

**STATE OF WEST VIRGINIA
OFFICE OF MINERS' HEALTH,
SAFETY AND TRAINING**



**Mining Laws, Rules and Regulations
2008 Reference Manual**

PREFACE

EDITOR'S NOTE: Whenever these rules and regulations refer to "Director of the Department of Energy" or "Director of the Department of Mines", it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

This volume includes for reference purposes, Chapter 22, Article 21 as it pertains to Oil and Gas Wells, and mining operations.

DISCLAIMER

The Office of Miners' Health, Safety and Training has created this publication to provide you with a convenient compilation of West Virginia mine laws. However, this publication was not necessarily prepared by persons licensed to practice law in a particular jurisdiction. Although every attempt was made to insure accuracy, the Office of Miners' Health, Safety and Training makes no guarantees that any of the text contained herein is accurate and up to date. You should consult the official West Virginia Code and the West Virginia Code of State Regulations as well. The Office of Miners' Health, Safety and Training is not engaged in rendering legal or other professional advice, and this publication is not a substitute for the advice of an attorney. If you require legal or other expert advice, you should seek the services of a competent attorney or other professional.

**To obtain copies of this Reference Manual call, write or order on-line:
WV Office of Miners' Health, Safety and Training
1615 Washington St., East
Charleston, WV 25311-2126
Web Site: www.wvminesafety.org
Phone: (304) 558-1425
Fax: (304) 558-1282**

Revision date: May, 2008

WV OFFICE OF MINERS' HEALTH SAFETY AND TRAINING

OFFICES AND ADMINISTRATION

DIRECTOR'S OFFICE
1615 WASHINGTON STREET EAST
CHARLESTON, WEST VIRGINIA 25311-2126
TELEPHONE: 304 558-1425
FAX: 304 558-4875
www.wvminesafety.org

DIRECTOR Ronald L. Wooten

DEPUTY DIRECTORC. A. Phillips

REGIONAL OFFICES

REGION ONE – FAIRMONT

205 Marion Square
Fairmont, WV 26554-2800
Telephone: 304-367-2706
Fax: 304-367-2708

REGION TWO – WELCH

891 Stewart Street
Welch, WV 24801-2311
Telephone: 304-436-8421
Fax: 304-436-2100

REGION THREE - DANVILLE

137 Peach Court, Suite 2
Danville, WV 25053
Telephone: 304-369-7823
Fax: 304-369-7826

REGION FOUR – OAK HILL

142 Industrial Drive
Oak Hill, WV 25901-9714
Telephone: 304-469-8100
Fax: 304-469-4059

TABLE OF CONTENTS

CHAPTER 15 PUBLIC SAFETY

ARTICLE 5 Division of Homeland Security and Emergency Management	2
ARTICLE 5B Mine and Industrial Accident Rapid Response System	2

CHAPTER 22 ENVIRONMENTAL PROTECTION

ARTICLE 21 Oil and Gas Wells	3
----------------------------------------	---

CHAPTER 22A MINERS' HEALTH, SAFETY AND TRAINING

ARTICLE 1 Administration; Enforcement	9
ARTICLE 2 Underground Mines	26
ARTICLE 2A Use of Diesel-Powered Equipment in Underground Coal Mines	62
ARTICLE 3 Underground Clay Mines	69
ARTICLE 4 Open-Pit Mines, Cement Manufacturing Plants, and Underground Limestone and Sandstone Mines	69
ARTICLE 5 Board of Appeals	70
ARTICLE 6 Board of Coal Mine Health and Safety	71
ARTICLE 7 Board of Miner Training, Education and Certification	75
ARTICLE 8 Certification of Underground and Surface Coal Miners	78
ARTICLE 9 Mine Inspectors' Examining Board	80
ARTICLE 10 Emergency Medical Personnel	81
ARTICLE 11 Mine Safety Technology	81

CHAPTER 24 PUBLIC SERVICE COMMISSION

ARTICLE 6 Local Emergency Telephone System	83
------------------------------------------------------	----

CHAPTER 61 CRIMES AND THEIR PUNISHMENT

ARTICLE 3 Crimes Against Property	83
---------------------------------------------	----

TITLE 36
BOARD OF COAL MINE HEALTH AND SAFETY

SERIES 1	
Approvals and Permits, Explosives and Ventilation for the Construction of Shaft and /or Slope Operations	84
SERIES 2	
Emergency Communications Requirements for Shaft and/or Slope Operations and Arrangements for Emergency Medical Assistance and Transporting Injured Persons; Reporting Requirements; Posting Requirements at Shaft and/or Slope Operations	88
SERIES 3	
Certification and Statutory Duties of Shaft and/or Slope Superintendent-Examiner-Foreman and Examiner-Foreman	89
SERIES 4	
Movement of Mining Equipment Within Coal Mines	94
SERIES 5	
Telephone Service or Communication Facilities	104
SERIES 6	
Longwall Mining	105
SERIES 7	
Shortwall Mining	108
SERIES 8	
Right of a Miner to Refuse to Operate Alleged Unsafe Equipment	110
SERIES 9	
Electrical Provisions in Shaft and/or Slope Construction Operations	112
SERIES 10	
Roof Control	114
SERIES 11	
When Underground Mine Foreman-Fire Boss Required; Assistants; Certification; Reopening of Abandoned Mines and De-energization of Self-Propelled Electric Coal Feeders; Performance Requirements	122
SERIES 12	
Electrical Provisions for Underground Mining	123
SERIES 13	
Authority, Accountability and Responsibility of Underground Mine Foreman; Responsibility of Operator in Relation to Mine Foreman; and Regulatory Review Procedures	128
SERIES 14	
Electrical Equipment in Mines, Required Examinations	129
SERIES 15	
Ventilation by Use of Mechanically Operated Fans	130
SERIES 16	
Blocking of Equipment Prior to Performing Work on Such Equipment	131
SERIES 17	
Unused and Abandoned Parts of Mine	131
SERIES 18	
Responsibility for Care and Maintenance of Equipment	132
SERIES 19	
Written Reports of Accidents	133
SERIES 20	
Independent Contractors	134
SERIES 21	
Instruction of Employees and Supervision of Apprentices; Annual Examination of Persons Using Flame Safety Lamps; Records of Examination; Maintenance of Methane Detectors	136

SERIES 22	
No Act Permitted Endangering Security of Mine; Search for Intoxicants, Matches, etc.	137
SERIES 23	
Surface Construction Operations Within the Coal Mining Industry	138
SERIES 24	
Record Keeping of All Certified Persons	199
SERIES 25	
Operation of Track Haulage Locomotives	200
SERIES 26	
Construction and Rehabilitation Operations in Underground Mines	200
SERIES 27	
Surface Areas	201
SERIES 28	
Coal and Rock Outbursts	204
SERIES 29	
Coupling and Uncoupling of Mine Cars	204
SERIES 30	
Operation of Section Haulage Equipment	204
SERIES 31	
Prevention of Injuries Due to Handling Materials	205
SERIES 32	
Housekeeping Practices in Underground Mines and Surface Areas of Underground Mines	205
SERIES 33	
Underground Mine Car Loading Points	206
SERIES 34	
Underground Mining Equipment to Conform with Height of Seam	206
SERIES 35	
Auger-Type Continuous Mining Machines	207
SERIES 36	
Trolley Pole Swing Limiters	207
SERIES 37	
Rulemaking Procedures for the Board of Coal Mine Health and Safety	207
SERIES 38	
Personal Protective Equipment	210
SERIES 39	
Railroad Car Dropping	211
SERIES 40	
Use of Lifting Jacks	211
SERIES 41	
Sheathed Explosive Units	212
SERIES 42	
Sealing Permanently Closed or Abandoned Mines	213
Editor's Note: Series 42 is declared null and void by Civil Action No. 95-Misc.565 in the Circuit Court of Kanawha County.	
SERIES 43	
Remote Controlled Extended or Deep Cut Mining Operations	213
SERIES 44	
Mine Rescue Requirements for the Office of Miners' Health, Safety and Training	214
SERIES 45	
Use of a Solid Triangular Tow Bar to Transport Disabled Underground Rubber-Tired Mining Equipment	215

**TITLE 37
MINE BOARD OF APPEALS**

SERIES 1	
Procedures and Practice Before the Board of Appeals	216
SERIES 2	
Procedures for Temporary Suspension of Certificate	223

**TITLE 48
BOARD OF MINER TRAINING, EDUCATION AND CERTIFICATION**

SERIES 1	
Certification of Underground Belt Examiners for Underground Coal Mines	223
SERIES 2	
Safety Training Program for Prospective Underground Coal Miners	224
SERIES 3	
Safety Training Program for Prospective Surface Coal Miners	241
SERIES 4	
Initial Training Program for Prospective Mine Rescue Team Members	256
SERIES 5	
(RESERVED)	257
SERIES 6	
Certification of Surface Mine Foremen	257
SERIES 7	
Standards for Certification of Coal Mine Electricians	259
SERIES 8	
Criteria and Standards for Alternative Training Programs for Apprentice Coal Mine Electricians	262

**TITLE 56
OFFICE OF MINER'S HEALTH, SAFETY AND TRAINING**

SERIES 1	
Procedures and Practice Before the Department of Energy	270
SERIES 2	
Rules Governing Safety Provisions for Clearing Crews	279
SERIES 3	
Safety of Those Employed in and Around Surface Mines	286
SERIES 4	
Emergency Rules Governing Protective Clothing and Equipment	322
SERIES 5	
Certification of Blasters for Surface Coal Mines and Surface Areas of Underground Mines	329
Editor's Note: Title 56 Series 5 has been repealed by Title 38 Legislative Rule Division of Environmental Protection Series 2C Section 1.8	
SERIES 6	
Open Pit Mines (Exclusive of Surface Mines)	329
SERIES 7	
Open Pit Limestone and Sandstone Mines and Underground Limestone and Sandstone Mines	331
SERIES 8	
Comprehensive Mine Safety Program	334
SERIES 9	
Requests for Information (Freedom of Information Act)	338
SERIES 10	
Reporting Requirements for Independent Contractors	339
SERIES 11	
First-Aid Training of Shaft and Slope Employees	339
SERIES 12	
Assessing Health and Safety Violation Penalties	340

TITLE 170
WV DIVISION OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT

SERIES 1

Mine and Industrial Accident Rapid Response System

344

TITLE 196
DIESEL EQUIPMENT COMMISSION

SERIES 1

Rules for Operating Diesel Equipment in Underground Mines in West Virginia

345

INDEX

357

CHAPTER 15 ARTICLE 5
PUBLIC SAFETY (Homeland Security)
DIVISION OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT

§15-5-11. Immunity and exemption; “duly qualified emergency service worker”

(a) All functions hereunder and all other activities relating to emergency services are hereby declared to be governmental functions. Neither the state nor any political subdivision nor any agency of the state or political subdivision nor, except in cases of willful misconduct, any duly qualified emergency service worker complying with or reasonably attempting to comply with this article or any order, rule, regulation or ordinance promulgated pursuant to this article, shall be liable for the death or injury to any person or for damage to any property as a result of such activity. This section does not affect the right of any person to receive benefits or compensation to which he or she would otherwise be entitled under this article, chapter twenty-three of this code, any Act of Congress or any other law.

(b) Any requirement for a license to practice any professional, mechanical or other skill does not apply to an authorized emergency service worker who shall, in the course of performing his or her duties, practice such skill during an emergency.

(c) As used in this section, “duly qualified emergency service worker” means:

(1) Any duly qualified full or part-time paid, volunteer or auxiliary employee of this state, or any other state, territory, possession or the District of Columbia, of the federal government, of any neighboring country or political subdivision thereof or of any agency or organization performing emergency services in this state subject to the order or control of or pursuant to the request of the state or any political subdivision thereof.

(2) Duly qualified instructors and properly supervised students in recognized educational programs where emergency services are taught. A recognized educational program shall include any program in an educational institution existing under the laws of this state and such other educational programs as shall be established by the Division of Homeland Security and Emergency Management or otherwise under this article.

(3) A member of any duly qualified mine rescue team designated by a mine operator pursuant to the provisions of section thirty-five, article one, chapter twenty-two-a of this code who is performing or engaging in emergency rescue services.

(d) A duly qualified emergency service worker performing his or her duty in this state pursuant to any lawful agreement, compact or arrangement for mutual aid and assistance to which the state or a political subdivision is a party shall possess the same powers, duties, immunities and privileges he or she would possess if performing the same duties in his or her own state, province or political subdivision thereof.

ARTICLE 5B.
MINE AND INDUSTRIAL ACCIDENT RAPID RESPONSE SYSTEM

§15-5B-1. Legislative purpose; Mine and Industrial Accident Rapid Response System created.

(a) The Legislature finds that the health and safety of persons working in and around the mining industry and other industries is of paramount concern to the people of West Virginia and that deaths and serious injuries resulting from dangerous working conditions cause grief and suffering to workers and their families. The Legislature further finds that there is an urgent need to provide more effective means and measures for improving emergency response and communications for dealing with mine and industrial accidents. The legislature declares that it is in the best interest of the citizens of West Virginia to designate an emergency telephone number for mining or industrial personnel to initiate a rapid emergency response to any mine or industrial accident. Provision of a single, primary emergency number through which emergency services can be quickly and efficiently obtained and through which the response of various state agencies charged by law with responding to mine and industrial emergencies can be coordinated will significantly contribute to the public good. The Mine and Industrial Accident Rapid Response System will provide a vital resource to the citizens of West Virginia by providing a critical connection between the Director of the Office of Miners' Health, Safety and Training, the Division of Homeland Security and Emergency Management, local and regional emergency services organizations and other responsible agencies.

(b) The Mine and Industrial Accident Rapid Response System is hereby created and shall consist of:

(1) The Mine and Industrial Accident Emergency Operations Center established in section two of this article; and (2) The 24-hour-a-day statewide telephone number established by the Director of the Division of Homeland Security and Emergency Management.

§15-5B-2. Mine and industrial accident emergency operations center.

(a) The Director of the Division of Homeland Security and Emergency Management, working in conjunction with the Office of Miners' Health, Safety and Training, shall maintain the Mine and Industrial Accident Emergency Operations Center, which shall be the official and primary state government twenty-four hour a day communications center for dealing with mine and industrial accidents.

(b) The emergency operations center shall be operated twenty-four hours a day, seven days a week by emergency service personnel employed by the Director to provide emergency assistance and coordination to mine and industrial accidents or emergencies.

(c) The emergency operations center shall be readily accessible twenty-four hours a day at a statewide telephone number established and designated by the Director.

§15-5B-3. Emergency mine response.

(a) To assist the Division of Homeland Security and Emergency Management in implementing and operating the Mine and Industrial Accident Rapid Response System, the Office of Miners' Health, Safety and Training shall, on a quarterly basis, provide the emergency operations center with a mine emergency contact list: Provided, That in the event of any change in the information contained in the mine emergency contact list, such changes shall be provided immediately to the emergency operations center. The mine emergency contact list shall include the following information:

- (1) The names and telephone numbers of the Director of the Office of Miners' Health, Safety and Training, or his or her designee, including at least one telephone number at which the Director or designee may be reached at any time;
- (2) The names and telephone numbers of all district mine inspectors, including at least one telephone number for each inspector at which each inspector may be reached at any time;
- (3) A current listing of all regional offices or districts of the Office of Miners' Health, Safety and Training, including a detailed description of the geographical areas served by each regional office or district; and
- (4) The names, locations and telephone numbers of all mine rescue stations, including at least one telephone number for each station that may be called twenty-four hours a day and a listing of all mines that each mine rescue station serves in accordance with the provisions of section thirty-five, article one, chapter twenty- two-a of this code.

(b) Upon the receipt of an emergency call regarding any accident, as defined in section sixty-six, article two, chapter twenty-two-a of this code, in or about any mine, the emergency operations center shall immediately notify:

- (1) The Director of the Office of Miners' Health, Safety and Training;
- (2) The district mine inspector assigned to the district or region in which the accident occurred;
- (3) All mine rescue stations that provide rescue coverage to the mine in question; and
- (4) Local emergency service personnel in the area in which the accident occurred.

(c) In the event that an emergency call regarding any accident, as defined in section sixty-six, article two, chapter twenty-two-a of this code, in or about any mine, is initially received by a county answering point, the call shall be immediately forwarded to the Mine and Industrial Accident Emergency Operations Center.

(d) Nothing in this section shall be construed to relieve an operator, as defined in section two, article one, chapter twenty- two-a of this code, from any reporting or notification obligation under federal law.

(e) The Mine and Industrial Accident Rapid Response System and the emergency operations center are designed and intended to provide communications assistance to emergency responders and other responsible persons. Nothing in this section shall be construed to conflict with the responsibility and authority of an operator to provide mine rescue coverage in accordance with the provisions of section thirty-five, article one, chapter twenty-two-a of this code or the authority of the Director of the Office of Miners' Health, Safety and Training to assign mine rescue teams under the provisions of subsection (d) of said section or to exercise any other authority provided in chapter twenty-two-a of this code.

§15-5B-4. Study of other industrial emergencies

The Director of the Division of Homeland Security and Emergency Management shall immediately cause a study to be conducted to determine the feasibility of providing emergency coverage to other industrial, manufacturing, chemical or other emergencies through the Mine and Industrial Accident Rapid Response System. On or before the first day of November, two thousand six, the Director shall submit a report to the Governor, the President of the Senate and the Speaker of the House of Delegates setting forth the findings of his or her study and recommendations for legislation consistent with the purposes of this article.

§15-5B-5. Rule-making authority

The Director of the Division of Homeland Security and Emergency Management shall propose emergency and legislative rules for promulgation in accordance with article three, chapter twenty- nine-a of this code regarding the implementation and administration of the Mine and Industrial Accident Rapid Response System. The requirements of this article enacted during the regular session of the Legislature in January, two thousand six, shall not be implemented until the emergency rule authorized herein has been approved.

**CHAPTER 22 ARTICLE 21
ENVIRONMENTAL PROTECTION - OIL AND GAS WELLS**

Editor's note: Refer to West Virginia Code 22-21-1, et seq. For additional law pertaining to drilling.

§22-21-9. Notice to owners.

(a) Prior to filing an application for a permit for a coalbed methane well under this article, the applicant shall deliver by personal service or by certified mail, return receipt requested, copies of the application, well plat and erosion and sediment control plan to the following:

- (1) The owners of record of the surface of the tract on which the coalbed methane well is to be located;
- (2) The owners of record of the surface of any tract which is to be utilized for roads or other land disturbance;
- (3) Each coal owner and each coal operator (i) from whom a consent and agreement provided for in section seven of this article is required, or (ii) whose coal seam will be penetrated by the proposed coalbed methane well or is within seven hundred fifty feet of any portion of the well bore; and
- (4) Each owner and lessee of record and each operator of natural gas surrounding the well bore and existing in formations above the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whichever is shallower. Notices to gas operators shall be sufficient if served upon the agent of record with the office of oil and gas.

(b) If more than three tenants in common or other co-owners of interests described in subsection (a) of this section hold interests in such lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code; provided, that all owners and operators occupying or operating on the tracts where the well work is proposed to be located at the filing date of the permit application shall receive actual service of the documents required by subsection (a) of this section.

(c) Prior to filing an application for a permit for a coalbed methane well under this article, the applicant shall cause to be published in the county in which the well is located or to be located a Class II legal advertisement as described in section two, article three, chapter fifty-nine of this code, containing such notice and information as the chief shall prescribe by rule, with the first publication date being no more than ten days after the filing of the permit application.

(d) Materials served upon persons described in subsections (a) and (b) of this section shall contain a statement of the methods and time limits for filing comment and objection, who may file comment and objection, the name and address of the chief with whom the comment and objection must be filed, the ability to obtain additional information from the chief, the fact that such persons may request notice of the permit decision, and a list of persons qualified to test water as provided in this section.

