safety and Training and has satisfactorily completed a coal mine electrical training program approved by the Office of Miner' Health, Safety and Training; or, any person who

(b) has at least three (3) years of experience in performing electrical work underground in a coal mine, in the surface work areas of an underground coal mine, in a surface coal mine, in a noncoal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and who has passed a certification examination administered by the Office of Miners' Health, Safety and Training; or

(c) any person who is qualified as a mine electrician in any state that recognizes certified electricians licensed in West Virginia.

2.6. Certified Person -- The term "certified person" when used to designate the kind of

person to whom the performance of duty in connection with the operation of a mine shall be assigned, means a person who is qualified under the provisions of the law to perform such duty. (Refer to W. Va. Code §22A-1-2(d)(3)).

2.7. Direct Supervision -- The term "direct supervision" means the supervision of an apprentice electrician by a certified electrician in the work area where electrical work is being performed.

2.8. Electrical work -- The term "electrical work" means work consisting primarily of electrical construction, installation, testing, inspection, maintenance and repair tasks on electrical coal mining equipment, apparatus, circuits, and/or distribution circuits used in or around a coal mine.

2.9. High Voltage -- The term "high voltage" means voltages of more than one thousand volts.

2.10. Immediate Supervision -- The term "immediate supervision" means the physical presence of a certified electrician with the apprentice electrician.

2.11. Low Voltage -- The term "low voltage" means up to and including six hundred sixty volts.

2.12. Medium Voltage -- The term "medium voltage" means voltages from six hundred sixty one to one thousand volts.

2.13. Qualified Person-Electrician Alternative Program -- The term "qualified person-electrician-alternative program" means a person who has completed all of the educational and testing requirements established by the Board of Miner Training, Education, and Certification pursuant to 48 CSR Series 8.

2.14. Traditional Training Program – The term "traditional training program" refers to the standard, certified electrician training program established by the Board of Miner Training, Education, and Certification pursuant to 48 CSR 7, 4.1 and 8.2.

2.15. Work Area -- The term "work area" means within five-hundred (500) feet in any direction of the area in a mine where electrical work is being performed.

§48-8-3. Requirement for Board Approval

3.1. In lieu of training under the traditional training program established under "Rules and Regulations Governing the Standards for Certification of Coal Mine Electricians," 48CSR7, the Board of Miner Training, Education and Certification may accept apprentice training through programs that meet the criteria and standards of this rule. No alternative training program will be accepted as a basis for performing unsupervised electrical work in a mine unless it complies with the provisions of this rule.

3.2. A person becoming an apprentice electrician shall first possess an experienced miner card (certified miner card). Exceptions to this requirement are found in 48 CSR 8-7.1 *et seq.*

§48-8-4. Initial Training

4.1. Each trainee will complete an initial 8-hour electrical hazards class. Upon completion of the class, the instructor will submit required documentation to the West Virginia Office of Miners' Health, Safety and Training for issuance of apprentice electrician cards. The class will include but not be limited to:

(a) Lockout and tag procedures - trainee will receive a lock, tag and multi-hole lockout device

(b) Electrical hazards identification - trainee will receive a 1000VAC rated voltage detector

(c) Electrical grounding

(d) Voltage effects on the human body

(e) High voltage power systems

(f) Electric arc welding safety

(g) PPE - Personnel Protective Equipment

(h) Fatal electrical accidents

4.2. Once the initial training is completed, the electrical trainee will begin a formal training class. Each trainee will be offered 360 total classroom and lab training hours. Each trainee will be required to attend and document 90% of these hours for a minimum total of 324 hours. The training will be conducted in a classroom and practical lab environment. All classroom and practical training will be completed by a Mine Safety and Health Administration certified electrical instructor. All classroom and lab training will be documented and cosigned by a West Virginia certified mine electrician, see appendix A. The training session will be in progress for a minimum of six calendar months and shall not exceed nine calendar months. During the training period, the trainee will document all hands-on practical electrical mine experience, both underground and in the lab. All electrical experience will be cosigned by a West Virginia certified mine electrician. The trainee will maintain a low/medium and high voltage experience log, see appendix B.