(e) Any person entitled to submit comment or objection shall also be entitled to receive a copy of the permit as issued or a copy of the order denying the permit if such person requests the receipt thereof as a part of the comment or objection concerning said permit application.

(f) Persons entitled to notice may contact the district office of the office of oil and gas to ascertain the names and location of water testing laboratories in the area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling such list of names the office of oil and gas shall consult with the state and local health departments.

§22-21-13. Review board hearing; findings; order.

(a) If comment or objection is filed under section ten or eleven of this article, the chief shall forthwith provide to the chairman of the coalbed methane review board a copy of any such objection or comment, together with the application for a permit for the coalbed methane well in question, the plat filed therewith and such other information accompanying the permit as may relate to the comment or grounds for the objection.

(b) The review board shall forthwith schedule a hearing for the purpose of considering such objection or comment. Notice shall be given fifteen days in advance of the hearing to any person filing comment or objection, and to any person to whom notice of the application required, and to any applicant, and the review board shall hold such hearing within thirty days after the deadline for filing objection or comment. At such hearing the review board shall consider the matters raised in any objection or comment, including surface topography and use, and with respect to the ability to mine any affected coal seam safely and the protection of any such seam for future mining shall consider the following:

(1) Whether the drilling location is above or in close proximity to any mine opening, shaft, entry, travelway, airway, haulageway, drainageway or passageway, or to any proposed extension thereof, any abandoned, operating coal mine or any coal mine already surveyed and platted but not yet being operated;

(2) Whether the proposed drilling can reasonably be done through an existing or planned pillar of coal, or in close proximity to an existing or planned pillar of coal, taking into consideration the surface topography;

(3) Whether the proposed well can be drilled safely, taking into consideration the dangers from creeps, squeezes or other disturbances due to the extraction of coal;

(4) The extent to which the proposed drilling location unreasonably interferes with the safe recovery of coal or coalbed methane;

(5) The extent to which the proposed drilling location will unreasonably interfere with present or future coal mining operations on the surface including, but not limited to, operations subject to the provisions of article three of this chapter;

(6) The feasibility of moving the proposed drilling location to a mined-out area, below the coal outcrop, or to some other location;

(7) The feasibility of a drilling moratorium for not more than one year in order to permit the completion of imminent coal mining operations;

(8) The methods proposed for the recovery of coal and coalbed methane;

(9) The practicality of locating the well on a uniform pattern with other wells;

(10) The surface topography and use;

(11) Whether any stimulation of the coal seam will render such seam or any other workable coal seams unmineable or unsafe for mining; and

(12) Whether the director of the office of miners' health, safety and training has submitted recommendations as to the safety of any proposed stimulation. In considering any recommendations made by the director of the office of miners' health, safety and training, the board shall incorporate such recommendations in its findings, conclusions and order unless the board determines that there is clear and convincing evidence on the record supporting a finding, conclusion or order inconsistent with such recommendations.

(c) In weighing the evidence presented to the board the applicant shall have the burden of proving by clear and convincing evidence that stimulation of a workable coal seam of twenty-eight inches or more in thickness will not render such seam or any other workable coal seam of twenty-eight inches or more in thickness unmineable or unsafe for mining.

(d) Upon consideration of the matters raised at the hearing, the review board shall render a decision based upon the ability to mine any affected coal seam safely and the protection of any coal seam for safe future mining, shall enter a written order containing findings of fact and conclusions which address any relevant considerations in subsection (b) of this section and based thereon shall issue and file with the chief a written order directing him to:

- (1) Refuse a drilling permit; or
- (2) Issue a drilling permit for the proposed drilling location; or
- (3) Issue a drilling permit for an alternate drilling location different from that requested by the applicant; or
- (4) Issue a drilling permit either for the proposed drilling location or for an alternative drilling location different from that requested by the applicant, provided such alternate location is covered by the agreement and consent required by section seven of this article, but not allow the drilling of the well for a period of not more than one year from the date of issuance of such permit; or
- (5) Issue a permit authorizing the applicant to stimulate the well in the absence of consent of the affected coal operators or owners of workable coal seams of twenty-eight inches or more in thickness as described in subsection (a) of section seven of this article, as proposed or as modified by the order of the board. Such order shall further provide for the applicant to furnish evidence of financial security in one of the following forms:
 - (a) A corporate surety bond having on it a company authorized to do business in this state as surety;
 - (b) bonds of the United States or agency thereof, or those guaranteed by, or for which the credit of the United States or agency therefore is pledged for the payment of the principal and interest thereof;
 - (c) direct general obligation bonds of this state, or any other state, or territory of the United States, or the District of Columbia if such other state, territory or the District of Columbia has the power to levy taxes for the payment of the principal and interest of such securities, and if at the time of the deposit such other state, territory or the District of Columbia is not in default in the payment of any part of the principal or interest owing by it upon any part of its funded indebtedness;
 - (d) direct general obligation bonds of any county, district, city, town, village, school district or other political subdivision of this state issued pursuant to law and payable from ad valorem taxes levied on all taxable property located herein, that the total indebtedness after deducting sinking funds and all debts incurred for self-sustaining public works does not exceed five percent of the assessed value of all taxable property therein at the time of the last assessment made before the date of such deposit, and that the issuer has not, within five years prior to the making thereof, been in default for more than ninety days in the payment of any part of the principal or interest on any debt, evidenced by its bonds;
 - (e) revenue bonds issued by this state or any agency of this state when such bonds are payable from revenues or earnings specifically pledged for the payment of principal and interest, and a lawful sinking fund or reserve fund has been established and is being maintained for the payment of such bonds;
 - (f) revenue bonds issued by a municipality in this state for the acquisition, construction, improvement or extension of a waterworks system, or a sewerage system, or a combined waterworks and sewerage system, when such bonds are payable from revenue or earnings specifically pledged for the payment of principal and interest, and a lawful sinking fund or reserve fund has been established and is being maintained for the payment of such bonds;
 - (g) revenue bonds issued by a public service board of a public service district in this state for the acquisition, construction, improvement or extension of any public service properties, or for the reimbursement of payment of the costs and expenses of creating the district, when such bonds are payable from revenue or earnings specifically pledged for the payment of principal and interest, and a lawful sinking fund or reserve fund has been established and is being maintained for the payment of such bonds;
 - (h) revenue bonds issued by a board of trustees of a sanitary district in this state for the corporate purposes of such district, when such bonds are payable from revenue or earnings specifically pledged for the payment of principal and interest, and a lawful sinking fund or reserve fund has been established and is being maintained for the payment of such bonds; and
 - (i) bonds issued by a federal land bank or home owners' loan corporation;
 - (j) cash; or
 - (k) any combination of the above. The operator of the well shall be entitled to all interest and income earned on the collateral securities provided pursuant to the order. Such security given shall be placed in an escrow account. The operator providing security shall be entitled from time to time to receive, upon written order of the board, the whole or any portion of such securities upon depositing in lieu thereof cash equal to the approved securities of the classes herein specified.

The amount of such financial security shall be set by order of the board but shall in no event exceed an amount of fifty thousand dollars. In setting the amount of financial security, the board shall consider the total amount of coal which could be at risk of economic harm, demonstrated experience in the locale and seams of the proposed stimulation, the probability of damages to the seam, and the likelihood of commercial recovery within thirty years of the date of stimulation.

Such financial security shall remain in force until two years after the affected coal is mined or for a period of thirty years after stimulation of the coal seam or until final resolution of any action timely instituted to collect the bond proceeds, whichever first occurs.

Any coal owner or operator may assert a claim to the posted financial security by instituting an action therefore in the circuit court of the county where the well is located or where the damages occurred.

Upon receipt of such review board order, the chief shall promptly undertake the action directed by the review board, provided that all other provisions of this article have been complied with. All permits issued by the chief pursuant to this section shall be effective ten days after issuance unless the review board orders the chief to stay the effectiveness of a permit for a period not to exceed thirty days from the date of issuance.

If a permit is issued, the chief shall indicate the approved drilling location on the plat filed with the application for a permit and shall number and keep an index of and docket each plat, the name of the well operator, the names and addresses of all persons notified, the dates of conferences, hearings and all other actions taken by the chief and the review board. The chief shall also prepare a record of the proceedings, which record shall include all applications, plats and other documents filed with the chief, all notices given and proof of service thereof, all orders issued, all permits issued and a transcript of the hearing. The record prepared by the chief shall be open to inspection by the public.

(e) Notwithstanding any finding or determination made by the board, in the event a workable coal seam twenty-eight inches or more in thickness is stimulated absent the consent of the coal owner or operator, the applicant and well operator shall be liable in tort without proof of negligence for any damage to such coal seam stimulated or any other workable coal seam twenty-eight inches or more in thickness within seven hundred fifty horizontal feet or one hundred vertical feet of the stimulation and for damages to any mining equipment proximately caused by such stimulation. Such applicant and well operator shall indemnify and hold the coal owner and coal operator harmless against any liability for injury, death or damage to property proximately caused by the stimulation.

§22-21-14. Protective devices required when a coalbed methane well penetrates workable coal bed; when a coalbed methane well is drilled through horizon of coal bed from which coal has been removed; notice of stimulation; results of stimulation.

(a) Except for those coalbeds which the coalbed methane operator proposes to complete for production of coalbed methane or where a ventilation hole is being converted to a well, when a well penetrates one or more workable coal beds, the well operator shall run and cement a string of casing in the hole through the workable coalbed or beds in such a manner as will exclude all oil, gas or gas pressure as may be found in such coalbed or beds. Such string of casing shall be circulated and cemented in such a manner as provided for in reasonable rules promulgated by the chief in accordance with the provisions of chapter twenty-nine-a. After any such string of casing has been so run and cemented to the surface, drilling may proceed to the permitted depth.

(b) When a coalbed methane well is drilled through the horizon of a coalbed from which the coal has been removed, the hole shall be drilled at least thirty feet below the coalbed, of a size sufficient to permit the placing of a liner which shall start not less than twenty feet above it. Within this liner, which may be welded to the casing to be used, shall be centrally placed the largest sized casing to be used in the well, and the space between the liner and casing shall be filled with cement as they are lowered into the hole. Cement shall be placed in the bottom of the hole to a depth of twenty feet to form a sealed seat for both liner and casing. Following the setting of the liner, drilling shall proceed in the manner provided above. Should it be found necessary to drill through the horizon of two or more workable coalbeds from which the coal has been removed, such liner shall be started not less than twenty feet below the lowest such horizon penetrated and shall extend to a point not less than twenty feet above the highest such horizon.

(c) At least five days prior to the stimulation of any coal seam the well operator shall give the coal owner and operator notice of the date and time of stimulation and shall allow the coal owner or operator to have an observer present at the site at the coal owner or operator's risk and cost. Within thirty days after stimulation is completed, the well operator shall certify the actual stimulation procedure used including, but not limited to, the fluid injection rate, the injection pressure, the volume and components of fluid injected and the amount and components of the propping agent, if any.

(d) The chief may grant variances to the requirements of this section where such variance would promote the extraction of coalbed methane without affecting mine safety.

§22-21-15. Drilling units and pooling of interests.

(a) In the absence of a voluntary agreement, an operator, owner or other party claiming an ownership interest in the coalbed methane may file an application with the chief to pool (i) separately owned interests in a single tract, (ii) separately owned tracts, (iii) separately owned interests in any tract, and (iv) any combination of (i), (ii) and (iii) to form a drilling unit for the production of coalbed methane from one or more coalbed methane wells.

(b) The application for a drilling unit may accompany the application for a permit for a coalbed methane well or be filed as a supplement to the permit application. Such application shall be verified by the applicant and contain the following information for the proposed unit:

- (1) The identity of each well and operator as set out in the well permit application;
- (2) Each well number, if one has been assigned;
- (3) The acreage of the proposed unit, the identity and acreage of each separate tract to be included in the proposed unit, and, where parts of tracts are included, the acreage of such parts;
- (4) The district and county in which the unit is located;
- (5) The names and addresses of the owners of the coal and coalbed methane underlying each separate tract, or the portion thereof which is to be included in the unit, any lessees or operators thereof, any coalbed methane owners not otherwise named, and any other claimants thereto known to the applicant. When any coal seam is separately owned, the list of names shall identify such separate ownership giving the names of the separately owned seams;
- (6) A statement describing the actions taken by the applicant to obtain a voluntary agreement from each interest owner or claimant named in the application from which agreement has not been obtained;

(7) Other pertinent and relevant information as the chief may prescribe by rules.

(c) The application for a drilling unit shall be accompanied with the following:

(1) A plat prepared by a licensed land surveyor or registered professional engineer showing the location of the coalbed methane well or wells, or proposed well or wells, the boundary and acreage of the proposed drilling unit, the boundary and acreage of each tract contained in the unit and, where parts of tracts are included, the boundary and acreage of such parts, a name identification of each tract, and the district and county in which the unit is located. All boundaries must be shown with courses and distances;

(2) A permit application fee of two hundred fifty dollars;

(3) A certificate by the applicant that the notice requirements of section sixteen of this article were satisfied by the applicant. Such certification may be by affidavit of personal service, or the return receipt card, or other postal receipt, for certified mailing;

(4) An estimate of the cost, or the actual cost if known, of drilling, completing, equipping, operating, plugging and abandoning any well or wells in the proposed unit.

§22-21-16. Notice to owners.

(a) At least thirty days prior to the date set for hearing under section seventeen of this article, the applicant shall deliver by personal service or by certified mail, return receipt requested, notice to the following:

(1) Each coal owner and coal operator of any coal seam underlying any tract or portion thereof which is proposed to be included in the unit;

(2) Each owner and lessee of record and each operator of natural gas surrounding the well bore and existing in formations above the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whichever is shallower. Notices to gas operators shall be sufficient if served upon the agent of record with the office of oil and gas;

(3) Any coalbed methane owner to the extent not otherwise named; and

(4) Any other person or entity known to the operator to have an interest in the coal or coalbed methane.

(b) The notice required by subsection (a) of this section shall specify a time and place for a conference and a hearing on this application, shall advise the persons notified that the applicant has filed an application for a drilling unit for the production of coalbed methane, that they may be present and object or offer comments to the formation of the proposed unit, and shall be accompanied with copies of (i) the permit application for the coalbed methane well, (ii) the permit application for the drilling unit, and (iii) the plat of the drilling unit.

§22-21-17. Review of application; hearing; pooling order; spacing; operator; elections; working interests, royalty interests, carried interests, escrow account for conflicting claims, division order.

(a) Prior to the time fixed for a hearing under subsection (b) of this section, the board shall also set a time and place for a conference between the proposed applicant to operate a coalbed methane drilling unit and all persons identified in the application as having an interest in the coalbed methane or being a claimant if such interests are disputed, who have not entered into a voluntary agreement. At such conference the applicant and such other persons present or represented having an interest in the proposed unit shall be given an opportunity to enter into voluntary agreements for the development of the unit upon reasonable terms and conditions.

No order may be issued by the board as to any unit unless the applicant submits at the hearing a verified statement setting forth the results of the conference. If agreement is reached with all parties to the conference, the board shall find the unit is a voluntary unit and issue an order consistent with such finding.

(b) The review board shall, upon request of a proposed applicant for a drilling unit or upon request of a coal owner or operator, provide a convenient date and time for a hearing on the application for a drilling unit, which hearing date shall be no sooner than thirty-five days nor more than sixty days of the date the request for hearing is made. The review board shall review the application and on the date specified for a hearing shall conduct a public hearing. The review board shall take evidence, making a record thereof, and consider:

(1) The area which may be drained efficiently and economically by the proposed coalbed methane well or wells;

(2) The plan of development of the coal and the need for proper ventilation of any mines or degasification of any affected coal seams;

(3) The nature and character of any coal seam or seams which will be affected by the coalbed methane well or wells;

(4) The surface topography and property lines of the lands underlaid by the coal seams to be included in the unit;

(5) Evidence relevant to the proper boundary of the drilling unit;

(6) The nature and extent of ownership of each coalbed methane owner or claimant and whether conflicting claims exist;

(7) Whether the applicant for the drilling unit proposes to be the operator of the coalbed methane well or wells within the unit; and if so, whether such applicant has a lease or other agreement from the owners or claimants of a majority interest in the proposed drilling unit;

(8) Whether a disagreement exists among the coalbed methane owners or claimants over the designation of the operator for any coalbed methane wells within the unit, and if so, relevant evidence to determine which operator can properly and efficiently develop the coalbed methane within the unit for the benefit of the majority of the coalbed methane owners;

(9) If more than one person is interested in operating a well within the unit, the estimated cost submitted by each such person for drilling, completing, operating and marketing the coalbed methane from any proposed well or wells; and

(10) Any other available geological or scientific data pertaining to the pool which is proposed to be developed.

(c) The review board shall take into account the evidence introduced, comments received and any objections at the hearing, and if satisfied that a drilling unit should not be established, shall enter an order denying the application.

If the review board is satisfied that a drilling unit should be established, it shall enter a pooling order establishing a drilling unit. Such pooling order shall:

- (1) Establish the boundary of the proposed unit, making such adjustment in the boundary as is just;
- (2) Authorize the drilling and operation of a coalbed methane well or wells for production of coalbed methane from the pooled acreage;
- (3) Establish minimum distances for any wells in the unit and for other wells which would drain the pooled acreage;
- (4) Designate the operator who will be authorized to drill, complete and operate any well or wells in the unit;
- (5) Establish a reasonable fee for the operator for operating costs, which shall include routine maintenance of the well and all accounting necessary to pay all expenses, royalties and amounts due working interest owners;
- (6) Such other findings and provisions as are appropriate for each order.

(d) The operator designated in such order shall be responsible for drilling, completing, equipping, operating, plugging and abandoning the well, shall market all production therefrom, shall collect all proceeds therefore, and shall distribute such proceeds in accordance with the division order issued by the review board.

(e) Upon issuance of the pooling order, the coalbed methane owners or any lessee of any such owners or any claimants thereto may make one of the following elections within thirty days after issuance of the order:

- (1) An election to sell or lease its interest to the operator on such terms as the parties may agree, or if unable to agree, upon such terms as are set forth by the board in its order;
- (2) An election to become a working interest owner by participating in the risk and cost of the well; or
- (3) An election to participate in the operation of the well as a carried interest owner.

Any entity which does not make an election within said thirty days prescribed herein shall be deemed to have elected to sell or lease under election (1) above.

(f) The working interest in the well shall include (i) the right to participate in decisions regarding expenditures in excess of operating costs, taxes, any royalties in excess of one eighth, and other costs and expenses allowed in the pooling order and (ii) the obligation to pay for all expenditures. The working interest shall exist in (i) all owners who participate in the risk and cost of drilling and completing the well and (ii) carried interest owners after recoupment provided in subsection (h) of this section. The working interest owners' net revenue share shall be seven eighths of the proceeds of sales of coalbed methane at the wellhead after deduction of operating costs, taxes, any royalties in excess of one eighth, and other costs and expenses allowed in a pooling order. Unless the working interest owners otherwise agree, the working interest owners shall share in all costs and decisions in proportion to their ownership interest in the unit. If any working interest owner deposits or contributes amounts in the escrow account which exceed actual costs, such owner shall be entitled to a refund; and if amounts deposited or contributed are less than actual costs, such owner shall make a deposit or contribution for the deficiency.

(g) The royalty interest in a well shall include the right to receive one eighth of the gross proceeds resulting from the sale of methane at the wellhead and such interest shall exist in the coalbed methane owners: Provided, That any coalbed methane owner who in good faith has entered a lease or other contract prior to receiving notice of an application to form the drilling unit as provided herein, shall be entitled to such owner's fractional interest in the royalty calculated at a rate provided for in such contract. Each such owner shall be entitled to share in the royalty in proportion to his or her fractional interest in the unit.