4.3. Electrical contractors, employees of preparation plants and employees working on the surface areas which do not require miner certification, may become certified as an apprentice electrician provided they are enrolled in an approved electrical training program for twelve (12) month period or in an alternative apprentice electrical program as set forth in 8.1. After completion of the approved twelve (12) month electrical training program, the apprentice may file an application and challenge the electrical certification test to become a certified electrician. After becoming a certified electrician if he or she seeks employment in an underground mine, which requires a miner certification and works in the capacity of an electrician, all work must be under the direct supervision of a certified electrician who is also a certified miner. A written record shall be kept at the mine site reflecting the work being performed. After the employee has obtained a valid miner certification, working at least six (6) months, he or she would be qualified to perform the duties as a certified electrician unsupervised.

4.4. The trainee will:

(a) Work at an underground mine, surface mine or preparation plant. The trainee will complete and log a minimum of 277 electrical experience hours with 56 hours of this to be high voltage. The mine electrical experience will be on low, medium, and high voltage mine systems that he has worked on both at the mine site or in the practical hands on labs. All electrical work experience will be logged as required in 48CSR7-4.

(b) 20% of the total hands-on electrical work (56 hours) will be completed on high voltage systems.

§48-8-5. Certified Electrician Training Plan

5.1. During the first six months of the training program the trainee shall attend nine weeks of electrical class for a total of 360 electrical training hours. Of these 360 hours, normally 220 hours shall be classroom training, and at least 140 hours shall be of hands-on laboratory type training on mine electrical circuits. This hands-on laboratory type training shall be documented and countersigned by the certified electrical instructor who administered the training sessions. See Appendix "A". The trainee shall also be working at the mine site as an apprentice electrician during the first six months of the training period. He shall perform a minimum of 40 hours of actual hands on electrical work at the mine site which shall be documented and countersigned by the certified electrician who supervised the work. See appendix "B".

5.2. When the apprentice electrician enrolled in an approved alternative electrical training program of at least 6 months and meets the requirements of the approved program, they may challenge the electrical test and be issued a

qualified person-electrician card.

5.3. A qualified person-electrician can not perform the following duties without the direct supervision of a certified electrician. Duties which will not be permitted by a qualified person-electrician include: troubleshooting high voltage circuits; repairing high voltage substations; energizing or de-energizing open mounted type high voltage disconnects; splicing high voltage cables; and testing and troubleshooting high voltage transformers, high voltage vacuum breakers and high voltage line splitters.

5.4. A qualified person-electrician is not permitted to perform the required monthly tests of high voltage circuit protective devices except under the direct supervision of a certified electrician. After twelve (12) months from the issue date of the electrician's apprentice card, the qualified person-electrician may apply for an electrician certification card. This application will be submitted on a document provided by the West Virginia Office of Miner's Health, Safety and Training at which time an electrician certification card will be issued.

5.5. During the six months period after receiving a Qualified Person – Electrical Card, he shall perform a minimum of 97 hours of actual hands-on electrical work at the mine site which shall be documented and countersigned by the certified electrician who supervised the work. See appendix "B". Upon completion of the required six month period and the completion of the required hands-on electrical experience, and a signed affidavit from mine management stating that he has accomplished the required work experience, he will be issued a final Certified Electrician's Certificate.

§48-8-6. Classroom and Lab Training Plan (360 hours, documented with cosigned log)

6.1. The trainee will be instructed in all aspects of mining electricity, which will include:

(a) State and Federal mining laws which apply to electricity
(b) Permissibility
(c) AC and DC Theory
(d) Basic Electricity
(e) Schematic Reading
(f) Gas Detection and Fire Prevention
(g) National Electric Code

6.2. In support of the above sections as well as additional material, the following material will be covered in the classroom:

(a) Basic Electricity

1. Introduction
2. History of electricity
3. Dangers of Electricity
   a. Shocks and Burns
   b. Rubber gloves
   c. Removing a person from power
   d. Artificial Respiration
4. Lock-out and Tag-Out Procedures
5. Electrical Fundamentals
6. How is electricity produced – Power Generation
7. Magnetism
8. Insulators and conductors
9. Electrical quantities and Ohm's Law
10. Getting Electricity to the Mine
11. Getting electricity into the mine
12. Supplying power to the face area
13. Basic Trailing Cables
14. Basic Batteries
15. Basic Trolley and Track Systems

(b) DC Theory and Application

1. DC Symbols
   a. Test and discussion
2. Ohms Law and discussion
3. Volt Ohm Meters
   a. Analog
   b. Digital
   c. Discussion, Demonstration, and Hands-on Practice
   d. Test on Meter Principals
   e. Test on Meter Readings
4. Ammeters
   a. Analog
   b. Digital
   c. Discussion, Demonstration, and Hands-on Practice

d. Test on Meter Principals
e. Test on Meter Readings
5. Meggers
a. Analog
b. Digital
c. Discussion, Demonstration, and Hands-on Practice
d. Test on Meter Principals
e. Test on Meter Readings
6. Series and Parallel Circuits
a. Discussion, Demonstration, and Hands-on Practice
b. Test and discussion
7. Batteries
a. Discussion, Demonstration, and Hands-on Practice
b. Test and discussion
8. Basic DC Panel
9. Switches
a. Discussion, Demonstration, and Hands-on Practice
b. Test and discussion
10. Contactor Assembly and Disassembly
a. Discussion, Demonstration, and Hands-on Practice
11. Fuses
a. Discussion, Demonstration, and Hands-on Practice
b. Test and discussion
12. Mercury Tubes
a. Types and Operation
b. Holding Circuits
c. Timing Circuits
d. Discussion, Demonstration, and Hands-on Practice
13. Master Contactors
a. Discussion, Demonstration, and Hands-on Practice
14. Resistors
a. Series circuits
b. Parallel circuits
c. Combination circuits
15. Motor Starting Resistance
a. Discussion, Demonstration, and Hands-on Practice
16. Cross the Line Contactors
a. Discussion, Demonstration, and Hands-on Practice
17. Motor Overloads
a. Discussion, Demonstration, and Hands-on Practice
18. Complete Schematic of Control Circuit
a. Discussion, Demonstration
19. Complete Wiring of Control Circuit
a. Discussion, Demonstration, and Hands-on Practice
20. Component Labeling Test
a. Discussion, Demonstration
21. Troubleshooting Control Circuits
a. Discussion, Demonstration, and Hands-on Practice
22. DC Motors
a. Types – Series, Shunt, and Compound
b. Wiring
c. Reversing
d. Checking
e. Discussion, Demonstration, and Hands-on Practice
23. Troubleshooting Control and Motor Circuits
a. Discussion, Demonstration, and Hands-on Practice
24. DC Motor Fundamentals Test
25. Solenoids
26. Cables
a. Conductor
b. Three Conductor
c. Frame Grounding
d. Discussion, Demonstration, and a Hands-on examination of different DC Cables
e. Troubleshooting DC Cables
f. Cable Test
27. Solid State Devices
28. Diode Systems
a. Diodes
b. Types of Diodes
c. Testing
d. Discussion, Demonstration, and Hands-on Practice
29. Rectifiers
a. Half Wave
b. Full Wave
30. Diode Grounding Panel
a. Discussion
b. Wiring
c. Troubleshooting
d. Discussion, Demonstration, and Hands-on Practice
31. Tests on DC Grounding Systems

32. Hands-On Wiring and Troubleshooting of DC Equipment
    a. Basic DC Panel with 3 Contactors, Resistance, and Series, Shunt, and Compound Motor
    b. Basic Grounding Diode Panel
    c. Basic DC Panel with Two-Pole Contactors, Resistance, and Motor
    d. Basic DC Panel with 4 contactors, Resistance, and motor
    e. Basic DC WV Test Panel
    f. DC Bolt Machine Panel
    g. Trolley Operated Jeep Panel
    h. SCR Drive Scoop Panel
    i. Drive Scoop Panel
    j. Transistor Drive Coal Hauler Panel
    k. SCR Drive Coal Hauler Panel
    l. Transistor Drive Coal Hauler Panel