(h) Where a coalbed methane owner elects to become a carried interest owner, such owner shall be entitled to his or her proportionate share of the working interest after the other working interest owners have recouped three hundred percent of the reasonable capital costs of the well or wells, including drilling, completing, equipping, plugging and abandoning and any further costs of reworking or other improvements of a capital nature.

(i) Each pooling order issued shall provide for the establishment of an escrow account into which the payment of costs and proceeds attributable to any conflicting interests shall be deposited and held for the interest of the claimants as follows:

- (1) Each participating working interest owner, except for the operator, shall deposit in the escrow account its proportionate share of the costs allocable to the ownership interest claimed by such working interest owner.
- (2) The operator shall deposit in the escrow account all proceeds attributable to the conflicting interests of any coalbed methane owners who lease, or are deemed to have leased, their interest, plus all proceeds in excess of operational expenses, as allowed in the pooling order, attributable to the conflicting working and carried interest owners.

(j) After each coalbed methane owner has made, or has been deemed to have made, an election under subsection (e) of this section, the review board shall enter a division order which shall set out the net revenue interest of each working interest owner, including each carried interest owner and the royalty interest of each coalbed methane owner. Thereafter payments shall be made to working interest owners, carried interest owners and royalty interest owners in accordance with the division order, except that payments attributable to conflicting claims shall be deposited in the escrow account. The fractional interest of each owner shall be expressed as a decimal carried to the sixth place.

(k) Upon resolution of conflicting claims either by voluntary agreement of the parties or a final judicial determination, the review board shall enter a revised division order in accordance with such agreement or determination and all amounts in escrow shall be distributed as follows:

- (1) Each legally entitled working interest owner shall receive its proportionate share of the proceeds attributable to the conflicting ownership interests;

- (2) Each legally entitled carried interest owner shall receive its proportionate share of the proceeds attributable to the conflicting ownership interests, after recoupment of amounts provided in subsection (h) of this section;
- (3) Each legally entitled entity leasing, or deemed to have leased, its coalbed methane shall receive a share of the royalty proceeds attributable to the conflicting interests; and
- (4) The operator shall receive the costs contributed to the escrow account by each legally entitled participating working interest owner.

(l) The review board shall enact rules for the administration and protection of funds delivered to escrow accounts.

(m) No provision of this section or article shall obviate the requirement that the coal owner's consent and agreement be obtained prior to the issuance of a permit as required under section seven of this article.

§22-21-20. Spacing.

No coalbed methane well may be drilled closer than one hundred feet of the outermost boundary of the coalbed methane tract, leased premises, or unit from which coalbed methane is or will be produced or within one thousand six hundred linear feet of the location of an existing well or a proposed well for which a permit application is on file, unless all owners and operators of any affected workable coal seams agree in writing. Affected workable coal seams for purposes of this section shall be those which will be penetrated or those seams more than twenty-eight inches in thickness from which production is targeted. Spacing shall otherwise be as provided in a pooling order issued by the chief, an order establishing special field rules or an order issued by the review board.

§22-21-22. Notice of plugging and reclamation of well; right to take well; objection; plugging order; plugging for mine-through.

(a) Prior to the commencement of plugging operations the operator shall give thirty days' advance notice to the chief and to all coal owners and operators whose names and addresses would be required for a permit application under subdivision (2), subsection (b), section six of this article as of the date of the notice. Such notice shall set out the number and other identification of the well, a copy of the well plat, the date plugging will commence, and the manner and method of plugging.

(b) Any coal owner or operator whose coal seam is affected by such well shall have the following rights:

(1) To convert the well to a vent hole or otherwise take the well. In such event the chief, upon determination that the coal owner or operator has placed the well under a mining permit, shall release the well operator's bond and the well operator shall be relieved of further responsibility for the well; and

(2) To file comment or objection with the chief, within fifteen days after receipt of notice of intent to plug, with respect to the proposed manner or method of plugging. The chief shall consider any such comment or objection and issue an order specifying the manner and method of plugging and reclamation.

(c) Whenever any coalbed methane well is located in that portion of a coal seam which will be mined within six months, the well operator shall, within sixty days after notice from the coal owner or coal operator that the well is to be mined through, plug the well in such manner that the well can be safely mined through.

§22-21-23. Method of plugging.

All coalbed methane wells shall be plugged in such a manner that any workable coal seam surrounding the well can be safely mined and that the well can be mined through. The chief shall promulgate rules specifying the manner and method of plugging coalbed methane wells and in doing so, or in entering any order for such plugging and reclamation, shall give special consideration to the ability to mine any affected coal seam safely and the protection of any affected coal seam for future mining.

**CHAPTER 22A ARTICLE 1
MINERS' HEALTH, SAFETY AND TRAINING
ADMINISTRATION; ENFORCEMENT**

§22A-1-1. Continuation of the office of miners' health, safety and training; purpose.

(a) The office of miners' health, safety and training is continued and is a separate office within the department of commerce, labor and environmental resources. The office shall be administered, in accordance with the provisions of this article, under the supervision and direction of the director of the office of miners' health, safety and training.

(b) The division of health, safety and training shall have as its purpose the supervision of the execution and enforcement of the provisions of this chapter and, in carrying out the aforesaid purposes, it shall give prime consideration to the protection of the safety and health of persons employed within or at the mines of this state. In addition, the division shall, consistent with the aforesaid prime consideration, protect and preserve mining property and property used in connection therewith.

§22A-1-2. Definitions. Unless the context in which used clearly requires a different meaning, the following definitions apply to this chapter:

(a) General.

(1) Accident. The term "accident" means any mine explosion, mine ignition, mine fire, or mine inundation, or injury to, or death of any person.

(2) Agent. The term "agent" means any person charged with responsibility for the operation of all or a part of a mine or the supervision of the miners in a mine.

(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.

- (4) Face equipment. The term "face equipment" means mobile or portable mining machinery having electric motors or accessory equipment normally installed or operated in by the last open crosscut in an entry or room.
- (5) Imminent danger. The term "imminent danger" means the existence of any condition or practice in a coal mine which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated.
- (6) Mine. The term "mine" includes the shafts, slopes, drifts or inclines connected with, or intended in the future to be connected with, excavations penetrating coal seams or strata, which excavations are ventilated by one general air current or divisions thereof, and connected by one general system of mine haulage over which coal may be delivered to one or more points outside the mine, and the surface structures or equipment connected or associated therewith which contribute directly or indirectly to the mining, preparation or handling of coal, or construction thereof.
- (7) Miner. The term "miner" means any individual working in a coal mine.
- (8) Operator. The term "operator" means any firm, corporation, partnership or individual operating any coal mine or part thereof, or engaged in the construction of any facility associated with a coal mine.
- (9) Permissible. The term "permissible" means any equipment, device or explosive that has been approved as permissible by the federal mine safety and health administration and/or the United States Bureau of Mines and meets all requirements, restrictions, exceptions, limitations and conditions attached to such classification by that agency or the bureau.
- (10) Person. The term "person" means any individual, partnership, association, corporation, firm, subsidiary of a corporation or other organization.
- (11) Work of preparing the coal. The term "work of preparing the coal" means the breaking, crushing, sizing, cleaning, washing, drying, mixing, storing and loading of bituminous coal or lignite, and such other work of preparing such coal as is usually done by the operator of the coal mine.
- (b) Office of miners' health, safety and training.
- (1) Board of appeals. The term "board of appeals" means as provided for in article five of this chapter.
- (2) Director. The term "director" means the director of the office of miners' health, safety and training provided for in section three of this article.
- (3) Mine inspector. The term "mine inspector" means a state mine inspector provided for in section eight of this article.
- (4) Mine inspectors' examining board. The term "mine inspectors' examining board" shall mean the mine inspectors' examining board provided for in article nine of this chapter.
- (5) Office. The term "office" means, when referring to a specific office, the office of miners' health, safety and training provided for in this article. The term "office," when used generically, includes any office, board, agency, unit, organizational entity or component thereof.
- (c) Mine areas.
- (1) Abandoned workings. The term "abandoned workings" means excavation, either caved or sealed, that is deserted and in which further mining is not intended, or open workings which are ventilated and not inspected regularly.
- (2) Active workings. The term "active workings" means all places in a mine that are ventilated and inspected regularly.
- (3) Drift. The term "drift" means a horizontal or approximately horizontal opening through the strata or in a coal seam and used for the same purposes as a shaft.
- (4) Excavations and workings. The term "excavations and workings" means any or all parts of a mine excavated or being excavated, including shafts, slopes, drifts, tunnels, entries, rooms and working places, whether abandoned or in use.
- (5) Inactive workings. The term "inactive workings" includes all portions of a mine in which operations have been suspended for an indefinite period, but have not been abandoned.
- (6) Mechanical working section. The term "mechanical working section" means an area of a mine (A) in which coal is loaded mechanically, (B) which is comprised of a number of working places that are generally contiguous, and (C) which is of such size to permit necessary supervision during shift operation, including pre-shift and on-shift examinations and tests required by law.
- (7) Panel. The term "panel" means workings that are or have been developed off of submain entries which do not exceed three thousand feet in length.
- (8) Return air. The term "return air" means a volume of air that has passed through and ventilated all the working places in a mine section.
- (9) Shaft. The term "shaft" means a vertical opening through the strata that is or may be used for the purpose of ventilation, drainage, and the hoisting and transportation of individuals and material, in connection with the mining of coal.
- (10) Slope. The term "slope" means a plane or incline roadway, usually driven to a coal seam from the surface and used for the same purposes as a shaft.
- (11) Working face. The term "working face" means any place in a coal mine in which work of extracting coal from its natural deposit in the earth is performed during the mining cycle.
- (12) Working place. The term "working place" means the area of a coal mine in by the last open crosscut.
- (13) Working section. The term "working section" means all areas of the coal mine from the loading point of the section to and including the working faces.
- (14) Working unit. The term "working unit" means an area of a mine in which coal is mined with a set of production equipment; a conventional mining unit by a single loading machine; a continuous mining unit by a single continuous mining machine, which is comprised of a number of working places.

(d) Mine personnel.

- (1) Assistant mine foreman. The term "assistant mine foreman" means a certified person designated to assist the mine foreman in the supervision of a portion or the whole of a mine or of the persons employed therein.
- (2) Certified electrician. The term "certified electrician" means any person who is qualified as a mine electrician and who has passed an examination given by the office, or has at least three 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 non-coal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and has satisfactorily completed a coal mine electrical training program approved by the office.
- (3) Certified person. The term "certified person," when used to designate the kind of person to whom the performance of a duty in connection with the operation of a mine shall be assigned, means a person who is qualified under the provisions of this law to perform such duty.
- (4) Interested persons. The term "interested persons" includes the operator, members of any mine safety committee at the mine affected and other duly authorized representatives of the mine workers and the office.
- (5) Mine foreman. The term "mine foreman" means the certified person whom the operator or superintendent shall place in charge of the inside workings of the mine and of the persons employed therein.
- (6) Qualified person. The term "qualified person" means a person who has completed an examination and is considered qualified on record by the office.
- (7) Shot firer. The term "shot firer" means any person having had at least two years of practical experience in coal mines, who has a knowledge of ventilation, mine roof and timbering, and who has demonstrated his or her knowledge of mine gases, the use of a flame safety lamp, and other approved detecting devices by examination and certification given him or her by the office.
- (8) Superintendent. The term "superintendent" means the person who has, on behalf of the operator, immediate supervision of one or more mines.
- (9) Supervisor. The term "supervisor" means a superintendent, mine foreman, assistant mine foreman, or any person specifically designated by the superintendent or mine foreman to supervise work or employees and who is acting pursuant to such specific designation and instructions.

(e) Electrical.

- (1) Armored cable. The term "armored cable" means a cable provided with a wrapping of metal, usually steel wires or tapes, primarily for the purpose of mechanical protection.
- (2) Borehole cable. The term "borehole cable" means a cable designed for vertical suspension in a borehole or shaft and used for power circuits in the mine.
- (3) Branch circuit. The term "branch circuit" means any circuit, alternating current or direct current, connected to and leading from the main power lines.
- (4) Cable. The term "cable" means a standard conductor (single conductor cable) or a combination of conductors insulated from one another (multiple conductor cable).
- (5) Circuit breaker. The term "circuit breaker" means a device for interrupting a circuit between separable contacts under normal or abnormal conditions.
- (6) Delta connected. The term "delta connected" means a power system in which the windings or transformers for A.C. generators are connected to form a triangular phase relationship, and with phase conductors connected to each point of the triangle.
- (7) Effectively grounded. The term "effectively grounded" is an expression which means grounded through a grounding connection of sufficiently low impedance (inherent or intentionally added or both) so that fault grounds which may occur cannot build up voltages in excess of limits established for apparatus, circuits or systems so grounded.
- (8) Flame-resistant cable, portable. The term "flame-resistant cable, portable" means a portable flame-resistant cable that has passed the flame tests of the Federal Mine Safety and Health Administration.
- (9) Ground or grounding conductor (mining). The term "ground or grounding conductor (mining)," also referred to as a safety ground conductor, safety ground and frame ground, means a metallic conductor used to connect the metal frame or enclosure of any equipment, device or wiring system with a mine track or other effective grounding medium.
- (10) Grounded (earthed). The term "grounded (earthed)" means that the system, circuit or apparatus referred to is provided with a ground.
- (11) High voltage. The term "high voltage" means voltages of more than one thousand volts.
- (12) Lightning arrester. The term "lightning arrester" means a protective device for limiting surge voltage on equipment by discharging or by passing surge current; it prevents continued flow of follow current to ground and is capable of repeating these functions as specified.
- (13) Low voltage. The term "low voltage" means up to and including six hundred sixty volts.
- (14) Medium voltage. The term "medium voltage" means voltages from six hundred sixty-one to one thousand volts.
- (15) Mine power center or distribution center. The term "mine power center or distribution center" means a combined transformer or distribution unit, complete within a metal enclosure from which one or more low-voltage power circuits are taken.
- (16) Neutral (derived). The term "neutral (derived)" means a neutral point or connection established by the addition of a "zig-zag" or grounding transformer to a normally underground power system.

(17) Neutral point. The term "neutral point" means the connection point of transformer or generator windings from which the voltage to ground is nominally zero, and is the point generally used for system groundings in wye-connected A.C. power system.

(18) Portable (trailing) cable. The term "portable (trailing) cable" means a flexible cable or cord used for connecting mobile, portable or stationary equipment in mines to a trolley system or other external source of electric energy where permanent mine wiring is prohibited or is impracticable.

(19) Wye-connected. The term "wye-connected" means a power system connection in which one end of each phase windings or transformers or A.C. generators are connected together to form a neutral point, and a neutral conductor may or may not be connected to the neutral point, and the neutral point may or may not be grounded.

(20) Zig-zag transformer (grounding transformer) The term "zig-zag transformer (grounding transformer)" means a transformer intended primarily to provide a neutral point for grounding purposes.

§22A-1-3. Director of the Office of Miners' Health, Safety and Training.

(a) The Director of the Office of Miners' Health, Safety and Training is responsible for surface and underground safety inspections of coal mines and the administration of the Office of Miners' Health, Safety and Training.

(b) The director is the chief executive officer of the office. Subject to provisions of law, he or she shall organize the office into those offices, sections, agencies and other units of activity found by the director to be desirable for the orderly, efficient and economical administration of the office. The director may appoint any other employees needed for the operation of the office and may prescribe their powers and duties and fix their compensation within amounts appropriated.

(c) The director shall be appointed by the Governor, by and with the advice and consent of the Senate, and shall serve at the will and pleasure of the Governor.

(d) The Director of the Office of Miners' Health, Safety and Training shall be a citizen of West Virginia, shall be a competent person of good repute and temperate habits with a demonstrated interest and five years' education, training or experience in underground coal mining safety and shall have at least three years of experience in a position of responsibility in at least one discipline relating to the duties and responsibilities for which the director will be responsible upon assumption of the office of director. Special reference shall be given to his or her administrative experience and ability. The director shall devote all of his or her time to the duties of the position of director and shall not be directly interested financially in any mine in this or any other state nor shall the director, either directly or indirectly, be a majority owner of, or have control of or a controlling interest in, a mine in this or any other state. The director shall not be a candidate for or hold any other public office, shall not be a member of any political party committee and shall immediately forfeit and vacate his or her office as director in the event he or she becomes a candidate for or accepts appointment to any other public office or political party committee: Provided, That, in the event of a vacancy in the position of director, the Governor may fill the director's position on an interim basis by appointing an acting director to exercise the powers of the director. The acting director shall be a citizen of West Virginia, shall be a competent person of good repute and temperate habits with a demonstrated interest and five years' education, training or experience in underground coal mining safety and shall have at least three years of experience in a position of responsibility in at least one discipline relating to the duties and responsibilities for which the acting director will be responsible during his or her interim service in the office of director. The interim service appointment can not last for more than one year, after which a permanent director must be appointed.

(e) The director shall be allowed and paid necessary expenses incident to the performance of his or her official duties. Prior to the assumption of his or her official duties, the director shall take the oath required of public officials prescribed by section five, article IV of the Constitution of West Virginia and shall execute a bond, with surety approved by the Governor, in the penal sum of ten thousand dollars. The executed oath and bond shall be filed in the Office of the Secretary of State. Premiums on the bond shall be paid from office funds.

§22A-1-4. Powers and duties of the director of the office of miners' health, safety and training.

(a) The director of the office of miners' health, safety and training is hereby empowered and it is his or her duty to administer and enforce such provisions of this chapter relating to health and safety inspections and enforcement and training in surface and underground coal mines, underground clay mines, open pit mines, cement manufacturing plants and underground limestone and sandstone mines.

(b) The director of the office of miners' health, safety and training has full charge of the division. The director has the power and duty to:

(1) Supervise and direct the execution and enforcement of the provisions of this article.

(2) Employ such assistants, clerks, stenographers and other employees as may be necessary to fully and effectively carry out his or her responsibilities and fix their compensation, except as otherwise provided in this article.

(3) Assign mine inspectors to divisions or districts in accordance with the provisions of section eight of this article as may be necessary to fully and effectively carry out the provisions of this law, including the training of inspectors for the specialized requirements of surface mining, shaft and slope sinking and surface installations and to supervise and direct such mine inspectors in the performance of their duties.

(4) Suspend, for good cause, any such mine inspector without compensation for a period not exceeding thirty days in any calendar year.

(5) Prepare report forms to be used by mine inspectors in making their findings, orders and notices, upon inspections made in accordance with this article.

(6) Hear and determine applications made by mine operators for the annulment or revision of orders made by mine inspectors, and to make inspections of mines, in accordance with the provisions of this article.

(7) Cause a properly indexed permanent and public record to be kept of all inspections made by himself or by mine inspectors.

(8) Make annually a full and complete written report of the administration of the office to the governor and the Legislature of the state for the year ending the thirtieth day of June. The report shall include the number of visits and inspections of mines in the state by mine inspectors, the quantity of coal, coke and other minerals (excluding oil and gas) produced in the state, the number of individuals employed, number of mines in operation, statistics with regard to health and safety of persons working in the mines including the causes of injuries and deaths, improvements made, prosecutions, the total funds of the office from all sources identifying each source of such funds, the expenditures of the office, the surplus or deficit of the office at the beginning and end of the year, the amount of fines collected, the amount of fines imposed, the value of fines pending, the number and type of violations found, the amount of fines imposed, levied and turned over for collection, the total amount of fines levied but not paid during the prior year, the titles and salaries of all inspectors and other officials of the office, the number of inspections made by each inspector, the number and type of violations found by each inspector: Provided, that no inspector is identified by name in this report. Such reports shall be filed with the governor and the Legislature on or before the thirty-first day of December of the same year for which it was made, and shall upon proper authority be printed and distributed to interested persons.

(9) Call or subpoena witnesses, for the purpose of conducting hearings into mine fires, mine explosions or any mine accident; to administer oaths and to require production of any books, papers, records or other documents relevant or material to any hearing, investigation or examination of any mine permitted by this chapter. Any witness so called or subpoenaed shall receive forty dollars per diem and shall receive mileage at the rate of fifteen cents for each mile actually traveled, which shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such witness.

(10) Institute civil actions for relief, including permanent or temporary injunctions, restraining orders, or any other appropriate action in the appropriate federal or state court whenever any operator or the operator's agent violates or fails or refuses to comply with any lawful order, notice or decision issued by the director or his or her representative.

(11) Perform all other duties which are expressly imposed upon him or her by the provisions of this chapter.

(12) Make all records of the office open for inspection of interested persons and the public.

(13) Impose reasonable fees upon applicants taking tests administered pursuant to the requirements of this chapter.

(14) Prepare study guides and other forms of publications relating to mine safety and charge a reasonable fee for the sale of the publications.

(15) Make all records of the office open for inspection of interested persons and the public.

§22A-1-5. Offices continued in the office of miners' health, safety and training.

(a) There are hereby continued in the office of miners' health, safety and training the following offices:

(1) The board of coal mine health and safety established pursuant to article six of this chapter;

(2) The coal mine safety and technical review committee established pursuant to article six of this chapter;

(3) The board of miner training, education and certification established pursuant to article seven of this chapter;

(4) The mine inspectors' examining board established pursuant to article nine of this chapter; and

(5) The board of appeals provided for pursuant to the provisions of article five of this chapter.

(b) Nothing in this article may authorize the director or the secretary of the department of commerce, labor and environmental resources to alter, discontinue or abolish any office, board or commission or the functions thereof, which are established by statute.

§22A-1-6. Director's authority to promulgate rules.

The director has the power and authority to propose or promulgate rules to organize the office and to carry out and implement the provisions of this chapter relating to health and safety inspections and enforcement. All rules in effect on the effective date of this article which pertain to the provisions of this chapter as they relate to health and safety inspection and enforcement shall remain in effect until changed or superseded by the director, or as appropriate. Except when specifically exempted by the provisions of this chapter, all rules or changes thereto shall be proposed or promulgated by the director in accordance with the provisions of chapter twenty-nine-a of this code.

§22A-1-7. Savings provisions.

All orders, determinations, rules, permits, grants, contracts, certificates, licenses and privileges which have been issued, made, granted, or allowed to become effective by the governor, any state department or agency or official thereof, or by a court of competent jurisdiction, in the performance of functions which were transferred from the division of energy to the secretary of the department of commerce, labor and environmental resources, to the director, or to the office, and which were in effect on the date such transfer occurred, shall continue in effect according to their terms until modified, terminated, superseded, set aside or revoked in accordance with law by the governor, the secretary, the director, or other authorized official, a court of competent jurisdiction or by operation of law.

§22A-1-8. Mine inspectors; regions and districts; employment; tenure; oath.

Notwithstanding any other provisions of this code to the contrary, mine inspectors shall be selected, serve and be removed as provided in this article.

The director shall divide the state into a sufficient number of regions, so as to equalize, as far as practical, the work of each inspector. The director may assign inspectors to districts and may designate and assign not more than one

inspector-at-large and one assistant inspector-at-large to each region. The director may designate the places of abode of inspectors at points convenient to the mines of their respective districts, and, in the case of inspectors-at-large and assistant inspectors-at-large, their respective regions.

All mine inspectors appointed after the mine inspectors' examining board has certified to the director an adequate register of qualified eligible candidates, so long as the register contains the names of at least three qualified eligible candidates, shall be appointed from the names on such register. Each original appointment shall be made by the director for a probationary period of not more than one year.

The director shall make each appointment from among the three qualified eligible candidates on the register having the highest grades: *Provided*, that the director may, for good cause, at least thirty days prior to making an appointment, strike any name from the register. Upon striking any name from the register, the director shall immediately notify in writing each member of the mine inspectors' examining board of the action, together with a detailed statement of the reasons therefore. Thereafter, if the mine inspectors' examining board finds, after hearing, that the action of the director was arbitrary or unreasonable, it may then order the name of any candidate so stricken from the register to be reinstated thereon. The reinstatement is effective from the date of removal from the register.

The name of any candidate passed over for appointment for three years shall be deleted from the register.

After having served for a probationary period of one year to the satisfaction of the director, a mine inspector has permanent tenure, subject to dismissal only for cause in accordance with the applicable provisions of section twelve of this article. No mine inspector, while in office, may be directly or indirectly interested as an employee, owner, lessor, operator, stockholder, superintendent or engineer of any coal mine. Before entering upon the discharge of the duties as a mine inspector, he or she shall take the oath of office prescribed by section 5, article IV of the Constitution of West Virginia, a certificate of which oath shall be filed in the office of the secretary of state.

The inspectors, inspectors-at-large and assistant inspectors-at-large, together with the director, shall make all inspections authorized by this article and article two of this chapter and shall perform such other duties as are imposed upon mine inspectors by this chapter and by any applicable legislative rules.

§22A-1-9. Mine safety instructors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to mine safety instructors.

(a) The office shall employ a sufficient number of mine safety instructors as the director determines to be reasonably necessary in fully and effectively carrying out the applicable provisions of this chapter.

(b) To be eligible for employment as a mine safety instructor, the applicant shall be: (1) A citizen of West Virginia, in good health, not less than twenty-four years of age, of good character and reputation, and of temperate habits; (2) a person who has had at least five years of practical experience in coal mines, at least two years of which has been in mines in this state: *Provided*, that graduation from any accredited college of mining engineering may be considered equivalent to two years of practical experience; (3) a person who has had practical experience with dangerous gases found in coal mines, and who has a good theoretical and practical knowledge of mines, mining methods, mine ventilation, sound safety practices and applicable mining laws and rules; and (4) a person who possesses a West Virginia foreman-fireboss certification; or a person who has had at least three years of experience as an actual working team member of a mine rescue team, or at least three years of experience as a member of a first aid team or emergency medical technician team; or a person who has had at least three years of experience as the safety director, or the equivalent as approved by the mine inspectors' examining board, of a mine; or a person who has had at least three years of experience as an active member of a mine safety committee. For the purpose of this section, practical experience means the performance of normal mining duties requiring a person to hold a certificate of competency and qualification as an experienced miner prior to actually performing such duties.

(c) (1) In order to qualify for appointment as a mine safety instructor, an eligible applicant shall submit to written, oral and practical examinations administered by the mine inspectors' examining board and furnish evidence of good health, character and other facts establishing eligibility as the board may require. The examinations shall relate to the duties to be performed by a mine safety instructor and, subject to the approval of the mine inspectors' examining board, may be prepared by the director.

(2) If the board finds after investigation and examination that an applicant: (A) Is eligible for appointment; and (B) has passed each required examination with a grade of at least seventy-five percent or an overall combined average score of eighty percent, the board shall add the applicant's name and grades to the register of qualified eligible candidates and promptly certify its action in writing to the director. The director shall then appoint one of the candidates from the three having the highest grades.

(d) Mine safety instructors shall be paid an annual salary of not less than thirty-seven thousand four hundred dollars, which shall be fixed by the director, who shall take into consideration ability, performance of duty and experience. Mine safety instructors shall devote all of their time to the duties of the office.

(e) Except as expressly provided in this section to the contrary, all provisions of this article relating to the eligibility, qualification, appointment, tenure and removal of underground mine inspectors, as well as those provisions relating to compensatory time and reimbursement for necessary expenses, are applicable to mine safety instructors.

EDITOR'S NOTE: See Addendum 1 for current salaries as of July 1, 2007

§22A-1-10. Mine inspectors may be appointed to fill vacancy in division.

Notwithstanding any other provisions of law, if a vacancy occurs in any appointive position within the office, any mine inspector having permanent tenure, if qualified, may be appointed to such appointive position by the director.

§22A-1-11. Employment of electrical inspectors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to electrical inspectors.

(a) The office shall employ a sufficient number of electrical inspectors as the director determines to be reasonably necessary in fully and effectively carrying out the applicable provisions of this chapter.

(b) To be eligible for employment as an electrical inspector, the applicant shall be: (1) A citizen of West Virginia, in good health, not less than twenty-four years of age, of good character and reputation, and of temperate habits; and (2) a person who has had five years of practical electrical experience in coal mines, at least two of which were in mines in this state, or a degree in electrical engineering from an accredited electrical engineering school and three years of practical electrical experience in underground coal mining. For the purposes of this section, practical electrical experience means the performance of duties requiring a person to be a certified electrician, as that term is defined in subdivision (2), subsection (d), section two of this article, prior to actually performing such duties.

(c) (1) In order to qualify for appointment as an electrical inspector, an eligible applicant shall submit to written, oral and practical examinations administered by the mine inspectors' examining board and furnish evidence of good health, character and other facts establishing eligibility as the board may require. The examinations shall relate to the duties to be performed by an electrical inspector and, subject to approval of the mine inspectors' examining board, may be prepared by the director.

(2) If the board finds after investigation and examination that an applicant: (A) Is eligible for appointment; and (B) has passed the required examinations with an average grade of at least ninety percent, the board shall add the applicant's name and grades to the register of qualified eligible candidates and promptly certify its action in writing to the director. The director shall then appoint one of the candidates from the three having the highest grades.

(d) Electrical inspectors shall be paid an annual salary of not less than forty-two thousand eight hundred twenty-eight dollars, which shall be fixed by the director, who shall take into consideration ability, performance of duty and experience. Electrical inspectors shall devote all of their time to the duties of the office.

(e) Except as expressly provided in this section to the contrary, all provisions of this article relating to the eligibility, qualifications, appointment, tenure and removal of underground mine inspectors, as well as those provisions relating to compensatory time and reimbursement for necessary expenses, are applicable to mine electrical inspectors.

EDITOR'S NOTE: See Addendum 1 for current salaries as of July 1, 2007

§22A-1-12. Employment of underground mine inspectors; eligibility; qualifications; examinations; salary and expenses; reinstatement; removal.

(a) The office shall employ as many underground mine inspectors as the director determines to be reasonably necessary in fully and effectively carrying out the applicable provisions of this chapter.

(b) To be eligible for employment as a mine inspector the applicant shall be: (1) A citizen of West Virginia, in good health, not less than twenty-four years of age, of good character and reputation and of temperate habits; (2) a person who has had at least five years of practical experience in coal mines, at least two years of which have been in mines of this state: Provided, That graduation from any accredited college of mining engineering may be considered the equivalent of two years of practical experience; (3) a person who has had practical experience with dangerous gases found in coal mines; and (4) a person who has a good theoretical and practical knowledge of mines, mining methods, mine ventilation, sound safety practices and applicable mining laws and rules. For the purpose of this section, practical experience means the performance of normal mining duties requiring a person to hold a certificate of competency and qualification as an experienced underground miner prior to actually performing such duties.

(c) In order to qualify for appointment as an underground mine inspector, an eligible applicant shall submit to written, oral and practical examinations administered by the mine inspectors' examining board and furnish evidence of good health, character and other facts establishing eligibility as the board may require. The examinations shall relate to the duties to be performed by an underground mine inspector and, subject to the approval of the mine inspectors' examining board, may be prepared by the director. If the board finds after investigation and examination that an applicant: (1) Is eligible for appointment; and (2) has passed each required examination, with a grade of at least seventy-five percent or an overall combined average score of eighty percent, the board shall add the applicant's name and grades to the register of qualified eligible candidates and promptly certify its action in writing to the director. The director shall then appoint one of the candidates from the three having the highest grades.

(d) Underground mine inspectors shall be paid an annual salary of not less than thirty-eight thousand one hundred sixty dollars; assistant inspectors-at-large, not less than forty-four thousand four hundred forty-eight dollars; inspectors-at-large, not less than forty-six thousand one hundred four dollars, each of which shall be fixed by the director, who shall take into consideration ability, performance of duty, and experience. In accordance with established rules of the state's travel management office, underground mine inspectors shall also be allowed and paid expenses necessarily incident to the performance of their official duties: Provided, That no reimbursement for expenses may be made other than upon the timely submittal of a properly itemized expense account settlement completed by the underground mine inspector, approved and countersigned by the director, or his or her designated representative, verifying that the expenses were actually incurred in the performance of official duties. Underground mine inspectors shall devote all of their time to the duties of the office and shall be afforded compensatory time or compensation of at least the regular rate for all time in excess of forty hours per week.

(e) (1) An underground mine inspector, after having received a permanent appointment, may be removed from office only for physical or mental impairment, incompetency, neglect of duty, public intoxication, malfeasance in office or other similarly good cause.

(2) Proceedings for the removal of an underground mine inspector may be initiated by the director whenever there is reasonable cause to believe that adequate cause exists, warranting removal. The proceeding may be initiated by a verified petition, filed with the mine inspectors' examining board by the director, setting forth with particularity the facts alleged. Not less than twenty reputable citizens, who are operators or employees in mines in this state, may petition the director for the removal of an underground mine inspector. If the petition is verified by at least one of the petitioners, based on actual knowledge of the affiant of the alleged facts, which, if true, warrant the removal of the inspector, the director shall cause an investigation of the alleged facts to be made. If, after the investigation, the director finds that there is substantial evidence, which, if true, warrants removal of the inspector, the director shall file a petition with the board requesting removal of the inspector.

(3) On receipt of a petition by the director seeking removal of an underground mine inspector, the board shall promptly notify the inspector to appear before it at a time and place designated in the notice, which time shall be not less than fifteen days thereafter. There shall be attached to the copy of the notice served upon the inspector a copy of the petition filed with the board.

(4) At the time and place designated in the notice, the board shall hear all evidence offered in support of the petition and on behalf of the inspector. Each witness shall be sworn, and a transcript shall be made of all evidence taken and proceedings had at the hearing. No continuance may be granted except for good cause shown. The chairman of the board and the director has power to administer oaths and subpoena witnesses.

(5) If any mine inspector against whom a petition has been filed willfully refuses or fails to appear before the board, or having appeared, refuses to answer under oath any relevant question on the basis that the testimony or answer might incriminate him or her or refuses to waive immunity from prosecution because of any relevant matter about which the inspector may be asked to testify, then the inspector shall forfeit his or her position.

(6) If, after hearing, the board finds that the inspector should be removed, it shall enter an order to that effect. The decision of the board is final and is not subject to judicial review.

EDITOR'S NOTE: See Addendum 1 for current salaries as of July 1, 2007

§22A-1-13. Employment of surface mine inspectors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to surface mine inspectors.

(a) The office shall employ as many surface mine inspectors as the director determines to be reasonably necessary in fully and effectively carrying out the applicable provisions of this chapter.

(b) To be eligible for employment as a surface mine inspector the applicant shall be: (1) A citizen of West Virginia, in good health, not less than twenty-four years of age, of good character and reputation and of temperate habits; (2) a person who has had at least five years of practical experience in coal mines, at least two years of which have been in surface mines in this state: Provided, That graduation from any accredited college of mining engineering may be considered the equivalent of two years of practical experience; and (3) a person who has a good theoretical and practical knowledge of surface mines, surface mining methods, sound safety practices and applicable mining laws and rules. For the purpose of this section, practical experience means the performance of normal mining duties requiring a person to hold a certificate of competency and qualification as an experienced surface miner prior to actually performing such duties.

(c) (1) In order to qualify for appointment as a surface mine inspector, an eligible applicant shall submit to written, oral and practical examinations administered by the mine inspectors' examining board and furnish evidence of good health, character and other facts establishing eligibility as the board may require. The examinations shall relate to the duties to be performed by a surface mine inspector and, subject to the approval of the mine inspectors' examining board, may be prepared by the director.

(2) If the board finds after investigation and examination that an applicant is: (A) Eligible for appointment; and (B) has passed each required examination with a grade of at least seventy-five percent, or an overall combined average score of eighty percent, the board shall add the applicant's name and grades to the register of qualified eligible candidates and promptly certify its action in writing to the director. The director shall then appoint one of the candidates from the three having the highest grades.

(d) Surface mine inspectors shall be paid an annual salary of not less than thirty-seven thousand three hundred thirty-two dollars, which shall be fixed by the director, who shall take into consideration ability, performance of duty, and experience. Surface mine inspectors shall devote all of their time to the duties of the office.

(e) Except as expressly provided in this section to the contrary, all provisions of this article relating to the eligibility, qualification, appointment, tenure, and removal of underground mine inspectors, as well as those provisions relating to compensatory time and reimbursement for necessary expenses, are applicable to surface mine inspectors.

EDITOR'S NOTE: See Addendum 1 for current salaries as of July 1, 2007

§22A-1-14. Director and inspectors authorized to enter mines; duties of inspectors to examine mines; no advance notice; reports after fatal accidents.

The director, or his or her authorized representative, has authority to visit, enter, and examine any mine, whether underground or on the surface, and may call for the assistance of any district mine inspector or inspectors whenever such

assistance is necessary in the examination of any mine. The operator of every coal mine shall furnish the director or his or her authorized representative proper facilities for entering such mine and making examination or obtaining information.

If miners or one of their authorized representatives have reason to believe, at any time, that dangerous conditions exist or that the law is not being complied with, they may request the director to have an immediate investigation made.

Mine inspectors shall devote their full time and undivided attention to the performance of their duties, and they shall examine all of the mines in their respective districts at least four times annually, and as often, in addition thereto, as the director may direct, or the necessities of the case or the condition of the mine or mines may require, with no advance notice of inspection provided to any person, and they shall make a personal examination of each working face and all entrances to abandoned parts of the mine where gas is known to liberate, for the purpose of determining whether an imminent danger, referred to in section fifteen of this article, exists in any such mine, or whether any provision of article two of this chapter is being violated or has been violated within the past forty-eight hours in any such mine.

In addition to the other duties imposed by this article and article two of this chapter, it is the duty of each inspector to note each violation he or she finds and issue a finding, order, or notice, as appropriate for each violation so noted. During the investigation of any accident, any violation may be noted whether or not the inspector actually observes the violation and whether or not the violation exists at the time the inspector notes the violation, so long as the inspector has clear and convincing evidence the violation has occurred or is occurring.

The mine inspector shall visit the scene of each fatal accident occurring in any mine within his or her district and shall make an examination into the particular facts of such accident; make a report to the director, setting forth the results of such examination, including the condition of the mine and the cause or causes of such fatal accident, if known, and all such reports shall be made available to the interested parties, upon written requests.

At the commencement of any inspection of a coal mine by an authorized representative of the director, the authorized representative of the miners at the mine at the time of such inspection shall be given an opportunity to accompany the authorized representative of the director on such inspection.

§22A-1-15. Findings, orders and notices.

(a) If, upon any inspection of a coal mine, an authorized representative of the director finds that an imminent danger exists, the representative shall determine the area throughout which the danger exists, and shall immediately issue an order requiring the operator of the mine or the operator's agent to cause immediately all persons, except those referred to in subdivisions (1), (2), (3) and (4), subsection (e) of this section, to be withdrawn from and to be prohibited from entering the area until an authorized representative of the director determines that the imminent danger no longer exists.

(b) If, upon any inspection of a coal mine, an authorized representative of the director finds that there has been a violation of the law, but the violation has not created an imminent danger, he or she shall issue a notice to the operator or the operator's agent, fixing a reasonable time for the abatement of the violation. If, upon the expiration of the period of time, as originally fixed or subsequently extended, an authorized representative of the director finds that the violation has not been totally abated, and if the director also finds that the period of time should not be further extended, the director shall find the extent of the area affected by the violation and shall promptly issue an order requiring the operator of the mine or the operator's agent to cause immediately all persons, except those referred to in subdivisions (1), (2), (3) and (4), subsection (e) of this section, to be withdrawn from, and to be prohibited from entering the area until an authorized representative of the director determines that the violation has been abated.

(c) If upon any inspection of a coal mine an authorized representative of the director finds that an imminent danger exists in an area of the mine, in addition to issuing an order pursuant to subsection (a) of this section, the director shall review the compliance record of the mine.