c. AC Theory and Application

1. How AC electricity is generated
2. AC Electricity
    a. Single Phase
    b. Three Phase
3. AC Symbols
    a. Discussion, Demonstration, and Practice
    b. Test and discussion
4. Circuit Breakers
5. Transformers
    a. Simple
    b. Tapped
    c. Combination
    d. Discussion, Demonstration, and Hands-on Practice
    e. Transformer Test
6. Line Starters
    a. Tips
    b. Coils
    c. Auxiliary Relays
    d. Discussion, Demonstration, and Hands-on Practice
7. Thermal Overloads
    a. Discussion, Demonstration, and Hands-on Practice
8. AC Motors
    a. Types – Squirrel Cage and Wound Rotor Motors
    b. Wiring
    c. Reversing
    d. Testing
    e. Discussion, Demonstration, and Hands-on Practice
9. Reading Schematic Drawings
10. Reading Wiring Drawings
11. Wiring of Motor and Control Circuits
    a. Discussion, Demonstration, and Hands-on Practice
12. Troubleshooting of Motor and Control Circuits
    a. Discussion, Demonstration, and Hands-on Practice
13. Silicon Controlled Rectifiers (SCRs)
    a. Discussion, Demonstration, and Hands-on Practice
14. AC Fundamentals Test
15. AC Protection Devices
16. Circuit Breakers
    a. Breaker Short Circuit Adjustments
    b. Breaker Ampere Capacity
    c. Breaker Thermal Trip Units
    d. Discussion, Demonstration, and Hands-on Practice
17. Receptacle and Plug Layout
    a. Discussion, Demonstration, and Hands-on Practice
18. Operation of Current Transformers
    a. Discussion, Demonstration, and Hands-on Practice
19. Operation of Ground Trip Devices
    a. Discussion, Demonstration, and Hands-on Practice
20. Operation of Ground Check Devices
    a. Impedance type ground monitors
    b. Continuity type ground monitors
    c. Wireless type ground monitors
    d. Hands-on wiring and Troubleshooting of Ground Monitors
21. AC Power Simulator System
    a. Discussion, Demonstration, and Hands-on Practice
    b. Testing
22. Troubleshooting of Complete AC Power Supply Systems
23. Hands-On Wiring and Troubleshooting of AC Equipment
    a. Basic AC Training Panel – 1 Linestarter, breaker, transformer, fuses, overloads, three phase motor

b. Basic AC Training Panel – 2 Linestarters, breaker, transformer, fuses, overloads, 2 three phase motors
c. Two different Basic AC Panels for Prep Plant
d. Basic AC WV Test Panel
e. AC Bolt Machine
f. Power Distribution Box
g. Section Power Center
h. Remote Control Continuous Miner with DC Tram
i. Remote Control Continuous Miner with AC Tram
j. Programmable Logic Controller Belt Starter Panel
k. Programmable Logic Controller Prep Plant Panel
l. Programmable Logic Controller Pump Panel
m. CO Monitor System
n. WV Test Panel for Power Center

24. Electrical Cables
    a. Types and Construction
    b. Splicing techniques
    c. Trouble-shooting Cables
        (1) With Ohmmeter
        (2) With Cable Thumper

d. High Voltage

1. High Voltage gloves
2. Hot sticks
3. Visible disconnects
4. Isolation transformers
5. Circuit breakers
6. Oil Breakers
7. Vacuum Breakers
8. Ground resistors
9. Ground monitors
10. Splicing high voltage cables
11. Lightning arrestors
12. Hands-On Wiring and Troubleshooting of High Voltage AC Equipment
    a. High Voltage Vacuum Breaker Panel
    b. WV High Voltage Relay Test Panel

e. Alternating Current Certification Test

1. Discussion and Practice
2. Test and discussion

f. Direct Current Certification Test

1. Discussion, Demonstration, and Practice
2. Test and discussion

g. Legal Requirements Certification Test

1. Review of Electrical Sections of Part 75 of the Federal Register
2. Discussion, Demonstration, and Practice
3. Test and discussion