(1) A review of the compliance record conducted in accordance with this subsection shall, at a minimum, include a review of the following:

- (a) Any closure order issued pursuant to subsection (a) of this section;
- (b) Any closure order issued pursuant to subsection (b) of this section;
- (c) Any enforcement measures taken pursuant to this chapter, other than those authorized under subsections (a) and (b) of this section;
- (d) Any evidence of the operator's lack of good faith in abating violations at the mine;
- (e) Any accident, injury or illness record that demonstrates a serious safety or health management problem at the mine;
- (f) The number of employees at the mine, the size, layout and physical features of the mine and the length of time the mine has been in operation; and
- (g) Any mitigating circumstances.

(2) If, after review of the mine's compliance record, the director determines that the mine has a history of repeated significant and substantial violations of a particular standard caused by unwarrantable failure to comply or a history of repeated significant and substantial violations of standards related to the same hazard caused by unwarrantable failure to comply and the history or histories demonstrate the operator's disregard for the health and safety of miners, the director shall issue a closure order for the entire mine and shall immediately issue an order requiring the operator of the mine or the operator's agent to cause immediately all persons, except those referred to in subdivisions (1), (2), (3) and (4), subsection (3) of this section, to be withdrawn from and to be prohibited from entering the mine until a thorough inspection of the mine has been conducted by the office and the director determines that the operator has abated all violations related to the imminent danger and any violations unearthed in the course of the inspection.

(d) All employees on the inside and outside of a mine who are idled as a result of the posting of a withdrawal order by a mine inspector shall be compensated by the operator at their regular rates of pay for the period they are idled, but not more than the balance of the shift. If the order is not terminated prior to the next working shift, all the employees on that shift who are idled by the order are entitled to full compensation by the operator at their regular rates of pay for the period they are idled, but for not more than four hours of the shift.

(e) The following persons are not required to be withdrawn from or prohibited from entering any area of the coal mine subject to an order issued under this section:

(1) Any person whose presence in the area is necessary, in the judgment of the operator or an authorized representative of the director, to eliminate the condition described in the order;

(2) Any public official whose official duties require him or her to enter the area;

(3) Any representative of the miners in the mine who is, in the judgment of the operator or an authorized representative of the director, qualified to make coal mine examinations or who is accompanied by such a person and whose presence in the area is necessary for the investigation of the conditions described in the order; and

(4) Any consultant to any of the persons set forth in this subsection.

(f) Notices and orders issued pursuant to this section shall contain a detailed description of the conditions or practices which cause and constitute an imminent danger or a violation of any mandatory health or safety standard and, where appropriate, a description of the area of the coal mine from which persons must be withdrawn and prohibited from entering.

(g) Each notice or order issued under this section shall be given promptly to the operator of the coal mine or the operator's agent by an authorized representative of the director issuing the notice or order, and all the notices and orders shall be in writing and shall be signed by the representative and posted on the bulletin board at the mine.

(h) A notice or order issued pursuant to this section may be modified or terminated by an authorized representative of the director.

(i) Each finding, order and notice made under this section shall promptly be given to the operator of the mine to which it pertains by the person making the finding, order or notice.

(j) Definitions. For the purposes of this section only, the following terms have the following meanings:

(1) "Unwarrantable failure" means aggravated conduct, constituting more than ordinary negligence, by a mine operator in relation to a violation of this chapter of the code; and

(2) "Significant and substantial violation" shall have the same meaning as that established in 6 FMSHRC 1 (1984).

§22A-1-16. Powers and duties of electrical inspectors as to inspections, findings and orders; reports of electrical inspectors.

In order that the electrical inspector may properly perform the duties required of him or her, he or she shall devote his or her whole time and attention to the duties of the office, and the inspector has the right to enter any coal mine for the purpose of inspecting electrical equipment, and if he or she finds during an inspection any defects in the electrical equipment which are covered by law and may be detrimental to the lives or health of the workmen, the inspector has the authority to order the operator, in writing, to remedy such defects within a prescribed time, and to prohibit the continued operation of such electrical equipment after such time, unless such defects have been corrected.

The electrical inspector shall examine each mine in his or her division at least once each year or as often as the director may deem necessary.

It is the duty of the electrical inspector, after completing the examination of a mine, to prepare a report describing his or her findings in said mine in a manner and form designated by the director. The original report shall be forwarded to the operator or the operator's representative whose duty it is to post it in some conspicuous place open to examination by any interested person or persons. The report shall show the date of inspection, a list of equipment, and any other information that the director may deem necessary.

§22A-1-17. Review of orders and notices by the director.

(a) (1) An operator, issued an order pursuant to the provisions of section fifteen of this article, or any representative of miners in any mine affected by such order or by any modification or termination of such order, may apply to the director for review of the order within thirty days of receipt thereof or within thirty days of its modification or termination. An operator, issued a notice pursuant to subsection (b), section fifteen of this article, or any representative of miners in any mine affected by such notice, may, if the operator believes that the period of the time fixed in such notice for the abatement of the violation is unreasonable, apply to the director for review of the notice within thirty days of the receipt thereof. The applicant shall send a copy of such application to the representative of miners in the affected mine, or the operator, as appropriate. Upon receipt of such application, the director shall cause such investigation to be made as the director deems appropriate. Such investigation shall provide an opportunity for a public hearing, at the request of the operator or the representative of miners in such mine, to enable the operator and the representative of miners in such mine to present information relating to the issuance and continuance of such order or the modification or termination thereof or to the time fixed in such notice. The filing of an application for review under this law does not operate as a stay of any order or notice.

(2) The operator and the representative of the miners shall be given written notice of the time and place of the hearing at least five days prior to the hearing.

(b) Upon receiving the report of such investigation, the director shall make findings of fact, and issue a written decision, incorporating therein an order vacating, affirming, modifying or terminating the order, or the modification or termination of such order, or the notice complained of and incorporate findings therein.

(c) In view of the urgent need for prompt decision of matters submitted to the director under this law, all actions which the director takes under this section shall be taken as promptly as practicable, consistent with adequate consideration of the issues involved.

(d) Pending completion of the investigation required by this section, the applicant may file with the director a written request that the director grant temporary relief from any modification or termination of any order, or from any order issued under section fifteen of this article, except an order issued under section sixteen of this article, together with a detailed statement giving reasons for granting such relief. The director may grant such relief, under such conditions as he or she may prescribe if:

(1) A hearing has been held in which all parties were given an opportunity to be heard;

(2) The applicant shows that there is substantial likelihood that the findings of the director will be favorable to the applicant; and

(3) Such relief will not adversely affect the health and safety of miners in the coal mine.

No temporary relief shall be granted in the case of a notice issued under section fifteen of this article.

§22A-1-18. Posting of notices, orders and decisions; delivery to agent of operator; names and addresses to be filed by operators.

(a) At each coal mine there shall be maintained an office with a conspicuous sign designating it as the office of the mine, and a bulletin board at such office or at some conspicuous place near an entrance of the mine, in such manner that notices, orders and decisions required by this law or rule to be posted on the mine bulletin board may be posted thereon, be easily visible to all persons desiring to read them, and be protected against damage by weather and against unauthorized removal. A copy of any notice, order or decision required by this law to be given to an operator shall be delivered to the office of the affected mine and a copy shall be immediately posted on the bulletin board of such mine by the operator or the operator's agent.

(b) The director shall cause a copy of any notice, order or decision required by this law to be given to an operator to be mailed immediately to a representative of the miners. Such notice, order or decision shall be available for public inspection.

(c) In order to ensure prompt compliance with any notice, order or decision issued under this law, the authorized representative of the director may deliver such notice, order or decision to an agent of the operator and such agent shall immediately take appropriate measures to ensure compliance with such notice, order or decision.

(d) Each operator of a coal mine shall file with the director the name and address of such mine and the name and address of the person who controls or operates the mine. Any revisions in such names or addresses shall be promptly filed with the director. Each operator of a coal mine shall designate a responsible official at such mine as the principal officer in charge of health and safety at such mine, and such official shall receive a copy of any notice, order or decision issued under this law affecting such mine. In any case, where the coal mine is subject to the control of any person not directly involved in the daily operations of the coal mine, there shall be filed with the director the name and address of such person and the name and address of a principal official of such person who has overall responsibility for the conduct of an effective health and safety program at any coal mine subject to the control of such person and such official shall receive a copy of any notice, order or decision issued affecting any such mine. The mere designation of a health and safety official under this subsection does not make such official subject to any penalty under this law.

§22A-1-19. Judicial review.

(a) Any order or decision issued by the director under this law, except an order or decision under section fifteen of this article is subject to judicial review by the circuit court of the county in which the mine affected is located or the circuit court of Kanawha County upon the filing in such court or with the judge thereof in vacation of a petition by any person aggrieved by the order or decision praying that the order or decision be modified or set aside, in whole or in part, except that the court shall not consider such petition unless such person has exhausted the administrative remedies available under this law and files within thirty days from date of such order or decision.

(b) The party making such appeal shall forthwith send a copy of such petition for appeal, by registered mail, to the other party. Upon receipt of such petition for appeal, the director shall promptly certify and file in such court a complete transcript of the record upon which the order or decision complained of was issued. The court shall hear such petition on the record made before the director. The findings of the director, if supported by substantial evidence on the record considered as a whole, shall be conclusive. The court may affirm, vacate or modify any order or decision or may remand the proceedings to the director for such further action as it may direct.

(c) In the case of a proceeding to review any order or decision issued by the director under this law, except an order or decision pertaining to an order issued under subsection (a), section fifteen of this article or an order or decision pertaining to a notice issued under subsection (b), section fifteen of this article, the court may, under such conditions as it may prescribe, grant such temporary relief as it deems appropriate pending final determination of the proceedings if:

(a) All parties to the proceeding have been notified and given an opportunity to be heard on a request for temporary relief;

(b) The person requesting such relief shows that there is a substantial likelihood that the person will prevail on the merits of the final determination of the proceeding; and

(c) Such relief will not adversely affect the health and safety of miners in the coal mine.

(d) The judgment of the court is subject to review only by the supreme court of appeals of West Virginia upon a writ of certiorari filed in such court within sixty days from the entry of the order and decision of the circuit court upon such appeal from the director.

(e) The commencement of a proceeding under this section shall not, unless specifically ordered by the court, operate as a stay of the order or decision of the director.

(f) Subject to the direction and control of the attorney general, attorneys appointed for the director may appear for and represent the director in any proceeding instituted under this section.

§22A-1-20. Injunctions.

The director may institute a civil action for relief, including a permanent or temporary injunction, restraining order, or any other appropriate order in the circuit court of the county in which the mine is located or the circuit court of Kanawha County, whenever the operator or the operator's agent (a) violates or fails or refuses to comply with any order or decision issued under this law, or (b) interferes with, hinders or delays the director or his or her authorized representative in carrying out the provisions of this law, or (c) refuses to admit such representatives to the mine, or (d) refuses to permit the inspection of the mine, or the investigation of an accident or occupational disease occurring in, or connected with, such mine, or (e) refuses to furnish any information or report requested by the director in furtherance of the provisions of this law, or (f) refuses to permit access to, and copying of, such records as the director determines necessary in carrying out the provisions of this law. Each court shall have jurisdiction to provide such relief as may be appropriate. Except as otherwise provided herein, any relief granted by the court to enforce an order under clause (a) of this section shall continue in effect until the completion or final termination of all proceedings for review of such order under this law, unless, prior thereto, the circuit court granting such relief sets it aside or modifies it. In any action instituted under this section to enforce an order or decision issued by the director after a public hearing, the findings of the director, if supported by substantial evidence on the record considered as a whole, shall be conclusive.

§22A-1-21. Penalties.

(a)(1) Any operator of a coal mine in which a violation occurs of any health or safety rule or who violates any other provisions of this chapter shall be assessed a civil penalty by the director under subdivision (3) of this subsection, which shall be not more than three thousand dollars, for each violation, unless the director determines that it is appropriate to impose a special assessment for said violation, pursuant to the provisions of subdivision (2), subsection (b) of this section. Each violation constitutes a separate offense. In determining the amount of the penalty, the director shall consider the operator's history of previous violations, whether the operator was negligent, the appropriateness of the penalty to the size of the business of the operator charged, the gravity of the violation and the demonstrated good faith of the operator charged in attempting to achieve rapid compliance after notification of a violation. Not later than the first day of June, two thousand two, the director shall promulgate as a rule the procedure for assessing such civil penalties. This rule will be in effect upon filing, without regard to the provisions of chapter twenty-nine-a of this code.

(2) Any revisions to rules relating to the assessment of civil penalties shall be proposed for promulgation as legislative rules in accordance with the provisions of article three, chapter twenty-nine-a of this code.

(3) Any miner who knowingly violates any health or safety provision of this chapter or health or safety rule promulgated pursuant to this chapter is subject to a civil penalty assessed by the director under subdivision (4) of this subsection which shall not be more than two hundred fifty dollars for each occurrence of the violation.

(4) A civil penalty under subdivision (1) or (2) of subsection (a) of this section or subdivision (1) or (2) of subsection (b) of this section shall be assessed by the director only after the person charged with a violation under this chapter or rule promulgated pursuant to this chapter has been given an opportunity for a public hearing and the director has determined, by a decision incorporating the director's findings of fact in the decision, that a violation did occur and the amount of the penalty which is warranted and incorporating, when appropriate, an order in the decision requiring that the penalty be paid. Any hearing under this section shall be of record.

(5) If the person against whom a civil penalty is assessed fails to pay the penalty within the time prescribed in the order, the director may file a petition for enforcement of the order in any appropriate circuit court. The petition shall designate the person against whom the order is sought to be enforced as the respondent. A copy of the petition shall immediately be sent by certified mail, return receipt requested, to the respondent and to the representative of the miners at the affected mine or the operator, as the case may be. The director shall certify and file in the court the record upon which the order sought to be enforced was issued. The court has jurisdiction to enter a judgment enforcing, modifying and enforcing as modified, or setting aside, in whole or in part, the order and decision of the director or it may remand the proceedings to the director for any further action it may direct. The court shall consider and determine de novo all relevant issues, except issues of fact which were or could have been litigated in review proceedings before a circuit court under section twenty of this article and, upon the request of the respondent, those issues of fact which are in dispute shall be submitted to a jury. On the basis of the jury's findings the court shall determine the amount of the penalty to be imposed. Subject to the direction and control of the attorney general, attorneys appointed for the director may appear for and represent the director in any action to enforce an order assessing civil penalties under this subdivision.

(b) (1) Any operator who knowingly violates a health or safety provision of this chapter or health or safety rule promulgated pursuant to this chapter, or knowingly violates or fails or refuses to comply with any order issued under section fifteen of this article, or any order incorporated in a final decision issued under this article, except an order incorporated in a decision under subsection (a) of this section or subsection (b), section twenty-two of this article, shall be assessed a civil penalty by the director under subdivision (5), subsection (a) of this section of not more than five thousand

dollars and for a second or subsequent violation assessed a civil penalty of not more than ten thousand dollars, unless the director determines that it is appropriate to impose a special assessment for said violation, pursuant to the provisions of subdivision (2) of this subsection.

(2) In lieu of imposing a civil penalty pursuant to the provisions of subsection (a) of this section or subdivision (1) of this subsection, the director may impose a special assessment if an operator violates a health or safety provision of this chapter or health or safety rule promulgated pursuant to this chapter and the violation is of serious nature and involves one or more of the following by the operator:

- (a) Violations involving fatalities and serious injuries;
 - (b) Failure or refusal to comply with any order issued under section fifteen of this article;
 - (c) Operation of a mine in the face of a closure order;
 - (d) Violations involving an imminent danger;
 - (e) Violations involving an extraordinarily high degree of negligence or gravity or other unique aggravating circumstances;
- or
- (f) A discrimination violation under section twenty-two of this article.

In situations in which the director determines that there are factors present which would make it appropriate to impose a special assessment, the director shall assess a civil penalty of at least five thousand dollars and of not more than ten thousand dollars.

(c) Whenever a corporate operator knowingly violates a health or safety provision of this chapter or health or safety rules promulgated pursuant to this chapter, or knowingly violates or fails or refuses to comply with any order issued under this law or any order incorporated in a final decision issued under this law, except an order incorporated in a decision issued under subsection (a) of this section or subsection (b), section twenty-two of this article, any director, officer or agent of the corporation who knowingly authorized, ordered or carried out the violation, failure or refusal is subject to the same civil penalties that may be imposed upon a person under subsections (a) and (b) of this section.

(d) Whoever knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this law or any order or decision issued under this law is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than five thousand dollars or imprisoned in the county jail not more than six months, or both fined and imprisoned. The conviction of any person under this subsection shall result in the revocation of any certifications held by the person under this chapter which certified or authorized the person to direct other persons in coal mining by operation of law and bars that person from being issued any license under this chapter, except a miner's certification, for a period of not less than one year or for a longer period as may be determined by the director.

(e) Whoever willfully distributes, sells, offers for sale, introduces or delivers in commerce any equipment for use in a coal mine, including, but not limited to, components and accessories of the equipment, who willfully misrepresents the equipment as complying with the provisions of this law, or with any specification or rule of the director applicable to the equipment, and which does not comply with the law, specification or rule, is guilty of a misdemeanor and, upon conviction thereof, is subject to the same fine and imprisonment that may be imposed upon a person under subsection (d) of this section.

(f) There is created in the treasury of the state of West Virginia a special health, safety and training fund. All civil penalty assessments collected under this section shall be collected by the director and deposited with the treasurer of the state of West Virginia to the credit of the special health, safety and training fund. The fund shall be used by the director who is authorized to expend the moneys in the fund for the administration of this chapter.

§22A-1-22. Discrimination.

(a) No person shall discharge or in any other way discriminate against or cause to be discharged or discriminated against any miner or any authorized representative of miners by reason of the fact that the person believes or knows that such miner or representative (1) has notified the director, his or her authorized representative, or an operator, directly or indirectly, of any alleged violation or danger, (2) has filed, instituted or caused to be filed or instituted any proceeding under this law, (3) has testified or is about to testify in any proceeding resulting from the administration or enforcement of the provisions of this law. No miner or representative shall be discharged or in any other way discriminated against or caused to be discriminated against because a miner or representative has done (1), (2) or (3) above.

(b) Any miner or a representative of miners who believes that he or she has been discharged or otherwise discriminated against, or any miner who has not been compensated by an operator for lost time due to the posting of a withdrawal order, may, within thirty days after such violation occurs, apply to the appeals board for a review of such alleged discharge, discrimination or failure to compensate. A copy of the application shall be sent to such person who shall be the respondent. Upon receipt of such application, the appeals board shall cause such investigation to be made as it deems appropriate. Such investigation shall provide an opportunity for a public hearing at the request of any party to enable the parties to present information relating to such violation. The parties shall be given written notice of the time and place of the hearing at least five days prior to the hearing. Mailing of the notice of hearing to the charged party at the party's last address of record as reflected in the records of the office is adequate notice to the charged party. Such notice shall be by certified mail, return receipt requested. Any such hearing shall be of record. Upon receiving the report of such investigation, the board shall make findings of fact. If it finds that such violation did occur, it shall issue a decision within forty-five days, incorporating an order therein, requiring the person committing such violation to take such affirmative action to abate the violation as the board deems appropriate, including, but not limited to, the rehiring or reinstatement of

the miner or representative of miners to his or her former position with back pay, and also pay compensation for the idle time as a result of a withdrawal order. If it finds that there was no such violation, it shall issue an order denying the application. Such order shall incorporate the board's finding therein. If the proceedings under this section relative to discharge are not completed within forty-five days of the date of discharge due to delay caused by the operator, the miner shall be automatically reinstated until the final determination. If such proceedings are not completed within forty-five days of the date of discharge due to delay caused by the board, then the board may, at its option, reinstate the miner until the final determination. If such proceedings are not completed within forty-five days of the date of discharge due to delay caused by the miner the board shall not reinstate the miner until the final determination.

(c) Whenever an order is issued under this section, at the request of the applicant, a sum equal to the aggregate amount of all costs and expenses including the attorney's fees as determined by the board to have been reasonably incurred by the applicant for, or in connection with, the institution and prosecution of such proceedings, shall be assessed against the person committing such violation.

§22A-1-23. Records and reports.

In addition to such records as are specifically required by this law, every operator of a coal mine shall establish and maintain such records, make such reports, and provide such information, as the director may reasonably require from time to time to enable the director to perform his or her functions under this law. The director is authorized to compile, analyze, and publish, either in summary or detailed form, such reports or information so obtained. Except to the extent otherwise specifically provided by this law, all records, information, reports, findings, notices, orders, or decisions required or issued pursuant to or under this law may be published from time to time, may be released to any interested person and shall be made available for public inspection.

§22A-1-24. Mine foreman examiner for mine foremen-fire bosses and assistant mine foremen-fire bosses; salary.

The director shall appoint a mine foreman examiner to examine and certify mine foremen-fire bosses, assistant mine foremen-fire bosses and mine examiners or fire bosses. Such mine foremen examiners shall be paid a minimum salary of thirty-one thousand thirty-two dollars per year.

§22A-1-25. Duties of mine foreman examiner.

The duties of the mine foreman examiner are to:

(a) Prepare and conduct examinations of mine foremen, assistant mine foremen and fire bosses;

(b) Prepare and certify to the director a register of all persons who successfully completed the examination with a passing grade of eighty percent.

§22A-1-26. Place and time for examinations.

The director shall determine the location where the mine foreman examiner shall meet for the purpose of holding examinations, and at least two weeks' notice of the time and place where the examinations are to be held shall be given.

The examinations shall be given at any location where there are at least five men to be tested, and adequate facilities to conduct such examination. The office of the secretary to the mine foreman examiner shall be located in the capitol complex in Charleston. All records pertaining to the examinations shall be kept at such office.

§22A-1-27. Preparation of examinations; notice of intention to take examination; investigation of applicants.

The mine foreman examiner shall, with the approval of the director, prepare, and from time to time, modify examinations to be administered applicants for certification as mine foremen and fire bosses.

All persons who desire to appear for examination shall notify the mine foreman examiner of their intentions to appear, if possible, not less than ten days prior to the date set for the examination. The mine foreman examiner shall inquire into the character and qualifications of the applicants who present themselves for examination.

§22A-1-28. Certificates of qualification heretofore granted.

Certificates of qualification of service heretofore granted shall have equal value with certificates of qualifications granted under this law.

§22A-1-29. Mine foreman examiner to certify successful applicants to director.

The mine foreman examiner shall certify to the director, on a form furnished by the director, every person whose examination shall disclose the person's fitness for the duties of mine foreman, assistant mine foreman, and fire boss, as above classified, and the director shall prepare certificates of qualification for the successful applicants and send them to the mine foreman examiner for distribution.

§22A-1-30. Record of examination.

The mine foreman examiner shall send to the director the answers and all other papers of the applicants, together with the tally sheets and a list of the questions and answers as prepared by the mine foreman examiner which shall be filed in the office as public documents.

§22A-1-31. Withdrawal of certification.

(a) Charge of breach of duty. A mine inspector or the director may charge a mine foreman, assistant mine foreman, fire boss or any other certified person with neglect or failure to perform any duty mandated pursuant to this article or article two of this chapter. The charge shall state the name of the person charged, the duty or duties he or she is alleged to have violated, the approximate date and place so far as is known of the violation of duty, the capacity of the person making the charge, and shall be verified on the basis of information and belief or personal knowledge. The charge is initiated by filing it with the director or with the board of appeals. A copy of any charge filed with the board of appeals or any member thereof, shall be transmitted promptly to the director. The director shall maintain a file of each charge and of all related documents which shall be open to the public.

(b) Evaluation of charge by board of appeals. Within twenty days after receipt of the charge the board shall evaluate the charge and determine whether or not a violation of duty has been stated. In making such a determination the board shall evaluate all documents submitted to it by all persons to determine as nearly as possible the substance of the charge and if the board of appeals is unable to determine the substance of the charge it may request the director to investigate the charge. Upon request, the director shall cause the charge to be investigated and report the results of the investigation to the board of appeals within ten days of the director's receipt of the charge. If the board determines that probable cause exists to support the allegation that the person charged has violated his or her duty, the board by the end of the twenty-day period shall set a date for hearing which date shall be within eighty days of the filing of the charge. Notice of the hearing or notice of denial of the hearing for failure to state a charge and a copy of the charge shall be mailed by certified mail, return receipt requested, to the charging party, the charged party, the director, the representative of the miner or miners affected and to any interested person of record. Thereafter the board shall maintain the file of the charge, which shall contain all documents, testimony and other matters filed which shall be open for public inspection.

(c) Hearing. The board of appeals shall hold a hearing, may appoint a hearing examiner to take evidence and report to the board of appeals within the time allotted, may direct or authorize taking of oral depositions under oath by any participant, or adopt any other method for the gathering of sworn evidence which affords the charging party, the charged party, the director and any interested party of record due process of law and a fair opportunity to present and make a record of evidence. Any member of the board shall have the power to administer oaths. The board may subpoena witnesses and require production of any books, papers, records or other documents relevant or material to the inquiry. The board shall consider all evidence offered in support of the charge and on behalf of the persons so charged at the time and place designated in the notice. Each witness shall be sworn and a transcript shall be made of all evidence presented in any such hearing. No continuance shall be granted except for good cause shown.

At the conclusion of the hearing the board shall proceed to determine the case upon consideration of all the evidence offered and shall render a decision containing its findings of fact and conclusions of law. If the board finds by a preponderance of the evidence that the certificate or certificates of the charged person should be suspended or revoked, as hereinafter provided, it shall enter an order to that effect. No renewal of the certificate shall be granted except as herein provided.

(d) Failure to cooperate. Any person charged who without just cause refuses or fails to appear before the board or cooperate in the investigation or gathering of evidence shall forfeit his or her certificate or certificates for a period to be determined by the board, not to exceed five years, and such certificate or certificates may not be renewed except upon a successful completion of the examination prescribed by the law for mine foremen, assistant mine foremen, fire bosses or other certified persons.

(e) Penalties. The board may suspend or revoke the certificate or certificates of a charged party for a minimum of thirty days or more including an indefinite period or may revoke permanently the certificate or certificates of the charged party, as it sees fit, subject to the prescribed penalties and monetary fines imposed elsewhere in this chapter.

(f) Integrity of penalties imposed. No person whose certification is suspended or revoked under this provision can perform any duties under any other certification issued under this chapter, during the period of the suspension imposed herein.

(g) Any party adversely affected by a final order or decision issued by the board hereunder is entitled to judicial review thereof pursuant to section four, article five, chapter twenty-nine-a of this code.

§22A-1-32. Certification of mine foreman or assistant mine foreman whose license to engage in similar activities suspended in another state.

Any person whose license, certificate or similar authority to perform any supervisory or fire boss duties in another state has been suspended or revoked by that state cannot be certified under any provision of this chapter during the period of such suspension or revocation in the other state.

§22A-1-33. Mine rescue stations; equipment.

The director is hereby authorized to purchase, equip and operate for the use of said office such mine rescue stations and equipment as he or she may deem necessary.

§22A-1-34. Mine rescue crews.

The director is hereby authorized to have trained and employed at the rescue stations, operated by the office within the state, such rescue crews as he or she may deem necessary. Each member of a rescue crew shall devote four hours each month for training purposes and shall be available at all times to assist in rescue work at explosions and mine fires. Regular members shall receive for such services the sum of thirty-two dollars per month, and captains shall receive thirty-five dollars per month, payable on requisition approved by the director. The director may remove any member of a rescue crew at any time.

§22A-1-35. Mine rescue teams.

- (a) It is the responsibility of the operator to provide mine rescue coverage at each active underground mine.
- (b) Mine rescue coverage may be provided by:

- (1) Establishing at least two mine rescue teams which are available at all times when miners are underground; or
- (2) Entering into an arrangement for mine rescue services which assures that at least two mine rescue teams are available at all times when miners are underground.

(c) As used in this section, mine rescue teams shall be considered available where teams are capable of presenting themselves at the mine site(s) within a reasonable time after notification of an occurrence which might require

their services. Rescue team members will be considered available even though performing regular work duties or while in an off-duty capacity. The requirement that mine rescue teams be available does not apply when teams are participating in mine rescue contests or providing rescue services to another mine.

(d) In the event of a fire, explosion or recovery operations in or about any mine, the director is hereby authorized to assign any mine rescue team to said mine to protect and preserve life and property. The director may also assign mine rescue and recovery work to inspectors, instructors or other qualified employees of the office as he or she deems necessary.

(e) The ground travel time between any mine rescue station and any mine served by that station shall not exceed two hours. To ensure adequate rescue coverage for all underground mines, no mine rescue station may provide coverage for more than seventy mines within the two-hour ground travel limit as defined in this subsection.

(f) Each mine rescue team shall consist of five members and one alternate, who are fully qualified, trained and equipped for providing emergency mine rescue service. Each mine rescue team shall be trained by a state certified mine rescue instructor.

(g) Each member of a mine rescue team must have been employed in an underground mine for a minimum of one year. For the purpose of mine rescue work only, miners who are employed on the surface but work regularly underground meet the experience requirement. The underground experience requirement is waived for those members of a mine rescue team on the effective date of this statute.

(h) An applicant for initial mine rescue training shall pass, on at least an annual basis, a physical examination by a licensed physician certifying his or her fitness to perform mine rescue work. A record that such examination was taken, together with pertinent data relating thereto, shall be kept on file by the operator and a copy shall be furnished to the director.

(i) Upon completion of the initial training, all mine rescue team members shall receive at least forty hours of refresher training annually. This training shall be given at least four hours each month, or for a period of eight hours every two months, and shall include:

- (1) Sessions underground at least once every six months;
- (2) The wearing and use of a breathing apparatus by team members for a period of at least two hours, while under oxygen, once every two months;
- (3) Where applicable, the use, care, capabilities and limitations of auxiliary mine rescue equipment, or a different breathing apparatus;
- (4) Mine map training and ventilation procedures.

(j) When engaged in rescue work required by an explosion, fire or other emergency at a mine, all members of mine rescue teams assigned to rescue operations shall, during the period of their rescue work, be employees of the operator of the mine where the emergency exists, and shall be compensated by the operator at the rate established in the area for such work. In no case shall this rate be less than the prevailing wage rate in the industry for the most skilled class of inside mine labor. During the period of their emergency employment, members of mine rescue teams shall be protected by the workers' compensation subscription of such emergency employer.

(k) During the recovery work and prior to entering any mine at the start of each shift, all rescue or recovery teams shall be properly informed of existing conditions and work to be performed by the designated company official in charge.

(1) For every two teams performing rescue or recovery work underground, one six-member team shall be stationed at the mine portal.

(2) Each rescue or recovery team performing work with a breathing apparatus shall be provided with a backup team of equal number, stationed at each fresh air base.

(3) Two-way communication and a lifeline or its equivalent shall be provided at each fresh air base for all mine rescue or recovery teams and no mine rescue team member shall advance more than one thousand feet in by the fresh air base: Provided, That if a life may possibly be saved and existing conditions do not create an unreasonable hazard to mine rescue team members, the rescue team may advance a distance agreed upon by those persons directing the mine rescue or recovery operations: Provided, however, That a lifeline or its equivalent shall be provided in each fresh air base for all mine rescue or recovery teams.

(4) A rescue or recovery team shall immediately return to the fresh air base when the atmospheric pressure of any member's breathing apparatus depletes to sixty atmospheres, or its equivalent.

(l) Mine rescue stations shall provide a centralized storage location for rescue equipment. This storage location may be either at the mine site, affiliated mines or a separate mine rescue structure. All mine rescue teams shall be guided by the mine rescue apparatus and auxiliary equipment manual. Each mine rescue station shall be provided with at least the following equipment:

- (1) Twelve self-contained oxygen breathing apparatuses, each with a minimum of two hours capacity, and any necessary equipment for testing such breathing apparatuses;
- (2) A portable supply of liquid air, liquid oxygen, pressurized oxygen, oxygen generating or carbon dioxide absorbent chemicals, as applicable to the supplied breathing apparatuses and sufficient to sustain each team for six hours while using the breathing apparatuses during rescue operations;
- (3) One extra, fully charged, oxygen bottle for each self-contained compressed oxygen breathing apparatus, as required under subdivision (1) of this subsection;
- (4) One oxygen pump or a cascading system, compatible with the supplied breathing apparatuses;

- (5) Twelve permissible cap lamps and a charging rack;
- (6) Two gas detectors appropriate for each type of gas which may be encountered at the mines served;
- (7) Two oxygen indicators or two flame safety lamps;
- (8) One portable mine rescue communication system or a sound-powered communication system. The wires or cable to the communication system shall be of sufficient tensile strength to be used as a manual communication system. The communication system shall be at least one thousand feet in length; and
- (9) Necessary spare parts and tools for repairing the breathing apparatuses and communication system, as presently prescribed by the manufacturer.

(m) Mine rescue apparatuses and equipment shall be maintained in a manner that will ensure readiness for immediate use. A person trained in the use and care of breathing apparatuses shall inspect and test the apparatuses at intervals not exceeding thirty days and shall certify by signature and date that the inspections and tests were done. When the inspection indicates that a corrective action is necessary, the corrective action shall be made and recorded by said person. The certification and corrective action records shall be maintained at the mine rescue station for a period of one year and made available on request to an authorized representative of the director.

(n) Authorized representatives of the director have the right of entry to inspect any designated mine rescue station.

(o) When an authorized representative finds a violation of any of the mine rescue requirements, the representative shall take appropriate corrective action in accordance with section fifteen of this article.

(p) Operators affiliated with a station issued an order by an authorized representative will be notified of that order and that their mine rescue program is invalid. The operators shall have twenty-four hours to submit to the director a revised mine rescue program.

(q) Every operator of an underground mine shall develop and adopt a mine rescue program for submission to the director within thirty days of the effective date of this statute: Provided, That a new program need only be submitted when conditions exist as defined in subsection (p) of this section, or when information contained within the program has changed.

(r) A copy of the mine rescue program shall be posted at the mine and kept on file at the operator's mine rescue station or rescue station affiliate and the state regional office where the mine is located. A copy of the mine emergency notification plan filed pursuant to 30 CFR 49.9(a) will satisfy the requirements of subsection (q) of this section if submitted to the director.

(s) The operator shall immediately notify the director of any changed conditions materially affecting the information submitted in the mine rescue program.

§22A-1-36. Mandatory safety programs; penalties.

(a) The director, in consultation with the state board of coal mine health and safety, shall promulgate rules in accordance with chapter twenty-nine-a of this code, detailing the requirements for mine safety programs to be established by coal operators, as provided in subsection (b) of this section. The rules may require different types of safety programs to be developed, depending upon the output of the particular mine, the number of employees of the particular mine, the location of the particular mine, the physical features of the particular mine or any other factor deemed relevant by the director.

(b) Within six months of the date when the rules required in subsection (a), above, become final, each operator shall develop and submit to the director a comprehensive mine safety program for each mine, in accordance with such rules. Each employee of the mine shall be afforded an opportunity to review and submit comments to the director regarding the modification or revision of such program, prior to submission of such program to the director. Upon submission of such program the director has ninety days to approve, reject or modify such program. If the program is rejected, the director shall give the operator a reasonable time to correct and resubmit such program. Each program which is approved shall be reviewed, at least annually, by the director. An up-to-date copy of each program shall be placed on file in the office and further copies shall be made available to the miners of each mine and their representatives. Each operator shall undertake all efforts necessary to assure total compliance with the appropriate safety program at each mine and shall fully implement all portions of such program.

(c) Any person violating any provision of this section is guilty of a misdemeanor and, upon conviction thereof, shall be fined not less than one hundred nor more than one thousand dollars, or imprisoned in the county jail for not more than six months, or both fined and imprisoned.

§22A-1-37. Certification of surface mine foremen.

(a) In every surface mine, regulated under the provisions of article three or four, chapter twenty-two of this code, where five or more persons are employed in a period of twenty-four hours, the operator shall employ at least one person certified in accordance with the provisions of article seven of this chapter as a mine foreman. Each applicant for certification as a mine foreman shall, at the time of issuance of a certificate of competency: (1) Be a resident or employed in a mine in this state; (2) have had at least three years' experience in surface mining, which shall include at least eighteen months' experience on or at a working section of a surface mine, or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school and have had at least two years' practical experience in a surface mine, which shall include at least eighteen months' experience on or at a working section of a surface mine; and (3) have demonstrated knowledge of mine safety, first aid, safety appliances, emergency procedures

relative to all equipment, state and federal mining laws and regulations and other subjects, by completing such training, education and examinations as may be required under article seven of this chapter.

(b) In surface mines in which the operations are so extensive that the duties devolving upon the mine foreman cannot be discharged by one person, one or more assistant mine foreman may be designated. Such persons shall act under the instruction of the mine foreman who shall be responsible for their conduct in the discharge of their duties. Each assistant so designated shall be certified under the provisions of article seven of this chapter. Each applicant for certification as assistant mine foreman shall, at the time of issuance of a certificate of competency, possess all of the qualifications required of a mine foreman: Provided, That at the time of certification the person is required to have at least two years' experience in surface mining, which shall include eighteen months on or at a working section of a surface mine or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school and have had twelve months' practical experience in a surface mine, all of which shall have been on or at a working section.

(c) The director shall promulgate such rules as may be necessary to carry out the provisions of this section.

§22A-1-38. Applicability and enforcement of laws safeguarding life and property; rules; authority of director regarding enforcing safety laws.

All provisions of this chapter intended to safeguard life and property shall extend to all surface-mining operations, regulated under articles three and four, chapter twenty-two of this code, insofar as such laws are applicable thereto. The director shall promulgate reasonable rules in accordance with the provisions of chapter twenty-nine-a of this code to protect the safety of those employed in and around surface mines. The enforcement of all laws and rules relating to the safety of those employed in and around surface mines is hereby vested in the director and shall be enforced according to the provisions of this chapter.

§22A-1-39. Reciprocity of mine foreman certification and experienced miner certification.

(a) Beginning the first day of April, one thousand nine hundred ninety-nine, and notwithstanding any other provisions in this code to the contrary, the Director, in consultation with the board of miner training, education and certification, established pursuant to the provisions of article seven of this chapter, shall make reciprocity of mine foreman certification and experienced miner certification available to any person certified by a state which accepts West Virginia's mine foreman or experienced miner certifications, if that state's qualifications, examination and certification criteria are substantially equivalent to those utilized by this state.

(b) A person requesting either of these certifications by reciprocity shall submit a photographic identification, a current copy of his or her certification card or certificate, verifiable documentation of all degrees held, continuing education successfully completed, and documentation of other training, if required for the certification, and shall also comply with any other criteria as the Director, in consultation with the board of miner training, education and certification, may reasonably require from time to time to effectively carry out the provisions of this section: Provided, That the criteria shall include, but is not limited to, the following minimum requirements:

(1) When a reciprocity agreement applicable to mine foreman certification has been established with another state, any applicant holding a mine foreman certificate from that state shall take the component of the West Virginia mine foreman certification examination that pertains only to specific West Virginia mining laws and rules and shall pass the examination with a score of at least eighty percent prior to being issued a West Virginia mine foreman certificate;

(2) when a reciprocity agreement applicable to experienced miner certification has been established with another state, any applicant holding an experienced miner's certificate from that state shall receive hazard training in accordance with provisions contained in 30 CFR Part 48.11 if the applicant is an underground miner, or in accordance with the provisions contained in 30 CFR Part 48.31 if the applicant is a surface miner, and shall receive instruction in West Virginia's mining laws and rules pertinent to any duties that are or will be assigned the miner prior to the miner performing any duties; and

(3) records of all training and instruction shall be kept in a book provided exclusively for that purpose which shall be made available upon request to an authorized representative of the Director and to authorized representatives of miners in or at the mine.