h. Permissibility Certification Test

1. Review of Permissibility
2. Cover complete MSHA manual "Permissibility: Electric Face Equipment" (Safety Manual No. 16)
3. Review Permissibility Slides
4. Discussion, Demonstration, and Practice
5. Test and discussion

i. National Electrical Code Certification Test

1. Review Selected Sections of National Electrical Code
2. Discussion, Demonstration, and Practice
3. Test and discussion

j. High Voltage Systems Certification Test

1. Review of Electrical Sections WV Law and of Part 75 and 77 of the Federal Register
2. High Voltage Training Panel
3. Discussion, Demonstration, and Practice
4. Test and discussion

k. Circuits and Equipment Certification Test

1. Discussion and Practice
2. Test and discussion

l. Final Complete Electrical Exam

During the formal classes, the trainees will complete other practical lab exercises that will include but are not limited to the following:

m. Practical Lab Exercises

1. Identifying electrical hazards
2. Trailing cable splices
3. Use of medium voltage rubber gloves and voltmeter
4. Installation of packing glands
5. Resealing a plane joint on an XP controller panel
6. Installing a cable coupler
7. Installing and testing a ground fault device
8. Installing and calibrating a ground monitor
9. Checking and changing brushes in a DC motor
10. Troubleshooting an DC motor
11. Troubleshooting an AC motor
12. Replacing a fuse in a pole mounted, high voltage cutout
13. Testing high voltage rubber gloves with air
14. Installing an AC plug
15. Reentering a trailing cable into a junction box
16. Replacing a tape switch on a roof bolter or scoop
17. Wiring a basic stop/start circuit to turn on a light with a relay
18. Adjusting the magnetic trip setting on a circuit breaker
19. Adding a new CO sensor to a CO system and calibrating
20. Troubleshooting a conveyor belt pull cord circuit
21. Proper use of an impulse generator (Thumper) for trailing cable troubleshooting
22. Calibrating a machine methane monitor system
23. Ground faulting a circuit breaker
24. Installation of machine trailing cables
25. Control wiring in a belt conveyor starter
26. Replacing the bulb in a permissible headlight
27. Proper adjustment of micro switches on direction tram contactors
28. Troubleshooting Continuous Miner with DC Tram
29. Troubleshooting a Continuous Miner with VFD Tram
30. Troubleshooting a Bolt Machine
31. Troubleshooting CO Monitor System
32. Troubleshooting an Programmable Logic Controller System

n. Other classes that are not electrical but shall be included in the training plan are:

1. Hand and Power Tools
   a. The student will attend 4 hours of Basic hand and power tool safety

2. Welding & Cutting Systems
   a. The student will attend 76 hours of Basic Cutting And Welding Safety

3. Principals of Hydraulics
   a. The student will attend 40 hours of Basic Hydraulic Principals and Safety

The total classroom and laboratory training time for Certified Electricians is 488 Hours.

§48-8-7. Exceptions

7.1. Mining equipment manufacturer's service representatives, electrical contractors, employees of preparation plants and employees working on the surface area at underground mines, which does not require a miner's certificate, may receive an apprentice electrician card in the following manner:

(a) Enrollment in an approved electrical training program for twelve (12) months, **or**;

(b) Enrollment in an approved alternative apprentice electrical program set forth in 48 CSR Series 8, **and**;

(c) Eight (8) hours of classroom training in the hazards of electricity and his employer must submit a request in writing to the Office of Miners' Health,

Safety and Training that an apprentice electrician card be issued.

7.2. All electrical work performed by the apprentice electrician must be under the direct supervision of a certified electrician. A log must be kept at the job site describing the work which was performed. The log must be dated and signed by both the apprentice electrician and the certified electrician observing the work performed.

7.3. After completing the approved (12) month electrical training program the apprentice may file an application and challenge the electrical certification test and become a certified electrician, or become a qualified person-electrician if enrolled in an approved alternative apprentice electrical training program as set forth in Section 8.1.

7.4. After becoming a certified electrician if he or she seeks employment in a job that requires a miners' certificate by the Office of Miners' Health, Safety & Training, all electrical work performed must be under the direct supervision of a certified electrician who is also qualified as a certified miner. A written record shall be kept at the mine site reflecting the work which was performed. After the employee has obtained a valid miner's certificate and has worked at least (6) months and one hundred eight (108) shifts, he or she would be qualified to perform duties as an unsupervised certified electrician.