CHAPTER 22A ARTICLE 2 UNDERGROUND MINES

§22A-2-1. Supervision by professional engineer or licensed land surveyor; seal and certification; contents; extensions; repository; availability; traversing; copies; archive; final survey and map; penalties.

The mapping of all coal mines shall be supervised by a competent engineer or land surveyor. The work of such engineer or land surveyor shall be supervised by either a civil engineer or a mining engineer certified by the board of registration for professional engineers, which exists by authority of section four, article thirteen, chapter thirty of this code, or a licensed land surveyor approved by the board of examiners of land surveyors as provided by section three, article thirteen-a of said chapter thirty. To each map supervised by the engineer or land surveyor there shall be affixed thereto the seal of a certified or professional engineer or licensed land surveyor, which shall be identical to the design authorized by the board of registration for professional engineers, as provided in section sixteen, article thirteen of said chapter thirty or board of examiners of land surveyors as provided by section eleven, article thirteen-a of said chapter thirty. Every map certified shall have the professional engineer's or land surveyor's signature and certificate, in addition to his or her seal, in the following form:

"I, the undersigned, hereby certify that this map is correct and shows all the information, to the best of my knowledge and belief, required by the laws of this State, and covers the period ending _____ P. E. (Either Civil or Mining Engineer or Land Surveyor)."

The operator of every underground coal mine shall make, or cause to be made, an accurate map of such mine, on a scale of not less than one hundred, and not more than five hundred feet to the inch. The map of such mine shall show:

- (1) Name and address of the mine;
- (2) The scale and orientation of the map;
- (3) The property or boundary lines of the mine;
- (4) The shafts, slopes, drifts, tunnels, entries, rooms, crosscuts and all other excavations and auger and strip mined areas of the coalbed being mined;
- (5) All drill holes that penetrate the coalbed being mined;
- (6) Dip of the coalbed;
- (7) The outcrop of the coalbed within the bounds of the property assigned to the mine;
- (8) The elevations of tops and bottoms of shafts and slopes, and the floor at the entrance to drift and tunnel openings;
- (9) The elevation of the floor at intervals of not more than two hundred feet in:
 - (a) At least one entry of each working section, and main and cross entries;
 - (b) The last line of open crosscuts of each working section, and main and cross entries before such sections and main and cross entries are abandoned; and
 - (c) Rooms advancing toward or adjacent to property or boundary lines or adjacent mines;
- (10) Contour lines passing through whole number elevations of the coalbed being mined, the spacing of such lines not to exceed ten-foot elevation levels, except that a broader spacing of contour lines may be approved for steeply pitching coalbeds by the person authorized so to do under the federal act; and contour lines may be placed on overlays or tracings attached to mine maps;
- (11) As far as practicable the outline of existing and extracted pillars;
- (12) Entries and air courses with the direction of airflow indicated by arrows;
- (13) The location of all surface mine ventilation fans, which location may be designated on the mine map by symbols;
- (14) Escapeways;
- (15) The known underground workings in the same coalbed on the adjoining properties within one thousand feet of such mine workings and projections;
- (16) The location of any body of water dammed in the mine or held back in any portion of the mine, but such bodies of water may be shown on overlays or tracings attached to the mine maps used to show contour lines, as provided under subdivision (10) of this section;
- (17) The elevation of any body of water dammed in the mine or held back in any portion of the mine;
- (18) The abandoned portion or portions of the mine;
- (19) The location and description of at least two permanent base line points coordinated with the underground and surface mine traverses, and the location and description of at least two permanent elevation bench marks used in connection with establishing or referencing mine elevation surveys;
- (20) Mines above or below;
- (21) Water pools above;
- (22) The location of the principal streams and bodies of water on the surface;
- (23) Either producing or abandoned oil and gas wells located within five hundred feet of such mine and any underground area of such mine;
- (24) The location of all high pressure pipelines, high voltage power lines and principal roads;
- (25) The location of railroad tracks and public highways leading to the mine, and mine buildings of a permanent nature with identifying names shown;
- (26) Where the overburden is less than one hundred feet, occupied dwellings; and
- (27) Such other information as may be required under the federal act or by the office of miners' health, safety and training.

The operator of every underground coal mine shall extend, or cause to be extended, on or before the first day of March and on or before the first day of September of each year, such mine map thereof to accurately show the progress of the workings as of the first day of July and the first day of January of each year. Such map shall be kept up to date by temporary notations, which shall include:

- (1) The location of each working face of each working place;
- (2) Pillars mined or other such second mining;
- (3) Permanent ventilation controls constructed or removed, such as seals, overcasts, undercasts, regulators and permanent stoppings, and the direction of air currents indicated; and
- (4) Escapeways designated by means of symbols.

Such map shall be revised and supplemented at intervals prescribed under the federal act on the basis of a survey made or certified by such engineer or surveyor, and shall be kept by the operator in a fireproof repository located in an area on the surface chosen by the operator to minimize the danger of destruction by fire or other hazard.

Such map and any revision and supplement thereof shall be available for inspection by a federal mine inspector, by mine health and safety instructors, by miners in the mine and their representatives and by operators of adjacent coal

mines and by persons owning, leasing or residing on surface areas of such mines or areas adjacent to such mines, and a copy of such map and any revision and supplement thereof shall be promptly filed with the office of miners' health, safety and training. The operator shall also furnish to persons expressly entitled thereto under the federal act, upon request, one or more copies of such maps and any revision and supplement thereof. Such map or revision and supplement thereof shall be kept confidential and its contents shall not be divulged to any other person, except to the extent necessary to carry out the provisions of the federal act and this chapter and in connection with the functions and responsibilities of the secretary of housing and urban development.

Surveying calculations and mapping of underground coal mines which were or are opened or reopened after the first of July, one thousand nine hundred sixty-nine, shall be done by the rectangular coordinate traversing method and meridians carried through and tied between at least two parallel entries of each development panel and panels or workings adjacent to mine boundaries or abandoned workings. These surveys shall originate from at least three permanent survey monuments on the surface of the mine property. The monuments shall be clearly referenced and described in the operator's records. Elevations shall be tied to either the United States geological survey or the United States coast and geodetic survey bench mark system, be clearly referenced and described on such map.

Underground coal mines operating on the first of July, one thousand nine hundred sixty-nine, and not using the rectangular coordinate traversing method shall, within two years of such date, convert to this procedure for surveying calculations and mapping. Meridians shall be carried through and tied between at least two parallel entries of each development panel and panels or workings adjacent to mine boundaries or abandoned workings. These surveys shall originate from at least three permanent survey monuments on the surface of the mine property. The monuments shall be clearly referenced and described in the coal mine operator's records. Elevations shall be tied to either the United States geological survey or the United States coast and geodetic survey bench mark system, be clearly referenced and described on such map.

The operator of such underground coal mine shall, by reasonable proof, demonstrate to the director or to any federal mine inspector concerned, at any time, that a diligent search was made for all existing and available maps and survey data for the workings on the adjoining properties. The operator shall further be able to show proof to the director or to any federal mine inspector concerned, that a suitable method was used to insure accuracy in the methods used in transposing other workings to the map of such mine.

There shall be an archive of underground coal mine maps maintained at the office of the director. The archive shall:

- (1) Be secured in a fireproof and burglarproof vault;
- (2) Have an appropriate map identification system; and
- (3) Have adequate map microfilming facilities.

Whenever an operator permanently closes or abandons an underground coal mine, or temporarily closes an underground coal mine for a period of more than ninety days, he or she shall promptly notify the office of miners' health, safety and training and the federal mine inspector of the district in which such mine is located of such closure. Within sixty days of the permanent closure or abandonment of an underground coal mine, or, when an underground coal mine is temporarily closed, upon the expiration of a period of ninety days from the date of closure, the operator shall file with the office of miners' health, safety and training and such federal mine inspector a copy of the mine map revised and supplemented to the date of the closure. Such copy of the mine map shall be certified by a certified or professional engineer or licensed surveyor as aforesaid and shall be available for public inspection.

Any person having a map or surveying data of any worked out or abandoned underground coal mine shall make such map or data available to the office of miners' health, safety and training to copy or reproduce such material.

Any person who fails or refuses to discharge any duty imposed upon him or her by this section is guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five hundred dollars nor more than one thousand dollars.

§22A-2-2. Plan of ventilation; approval by director of the office of miners' health, safety and training.

Every operator of a coal mine, before making any new or additional openings, shall submit to the director, for his or her information and approval, a general plan showing the proposed system of ventilation and ventilating equipment of the openings, with their location and relative positions to adjacent developments; no such new or additional openings shall be made until approved by the director. The operator shall deliver to the miners' representative employed by the operator at the mine a copy of the operator's proposed annual ventilation plan at least ten days prior to the date of submission. The miners' representative shall be afforded the opportunity to submit written comments to the operator prior to such submission; in addition the miners' representative may submit written comments to the director. The director shall promptly approve any such plans submitted, if the proposed system of ventilation and ventilating equipment meet the requirements of this article.

§22A-2-3. Fans.

(a) The ventilation of mines, the systems for which extend for more than two hundred feet underground and which are opened after the effective date of this article, shall be produced by a mechanically operated fan or mechanically operated fans. Ventilation by means of a furnace is prohibited in any mine. The fan or fans shall be kept in continuous operation, unless written permission to do otherwise be granted by the director. In case of interruption to a ventilating fan or its machinery whereby the ventilation of the mine is interrupted, immediate action shall be taken by the mine operator or the operator's management personnel, in all mines, to cut off the power and withdraw the men from the face regions or

other areas of the mine affected. If ventilation is restored in fifteen minutes, the face regions and other places in the affected areas where gas (methane) is likely to accumulate, shall be reexamined by a certified person; and if found free of explosive gas, power may be restored and work resumed. If ventilation is not restored in fifteen minutes, all underground employees shall be removed from the mine, all power shall be cut off in a timely manner, and the underground employees shall not return until ventilation is restored and the mine examined by certified persons, mine examiners or other persons holding a certificate to make preshift examination.

(b) All main fans installed after the effective date of this article shall be located on the surface in fireproof housings offset not less than fifteen feet from the nearest side of the mine opening, equipped with fireproof air ducts, provided with explosion doors or a weak wall, and operated from an independent power circuit. In lieu of the requirements for the location of fans and pressure-relief facilities, a fan may be directly in front of, or over a mine opening: Provided, That such opening is not in direct line with possible forces coming out of the mine if an explosion occurs: Provided, however, That there is another opening having a weak-wall stopping or explosion doors that would be in direct line with forces coming out of the mine. All main fans shall be provided with pressure- recording gauges or water gauges. A daily inspection shall be made of all main fans and machinery connected therewith by a certified electrician and a record kept of the same in a book prescribed for this purpose or by adequate facilities provided to permanently record the performance of the main fans and to give warning of an interruption to a fan.

(c) Auxiliary fans and tubing shall be permitted to be used in lieu of or in conjunction with line brattice to provide adequate ventilation to the working faces: Provided, that auxiliary fans be so located and operated to avoid recirculation of air at any time. Auxiliary fans shall be approved and maintained as permissible.

(d) If the auxiliary fan is stopped or fails, the electrical equipment in the place shall be stopped and the power disconnected at the power source until ventilation in the working place is restored. During such stoppage, the ventilation shall be by means of the primary air current conducted into the place in a manner to prevent accumulation of methane.

(e) In places where auxiliary fans and tubing are used, the ventilation between shifts, weekends and idle shifts shall be provided to face areas with line brattice or the equivalent to prevent accumulation of methane.

(f) The director may require that when continuous mine equipment is being used, all face ventilating systems using auxiliary fans and tubing shall be provided with machine-mounted diffuser fans, and such fans shall be continuously operated during mining operations.

(g) In the event of a fire or explosion in any coal mine, the ventilating fan or fans shall not intentionally be started, stopped, speed increased or decreased or the direction of the air current changed without the approval of the general mine foreman, and, if he or she is not immediately available, a representative of the office of miners' health, safety and training. A duly authorized representative of the employees should be consulted if practical under the circumstances.

§22A-2-4. Ventilation of mines in general.

(a) The operator or mine foreman of every coal mine, whether worked by shaft, slope, or drift, shall provide and hereafter maintain for every such mine adequate ventilation. In all mines the quantity of air passing through the last open crosscut between the intake and return in any pair or set of entries shall be not less than nine thousand cubic feet of air per minute and as much more as is necessary to dilute and render harmless and carry away flammable and harmful gases. All working faces in a working section between the intake and return airway entries shall be ventilated with a minimum quantity of three thousand cubic feet of air per minute and as much more as is necessary to dilute and render harmless and carry away flammable and harmful gases. The quantity of air reaching the last crosscut in pillar sections may be less than nine thousand cubic feet of air per minute if at least nine thousand cubic feet of air per minute is being delivered to the intake of the pillar line. The air current shall under any conditions have a sufficient volume and velocity to reduce and carry away smoke from blasting and any flammable or harmful gases. The operator shall provide to the safety committee access to anemometers and smoke tubes while performing their duties. All active underground working places in a mine shall be ventilated by a current of air containing not less than nineteen and five-tenths percent of oxygen, not more than five-tenths percent of carbon dioxide, and no harmful quantities of other noxious or poisonous gases.

(b) Airflow shall be maintained in all intake and return air courses of a mine, and where multiple fans are used, neutral areas created by pressure equalization between main fans shall not be permitted. Production activities in working faces shall cease while tubing, line brattice, or other ventilation devices are being installed in by the machine operator.

(c) Properly installed and adequately maintained line brattice or other approved devices shall be continuously used from the last open crosscut of an entry or room of each working section to provide adequate ventilation to the working faces for the miners and to remove flammable, explosive, and noxious gases, dust, and explosive fumes. When damaged by falls or otherwise, such line brattice or other devices shall be repaired immediately.

(d) Brattice cloth used underground shall be of flame-resistant material. The space between the line brattice or other approved device and the rib shall be large enough to permit the flow of a sufficient volume and velocity of air to keep the working face clear of flammable, explosive, and noxious gases, dust and explosive fumes.

(e) Each working unit newly developed in virgin coal hereafter, shall be ventilated by a separate split of air: Provided, That in areas already under development and in areas where physical conditions prevent compliance with this provision, the director may grant temporary relief from compliance until such time as physical conditions make compliance possible. The quantity of air reaching the last crosscut shall not be less than nine thousand cubic feet of air per minute and shall under any condition have sufficient volume and velocity to reduce and carry away smoke and flammable or harmful gases from each working face in the section.

(f) As working places advance, crosscuts for air shall be made not more than one-hundred-five feet apart. Where necessary to render harmless and carry away noxious or flammable gases, line brattice or other approved methods of ventilation shall be used so as to properly ventilate the face. All crosscuts between the main intake and return airways not required for passage of air and equipment shall be closed with stoppings substantially built with incombustible or fire-resistant material so as to keep working places well ventilated. In mines where it becomes necessary to provide larger pillars for adequate roof support, working places shall not be driven more than two hundred feet without providing a connection that will allow the free flow of air currents. In such cases, a minimum of twelve thousand cubic feet of air a minute shall be delivered to the last open crosscut and as much more as is necessary to dilute and render harmless and carry away flammable and noxious gases.

(g) In special instances for the construction of sidetracks, haulageways, airways, or openings in shaft bottom or slope bottom layouts where the size and strength of pillars is important, the director may issue a permit approving greater distances. The permit shall specify the conditions under which such places may be driven.

(h) In all mines a system of bleeder openings on air courses designed to provide positive movement of air through and/or around abandoned or caved areas, sufficient to prevent dangerous accumulation of gas in such areas and to minimize the effect of variations in atmospheric pressure shall be made a part of pillar recovery plans projected after the first day of July, one thousand nine hundred seventy-one.

(i) If a bleeder return is closed as a result of roof falls or water during pillar recovery operations, pillar operations may continue without reopening the bleeder return if at least twenty thousand cubic feet of air per minute is delivered to the intake of the pillar line.

(j) No operator or mine foreman shall permit any person to work where he is unable to maintain the quantity and quality of the air current as heretofore required: Provided, that such provisions shall not prohibit the employment of men to make place of employment safe.

(k) The ventilation of any mine shall be so arranged by means of air locks, overcasts, or undercasts, that the use of doors on passageways where men or equipment travel may be kept to a minimum. Where doors are used in a mine they shall be erected in pairs so as to provide a ventilated air lock unless the doors are operated mechanically.

(l) A crosscut shall be provided at or near the face of each entry or room before such places are abandoned.

(m) Overcasts or undercasts shall be constructed of incombustible material and maintained in good condition.

(n) After the first day of January, one thousand nine hundred eighty-seven, all run through check curtains shall be substantially constructed of translucent material, except that where belting material has to be used because of high velocity, there shall be a window of translucent material at least thirty inches square or one half the height of the coal seam, whichever is less.

§22A-2-4a. Use of belt air.

(a) Definitions. For purposes of this section, "belt air" means the use of a belt conveyor entry as an intake air course to ventilate the working sections of a mine or areas where mechanized mining equipment is being installed or removed.

(b) Upon the effective date of the enactment of this section, belt air may not be used to ventilate the working sections of a mine or areas where mechanized mining equipment is being installed or removed: Provided, that if an alternative method of ventilation will at all times guarantee no less than the same measure of protection afforded the miners of an underground mine by the foregoing or if the application of the foregoing to an underground mine will result in a diminution of safety to the miners in the mine, the director may approve the interim use of belt air pursuant to the following:

(1) For those operators using belt air pursuant to a ventilation plan approved by the director in accordance with the provisions of section two of this article prior to the effective date of the enactment of this section, the director shall cause and inspection to be made of the mine ventilation system and ventilation equipment. The director may allow the continued use of belt air in that mine if he or she determines that: (i) the use meets the minimum requirements of 30 CFR 75.350(b); and (ii) the use, as set forth in the ventilation plan and as inspected, will at all times guarantee no less than the same measure of protection afforded the miners of the mine if belt air were not used, or that the prohibition of the use of belt air in the mine will result in a diminution of safety to the miners in the mine.

(2) For those operators submitting on or after the effective date of the enactment of this section, a ventilation plan proposing the use of belt air to the director pursuant to section two of this article, the director shall immediately upon receipt of the plan give notice of the plan to the representative of the miners in that mine and cause any investigation to be made that the director considers appropriate: *Provided*, that the investigation shall include a review of any comments on the plan submitted by the representative of miners in the mine. Upon receiving the report of the investigation, the director shall make findings of fact and issue a written decision, incorporating in the decision his or her findings and an order approving or denying the use of belt air pursuant to the terms of the ventilation plan. To approve the use of belt air pursuant to a ventilation plan, the director shall, at a minimum, determine that: (i) the operator's proposed use of belt air meets the minimum requirements of 30 CFR 75.350(b); and (ii) approval of the proposed use of belt air will at all times guarantee no less than the same measure of protection afforded the miners of the mine if belt air were not used, or that the prohibition of the use of belt air in the mine will result in a diminution of safety to the miners in the mine.

(3) The interim use of belt air shall be accurately reflected in the operator's plan of ventilation, as approved by the director in accordance with the provisions of section two of this article.

(c) Upon completion of the independent scientific and engineering review concerning the use of belt air and the composition and fire retardant properties of belt materials in underground coal mining by the technical study panel created pursuant to the provisions of 30 U.S.C. §963 and the Secretary of the United States Department of Labor's corresponding report to Congress pursuant to the review, the Board of Coal Mine Health and Safety shall, within thirty days of the Secretary of Labor's report to Congress, provide the Governor with its recommendations, if any, for the enactment, repeal or amendment of any statute or rule which would enhance the safe ventilation of underground mines and the health and safety of miners: *Provided*, that at least sixty days after the Secretary of Labor's report to Congress, the Board of Coal Mine Health, Safety and Training shall promulgate emergency rules regulating the use of belt air in light of that report: *Provided, however*, that the provisions of subsections (a) and (b) of this section shall expire and no longer have any force and effect upon the filing of such emergency rules.