§48-8-8. Qualified Person-Electrician

8.1. When an apprentice electrician enrolled in an approved alternative electrical training program meets the requirements of the approved program he may challenge the electrical certification test and be issued a qualified person-electrician certification card. A qualified person-electrician would be limited to the following duties without working under the direct supervision of a certified electrician:

(a) Testing, troubleshooting and repairing low and medium voltage circuits, and;

(b) Required weekly examinations of Low and Medium voltage electrical equipment and required permissibility test of low and medium voltage equipment.

8.2. Duties which will **not** be permitted by a qualified person-electrician without the direct supervision of a certified electrician includes:

(a) Troubleshooting of high voltage circuits, repairs of high voltage sub-stations, energizing or de-energizing open mounted type high voltage disconnects, splicing high voltage cables, testing and troubleshooting of high voltage transformers, high voltage vacuum breakers and high voltage line splitters, and;

(b) The required monthly tests of high voltage circuit protective devices.

8.3. Twelve (12) months from the original issue date of the qualified person- apprentice electrician's card, the qualified person-electrician can apply for an electrical certification card. The application will be submitted on a document provided by the Office of Miners' Health, Safety and Training at which time an electrician's card will be issued.

WEST VIRGINIA OFFICE OF MINERS' HEALTH SAFETY AND TRAINING
Apprentice Electrician Training Program

PRACTICAL HANDS-ON LAB ELECTRICIAL WORK PERFORMED BY APPRENTICE ELECTRICIANS – APPENDIX A						
Name:				Apprentice Electrical Card No.		
Date	Low/Med Voltage Hours	High Voltage Hours	Type of Electrical Work Performed	Electrician's Initials	Electrician's Initials	Apprentice's Initials
Total Low/Med Voltage Hours This Page:			Signature of Apprentice Electrician:			
Total High Voltage Hours This Page:			Total Accumulated Hours		Page Number:	

WEST VIRGINIA OFFICE OF MINERS' HEALTH SAFETY AND TRAINING
Apprentice Electrician Training Program

ELECTRICAL WORK PREFORMED BY APPRENTICE ELECTRICIANS AT THE MINE SITE – APPENDIX B						
Name:				Apprentice Electrical Card No.		
Date	Low/Med Voltage Hours	High Voltage Hours	Type of Electrical Work Performed	Electrician's Initials	Electrician's Initials	Apprentice's Initials
Total Low/Med Voltage Hours This Page:			Signature of Apprentice Electrician:			
Total High Voltage Hours This Page:			Total Accumulated Hours		Page Number:	

PO Box 497
Sylvester, WV 25193

ELK RUN COAL COMPANY

June 21, 2007

Ronald L. Wooten
1615 Washington Street East
Charleston, WV 25311-2126

Members of Review Committee:

A careful review of the proposed Rules Governing the Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians has raised several concerns. Some of which I have addressed in this letter.

There is a limit to the amount of new material an individual can absorb and retain in a short period of time, six months or one year. The industry needs well-rounded, multi-skilled repairmen. Unfortunately, most individuals cannot develop all of the skills at the same time.

The huge volume of training necessary to become a safe, competent coal mine electrician alone is daunting. I am concerned, by adding additional material not relevant to the majority of the industry, many Apprentice Electricians will be overwhelmed and mastery of the trade of Electrician will be lessened. We are considering regulations for the training of Apprentice Electricians for the West Virginia coal industry in total. In my opinion, the training requirements should be focused on mining industry electricity in general, without special emphasis placed on certain machines used by only part of the industry.

I believe, the regulations should as a minimum require an individual to be given a good working knowledge of the following:

a. Mining laws concerning electricity
b. Permissibility
c. AC and DC Theory
d. Basic electricity
e. Schematic print reading
f. Gas detection and fire prevention
g. National Electric Code
h. Electrical hazard recognition
i. Personal protective equipment
j. Electrical safety
k. Trouble shooting
l. Instruments and apparatus used for electrical testing and diagnostics
m. Mathematical formula necessary for electrical calculations

Additions to these basic requirements could be evaluated on a plan-by-plan basis, and approved, if found to be suitable. It is doubtful that one plan will fulfill the needs of every company needing electricians.

Several of the new requirements proposed for Alternate Training Programs for Apprentice Electricians appear to be tailored to be supportive of a particular company or even a certain mine. Many of the requirements do not reflect the needs of the entire industry, although the entire industry will be bound by these requirements! It is to be noted that there is no job specific training in these regulations for high wall miners, such as Addington or Superior Systems. There is no job specific training in these regulations for electric trucks, shovels, drag lines, long walls, fiber optics, power systems for preparation plants, or surface electrical installations other than high voltage installations. There are however, several aspects of the regulations requiring comprehensive training on continuous miners, roof bolters, trolley equipment, and out-dated DC equipment.

Welding and cutting safety training as listed in 48-8-6 (n) can be accomplished in much less than 76 hours. This amount of training alone would nearly double the minimum requirements for classroom training previously required for the 1 year Apprentice Electrician. It would appear that a welding certification is being trained for as part of the Electrical Certification process. Welding and cutting, while a very necessary skill, is not a requirement of Certified Electricians. Through out the industry many companies employ Mechanic/ Welders. Most repair shops employ Welder/Fabricators and preparation plants have Pipe Fitters.

The Basic Hydraulics Principals and Safety class requiring 40 additional hours to be added to the training of a Certified Electrician is another class, while a good addition to any repairman's training who is working in the industry, should not be a requirement for an Electrician Certification. Many Certified Electricians have little or no involvement with hydraulics in their occupation.

Please find noted below excerpts of rules being proposed that in my opinion need modification or omission.

Thank You,

David Terry

CC: C.A. Phillips, Deputy Director

48-8-6.2 (b)

26. Cables

a. Two Conductor
b. Three Conductor
c. Frame Grounding
d. Discussion, Demonstration, and a Hands-on examination of different DC Cables
e. Troubleshooting DC Cables
f. Cable Test

Our use of these DC cables is very limited and this would not be as beneficial as other training.

48-8-6.2 (b)

30. Diode Grounding Panel

g. Discussion
h. Wiring
i. Troubleshooting
j. Discussion, Demonstration, and Hands-on Practice

31. Tests on DC Grounding Systems

We would be better served with another practical to replace this. (30), (31), Use of these systems is very limited and could be described as site or operation specific.

32. Hands-On Wiring and Troubleshooting of DC Equipment

a. Basic DC Panel with 3 Contactors, Resistance, and Series, Shunt, and Compound Motor
b. Basic Grounding Diode Panel
c. Basic DC Panel with Two-Pole Contactors, Resistance, and Motor
d. Basic DC Panel with 4 Contractors, Resistance, and motor
e. Basic DC WV Test Panel
f. DC Bolt Machine
g. Trolley Operated Jeep Panel
h. SCR Drive Scoop Panel
i. Drive Scoop Panel
j. Transistor Drive Coal Hauler Panel

k. SCR Drive Coal Hauler Panel
l. Transistor Drive Coal Hauler Panel

The (a) Basic DC panel with 3 contactors, The (b) Basic grounding diode panel, The (c) Basic Dc Panel with 2 pole contactors, resistance and motor, The (f) DC roof bolter, The (g) trolley operated jeep would not be applicable for us. The (i) practical, Drive scoop panel, does not illustrate what type of scoop panel is required for training. The (j) and (l) Transistor drive coal hauler panel appear to be the same exercise. We could profit more from a rubber tire man trip panel, fork lift or battery rail man trip

48-8-6.2 c

22. Troubleshooting of Complete AC Power Supply Systems

What sort of AC power supply system is being referred to?

23. Hands-On Wiring and Troubleshooting of AC Equipment

    a. Basic AC Training Panel – 1 Linestarter, breaker, transformer, fuses, overloads, three phase motor
    b. Basic AC Training Panel – 2 Linestarters, breaker, transformer, fuses, overloads, 2 three phase motors
    c. Two different Basic AC Panels for Prep Plant
    d. Basic AC WV Test Panel
    e. AC Bolt Machine
    f. Power Distribution Box
    g. Section Power Center
    h. Remote Control Continuous Miner with DC Tram
    i. Remote Control Continuous Miner with AC Tram

These items: (c), (e), (g), (h), and (i) are operation or job specific and should not be included in all training plans.

48-6-6.2 C

j. Programmable Logic Controller Belt Starter Panel
k. Programmable Logic Controller Prep Plant Panel
l. Programmable Logic Controller Pump Panel

These items are not routinely troubleshot and serviced by the majority of the Certified Electricians in our work force. These are specialized items and should not be part of an Apprentice training program.

48-8-6 (m)

28. Troubleshooting Continuous Miner with DC Tram

This practical could be modified to "Troubleshooting a mining machine with DC tram", instead of being specifically a Continuous Miner.

29. Troubleshooting a Continuous Miner with VFD Tram

This practical could be modified to: "Troubleshooting a VFD Tram controller", instead of being specifically a Continuous Miner.

30. Troubleshooting a Bolt Machine

All mining operations requiring electricians do not require Bolt Machines.

31. Troubleshooting CO Monitor System

All coal operations requiring certified electricians do not require CO monitors.

32. Troubleshooting an Programmable Logic Controller System

The majority of the Certified Electricians in the mining industry do not routinely work on PLC systems. This in my opinion should be an alternate exercise, used only for those who need it.

n. Other classes that are not electrical but shall be included in the training plan are:

1. Hand and Power tools:
   a. the student will attend 4 hours of Basic hand and power tool safety.

The hand and power tool safety can be well illustrated and closely monitored by the Certified Electrician who is supervising the practical portion of the training received by the apprentice.

2. Welding and cutting systems
   a. the student will attend 76 hours of Basic Cutting and Welding Safety

Welding and cutting are important skills. These skills are part of a separate craft. Metal working should not be a requirement for ELECTRICAL certification. There are

separate certifications in place for welding. The safety training for these tasks can be well covered well in less than 76 hours.

3. Principals of Hydraulics
    a. The student will attend 40 hours of Basic Hydraulic Principals and Safety

Hydraulics training is important. However, most hydraulic circuits are very "machine or manufacturer specific". Hydraulic training should not be a requirement for ELECTRICAL certification. The safety training for hydraulics can be accomplished in much less than 40 hours. Further training on hydraulics would be more effective if conducted by the operations on an individual basis on the machinery used by the operation

To: C. A. Phillips, Deputy Director

From: Warren Beam, WVU Mining Extension Agent W.B.

Date: June 20, 2007

Subject: Comments on Emergency Rules, Title 48, Series 8

Dear Mr. Phillips:

48-8-1 – General 1.1 scope states in part "This rule is only intended to regulate the structure and content of an alternative training program and it does not alter or affect any other requirement for the certification of coal mine electricians". Does this mean that 48-8-7 exceptions applies only to apprentice electrician cards for the alternative program? I see some problems with this wording.

48-8-3 – Requirement for board approval states in part "the Board of Miner Training, Education, and Certification may accept apprentice training through programs that meet the criteria and standard of this rule". The Classroom and Lab Training Plan specified in 48-8-6 is much too site specific. The apprentice electrician may not be working at an underground mine. He may be at a surface mine or a preparation plant. If an alternative training program is designed to train the apprentice electrician in all aspects of mine electricity then surface mine circuits and equipment would need to be added to the program. I fell that the alternative training programs should be more general in nature so it can apply to all coal mining operations and not just this particular operation.

48-8-6.1 n – States in part "other classes that are not electrical but shall be included in the training plan are": Why are these requirements? They should be optional.

48-8-8 – Qualified Person – Electrician section is almost a duplicate of 48-8-5.2 through 48-8-5.5.

Thank you for the opportunity to comment on these rules.

Faxed to 558-4875 6/20/07

RESPONSE TO PUBLIC COMMENTS

After considering all comments submitted, the Board finds that the rule filed with the Secretary of State in May 2007 should not be changed and should be final filed as is.