§22A-2-5. Unused and abandoned parts of mine.

(a) In any mine, all workings which are abandoned after the first day of July, one thousand nine hundred seventy-one, shall be sealed or ventilated. If such workings are sealed, the sealing shall be done with incombustible material in a manner prescribed by the director, and one or more of the seals of every sealed area shall be fitted with a pipe and cap or valve to permit the sampling of gases and measuring of hydrostatic pressure behind the seals. For the purpose of this section, working within a panel shall not be deemed to be abandoned until such panel is abandoned.

(b) Air that has passed through an abandoned area or an area which is inaccessible or unsafe for inspection shall not be used to ventilate any working place in any working mine, unless permission is granted by the director with unanimous agreement of the technical and mine safety review committee. Air that has been used to ventilate seals shall not be used to ventilate any working place in any working mine. No air which has been used to ventilate an area from which the pillars have been removed shall be used to ventilate any working place in a mine, except that such air, if it does not contain 0.25 volume percent or more of methane, may be used to ventilate enough advancing working places immediately adjacent to the line of retreat to maintain an orderly sequence of pillar recovery on a set of entries. Before sealed areas, temporary or permanent, are reopened, the director shall be notified.

(c) On or after the effective date of the amendment and reenactment of this section during the regular session of the Legislature in two thousand seven, a professional engineer registered with the Board of Registration for Professional Engineers pursuant to article thirteen, chapter thirty of this code shall certify the design of all new seals as meeting the criteria established by the director. Every seal design shall have the professional engineer's certificate and signature, in addition to his or her seal, in the following form: "I the undersigned, do hereby certify that this seal design is, to the best of my knowledge, in accordance with all applicable requirements under state and federal law, rules and regulations.
_____ P.E."

(d) On or after the effective date of the amendment and reenactment of this section during the regular session of the Legislature in two thousand seven, the director shall approve the construction of all new seals in accordance with rules authorized in this section. The construction shall also be:

- (1) certified by a mine foreman-fire boss of the mine as being in accordance with the design certified by a professional engineer pursuant to subsection (c) of this section; and
- (2) (a) constructed of solid concrete blocks and in accordance with the other provisions of 30 CFR 75.335(a)(1); or
(b) constructed in a manner that the director has approved as having the capability to withstand pressure equal to or greater than a seal constructed in accordance with the provisions of 30 CFR 75.335(a)(1).

(e) On or after the effective date of the amendment and reenactment of this section during the regular session of the Legislature in two thousand seven, the operator shall inspect the physical condition of all seals and measure the atmosphere behind all seals in accordance with protocols developed by the Board of Coal Mine Health and Safety, pursuant to rules authorized in this section and consistent with a mine-specific atmospheric measurement plan submitted to and approved by the director. The atmospheric measurements shall include, but not be limited to, the methane and oxygen concentrations and the barometric pressure. The atmospheric measurements also shall be recorded with ink or indelible pencil in a book kept for that purpose on the surface at a location designated by the operator. The protocols shall specify appropriate methods for inspecting the physical condition of seals, measuring the mine atmosphere in sealed workings, and inerting the mine atmosphere behind the seals, where appropriate.

(f) (1) In all mines containing workings sealed using seals constructed in accordance with the provisions of 30 CFR 75.335(a)(2) which are constructed: (a) of cementitious foam blocks; or (b) with methods or materials that the Board of Coal Mine Health and Safety determines do not provide an adequate level of protection to miners, the operator shall, pursuant to a plan submitted to and approved by the director, remediate the seals by either enhancing the seals or constructing new seals in place of or immediately outby the seals. After being remediated, all seals must have the capability to withstand pressure equal to or greater than a seal constructed in accordance with the provisions of 30 CFR 75.335(a)(1). The design, development, submission and implementation of the remediation plan is the responsibility of the operator of each mine. Pursuant to rules authorized in this section, the Board of Coal Mine Health and Safety shall specify appropriate methods of enhancing the seals.

(2) Notwithstanding any provision of this code to the contrary, if the director determines that any seal described in subdivision (2) of this subsection is incapable of being remediated in a safe and effective manner, the mine foreman-fire boss shall, at least once every twenty-four hours, inspect the physical condition of the seal and measure the atmosphere behind the seal. The daily inspections and measurements shall otherwise be performed in accordance with the protocols and atmospheric measurement plan established pursuant to subsection (e) of this section.

(g) Upon the effective date of the amendment and reenactment of this section during the regular session of the Legislature in two thousand seven, second mining of lower coal on retreat, also known as bottom mining, shall not be permitted in workings that will be sealed unless an operator has first submitted and received approval by the director of a remediation plan that sets forth measures that will be taken to mitigate the effects of remnant ramps and other conditions created by bottom mining on retreat which can increase the force of explosions originating in and emanating out of workings that have been bottom mined. The director shall require that certification in a manner similar to that set forth in subsection (c) of this section shall be obtained by the operator from a professional engineer and the mine foreman-fire boss for the plan design and plan implementation, respectively.

(h) No later than sixty days after the effective date of the amendment and reenactment of this section during the regular session of the Legislature in two thousand seven, the Board of Coal Mine Health and Safety shall develop and promulgate rules pursuant to the provisions of section four, article six of this chapter to implement and enforce the provisions of this section.

(i) Upon the issuance of mandatory health and safety standards relating to the sealing of abandoned areas in underground coal mines by the Secretary of the United States Department of Labor pursuant to 30 U.S.C. § 811, as amended by section ten of the federal Mine Improvement and New Emergency Response Act of 2006, the director, working in consultation with the Board of Coal Mine Health and Safety, shall, within thirty days, provide the Governor with his or her recommendations, if any, for the enactment, repeal or amendment of any statute or rules which would enhance the safe sealing of abandoned mine workings and the health and safety of miners.

§22A-2-6. Movement of mining equipment.

(a) Mining equipment being transported or trammed underground, other than ordinary sectional movements, shall be transported or trammed by qualified personnel under the supervision of a certified foreman. When equipment is being transported or trammed, no person shall be permitted to be in by the equipment in the ventilating split that is passing over such equipment. To avoid accidental contact with power lines, face equipment shall be insulated and assemblies removed, if necessary, so as to provide clearance.

(b) The task force shall, upon the effective date of the amendments to this section made during the two-thousand eight Regular Session of the West Virginia Legislature, undertake a study of methods and technologies available related to transporting miners, mining equipment and supplies in underground mines.

(c) Upon completion of the study directed by the provisions of subsection (b) of this section, the task force may present recommendations to the West Virginia Board of Coal Mine Health and Safety designed to improve the safety and efficiency of underground mines transportation systems. The board may upon the consideration of any such task force recommendations, promulgate rules governing the movement of mining equipment within coal mines in the State of West Virginia.

(d) The current legislative rule 36CSR4, effective the nineteenth day of July, one thousand mine hundred seventy-nine, relating to "Rules and Regulations Governing the Movement of Mining Equipment within coal Mines in the State of West Virginia," is hereby limited and qualified as to its force and effect and shall only be read to be effective to the extent provided as follows:

To the extent that the rule permits the movement of major pieces of heavy mining equipment with men in by the equipment in the ventilating split that is passing over such equipment, to-wit, Section 4: applying the prohibition only to "transporting" and only "where energized D.C. powered trolley or feeder wires are present;" Sections 5.1, 10.1, 12.1 and 13.1 to the extent that they involve transporting or trampling such equipment with men in by; Sections 6.1 and 6.2 only to the extent that such equipment is not designed by the manufacturer to operate on track; Section 7.1 only to the extent that such equipment exceeds the length or width of the mine car; and Section 11.1 only to the extent that such equipment in said Section exceeds the length, width or cargo carrying capacity of the unit being used to transport such equipment. Construction work and rehabilitation work are not prohibited except to the extent that such would involve the movement of major pieces of heavy mining equipment into the precise area where such work is to be performed, with men in by.

(e) The provisions of subsection (d) of this section, as enforced upon the first day of February, two-thousand eight, shall remain in full force and effect until modified by any rules promulgated pursuant to subsection (c) of this section.

§22A-2-7. When underground mine foreman-fire boss required; assistants; certification.

(a) In every underground mine where five or more persons are employed in a period of twenty-four hours, the operator shall employ at least one person certified in accordance with the provisions of article seven of this chapter as a mine foreman-fire boss. Each applicant for certification as a mine foreman-fire boss shall, at the time he or she is issued a certificate of competency: (1) Be a resident or employed in a mine in this state; (2) have had at least five years' experience in the underground working, ventilation and drainage of a coal mine, which shall include at least eighteen months' experience on or at a working section of an underground mine or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school or be a graduate of an accredited engineering school with a bachelor's degree in mining engineering technology, electrical, mechanical or civil engineering; and have had at least two years' practical experience in an underground mine, which shall include at least eighteen months' experience on or at a working section of an underground mine; or be a graduate of an accredited college or university with an associate degree in mining, electrical, mining engineering technology, mechanical engineering or civil engineering and have had at least four years' practical experience in an underground mine, which shall include at least eighteen months' experience on or at a working section of an underground mine; and (3) have demonstrated his or her knowledge of

dangerous mine gases and their detection, mine safety, first aid, safety appliances, state and federal mining laws and regulations and other subjects by completing such training, education and examinations as may be required of him or her under article seven of this chapter.

(b) In mines in which the operations are so extensive that the duties devolving upon the mine foreman-fire boss cannot be discharged by one man, one or more assistant mine foremen-fire bosses may be designated. Such persons shall act under the instruction of the mine foreman-fire boss, who shall be responsible for their conduct in the discharge of their duties. Each assistant so designated shall be certified under the provisions of article seven of this chapter. Each applicant for certification as assistant mine foreman-fire boss shall, at the time he or she is issued a certificate of competency, possess all of the qualifications required of a mine foreman-fire boss: Provided, That he or she shall at the time he or she is certified be required to have at least three years' experience in the underground working, ventilation and drainage of coal mines, which shall include eighteen months on or at a working section of an underground mine or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school or be a graduate of an accredited engineering school with a bachelor's degree in mining engineering technology, electrical, mechanical or civil engineering; and have had twelve months' practical experience in an underground mine, all of which shall have been on or at a working section or be a graduate of an accredited college or university with an associate degree in mining, electrical, mining engineering technology, mechanical or civil engineering and have had at least two years' practical experience in an underground mine, which shall include at least eighteen months' experience on or at a working section of an underground mine.

(c) Until the first day of January, one thousand nine hundred seventy-seven, in mines in which the operations are so extensive that all the duties devolving upon the mine foreman-fire boss cannot be discharged by one person, competent persons having had at least three years' experience in coal mines may be designated as assistants, who shall act under the mine foreman-fire boss' instructions and the mine foreman-fire boss is responsible for their conduct in the discharge of their duties under such designation.

(d) Any person holding a mine foreman's certificate issued by any other state may act in the capacity of mine foreman-fire boss in any mine in this state until the next regular mine foreman-fire boss' examination held by the office of miners' health, safety and training, but not to exceed a maximum of ninety days.

(e) After the first day of July, one thousand nine hundred seventy-four, all duties heretofore performed by persons certified as mine foreman, assistant mine foreman or fire boss shall be performed by persons certified as underground mine foreman-fire boss or an assistant underground mine foreman-fire boss.

After the first day of July, one thousand nine hundred seventy-four, every certificate heretofore issued to an assistant mine foreman or fire boss shall be deemed to be of equal value to a certificate issued hereafter to an assistant mine foreman-fire boss, and every certificate heretofore issued to a mine foreman shall be deemed to be of equal value to a certificate issued hereafter to a mine foreman-fire boss.

§22A-2-8. Duties; ventilation; loose coal, slate or rocks; props; drainage of water; man doors; instruction of apprentice miners.

(a) The duties of the mine foreman shall be to keep a careful watch over the ventilating apparatus, the airways, traveling ways, pumps and drainage. He shall see that, as the miners advance their excavations, proper breakthroughs are made so as to ventilate properly the mine; that all loose coal, slate and rock overhead in the working places and along the haulways are removed or carefully secured so as to prevent danger to persons employed in such mines, and that sufficient suitable props, caps, timbers, roof bolts, or other approved methods of roof supports are furnished for the places where they are to be used and delivered at suitable points. The mine foreman shall have all water drained or hauled out of the working places where practicable, before the miners enter, and such working places shall be kept dry as far as practicable while the miners are at work. It shall be the duty of the mine foreman to see that proper crosscuts are made, and that the ventilation is conducted by means of such crosscuts through the rooms by means of checks or doors placed on the entries or other suitable places, and he shall not permit any room to be opened in advance of the ventilation current. The mine foreman or other certified persons designated by him, shall measure the air current with an anemometer or other approved device at least weekly at the inlet and outlet at or near the faces of the advanced headings, and shall keep a record of such measurements in a book or upon a form prescribed by the director. Signs directing the way to outlets or escapeways shall be conspicuously placed throughout the mine.

(b) After the first day of July, one thousand nine hundred seventy-one, hinged man doors, at least thirty inches square or the height of the coal seam, shall be installed between the intake and return at intervals of three hundred feet when the height of the coal is below forty-eight inches and at intervals of five hundred feet when the height of the coal is above forty-eight inches.

(c) The duties of the mine foreman and assistant mine foreman shall include the instruction of apprentice miners in the hazards incident to any new work assignments; to assure that any individual given a work assignment in the working face without prior experience on the face is instructed in the hazards incident thereto and supervised by a miner with experience in the tasks to be performed.

§22A-2-9. Slopes, incline planes and haulage roads.

The mine foreman shall require that all slopes, incline planes and haulage roads used by any person in the mine shall conform to the provisions of this article.

§22A-2-10. Signals on haulways; lights at mouth and bottom of shaft; operation of cages.

On all haulways, where hauling is done by machinery of any kind, the mine foreman shall provide for a proper system of signals, and a conspicuous light or approved trip reflector on the rear of every trip or train of cars when in motion in a mine. When hoisting or lowering of miners occurs in the morning before daylight, or in the evening after darkness, at any mine operated by shaft, the mine foreman shall provide and maintain at the shaft mouth a light of stationary character, sufficient to show the landing and all surrounding objects distinctly, and sufficient light of a stationary character shall be located at the bottom of the shaft so that persons coming to the bottom may clearly discern the cages and other objects contiguous thereto. The mine foreman shall require that no cages on which miners are riding shall be lifted or lowered at a rate of speed greater than one thousand feet per minute and that no mine cars, either empty or loaded, shall be hoisted while miners are being lowered, and no cage having an unstable self-dump platform shall be used for the carrying of miners unless the same is provided with some device by which it may be securely locked when miners are being hoisted or lowered into the mine: Provided, however, That during the initial development of a mine, and only until the shafts are joined, miners shall be permitted to ride cages with one empty car which has been bolted or strapped to the cage.

§22A-2-11. Boreholes.

It shall further be the duty of the mine foreman to have boreholes kept not less than twenty feet in advance of the face, one each twenty feet on sides of the working places that are being driven toward and in dangerous proximity to an abandoned mine or part of a mine which may contain inflammable gases or which is filled with water. These holes shall be drilled whenever any working place in an underground mine approaches within fifty feet of abandoned workings in such mine, as shown by surveys made and certified by a competent engineer or surveyor, or within two hundred feet of any abandoned workings of such mine which cannot be inspected.

§22A-2-12. Instruction of employees and supervision of apprentices; annual examination of persons using flame safety lamps; records of examination; maintenance of methane detectors, etc.

The office of miners' health, safety and training shall prescribe and establish a course of instruction in mine safety and particularly in dangers incident to such employment in mines and in mining laws and rules, which course of instruction shall be successfully completed within twelve weeks after any person is first employed as a miner. It is further the duty and responsibility of the office of miners' health, safety and training to see that such course is given to all persons as above provided after their first being employed in any mine in this state.

It is the duty of the mine foreman or the assistant mine foreman of every coal mine in this state to see that every person employed to work in such mine is, before beginning work therein, instructed in the particular danger incident to his or her work in such mine, and furnished a copy of the mining laws and rules of such mine. It is the duty of every mine operator who employs apprentices, as that term is used in sections three and four, article eight of this chapter to ensure that the apprentices are effectively supervised with regard to safety practices and to instruct apprentices in safe mining practices. Every apprentice shall work under the direction of the mine foreman or his or her assistant mine foreman and they are responsible for his or her safety. The mine foreman or assistant mine foreman may delegate the supervision of an apprentice to an experienced miner, but the foreman and his or her assistant mine foreman remain responsible for the apprentice. During the first ninety days of employment in a mine, the apprentice shall work within sight and sound of the mine foreman, assistant mine foreman, or an experienced miner, and in such a location that the mine foreman, assistant mine foreman or experienced miner can effectively respond to cries for help of the apprentice. Such location shall be on the same side of any belt, conveyor or mining equipment.

Persons whose duties require them to use a flame safety lamp or other approved methane detectors shall be examined at least annually as to their competence by a qualified official from the office of miners' health, safety and training and a record of such examination shall be kept by the operator and the office. Flame safety lamps and other approved methane detectors shall be given proper maintenance and shall be tested before each working shift. Each operator shall provide for the proper maintenance and care of the permissible flame safety lamp or any other approved device for detecting methane and oxygen deficiency by a person trained in such maintenance, and, before each shift, care shall be taken to ensure that such lamp or other device is in a permissible condition.

§22A-2-13. Daily inspection of working places; records.

Before the beginning of any shift upon which they shall perform supervisory duties, the mine foreman or his assistant shall review carefully and countersign all books and records reflecting the conditions and the areas under their supervision, exclusive of equipment logs, which the operator is required to keep under this chapter. The mine foreman, assistant mine foreman or fire boss shall visit and carefully examine each working place in which miners will be working at the beginning of each shift before any face equipment is energized and shall examine each working place in the mine at least once every two hours each shift while such miners are at work in such places, and shall direct that each working place shall be secured by props, timbers, roof bolts, or other approved methods of roof support or both where necessary to the end that the working places shall be made safe. The mine foreman or his assistants upon observing a violation or potential violation of article two of this chapter or any regulation or any plan or agreement promulgated or entered into thereunder shall arrange for the prompt correction thereof. The foreman shall not permit any miner other than a certified foreman, fire boss, assistant mine foreman, assistant mine foreman-fire boss or pumper to be on a working section by himself. Should the mine foreman or his assistants find a place to be in a dangerous condition, they shall not leave the place until it is made safe, or shall remove the persons working therein until the place is made safe by some competent person designated for that purpose. He shall place his initials, time and the date at or near each place he examines. He

shall also record any dangerous conditions and practices found during his examination in a book provided for that purpose.

§22A-2-14. Safety inspections; removal of gases.

It shall be the duty of the mine foreman, assistant mine foreman or fire boss to examine all working places under his supervision for hazards at least once every two hours during each coal-producing shift, or more often if necessary for safety. In all mines such examinations shall include tests with an approved detector for methane and oxygen deficiency, which tests for oxygen deficiency may be with a permissible flame safety lamp: Provided, that a flame safety lamp may be used for methane testing when a malfunction occurs with a methane detector. It shall also be his duty to remove as soon as possible after its discovery any accumulations of explosive or noxious gases in active workings, and where practicable, any accumulations of explosive or noxious gases in the worked out and abandoned portions of the mine. It shall be the duty of the mine foreman, assistant mine foreman or fire boss to examine each mine within three hours prior to the beginning of a shift and before any miner in such shift enters the active workings of the mine.

§22A-2-15. Dangerous places.

The mine foreman shall direct and see that all dangerous places and the entrance or entrances to worked out and abandoned places in all mines are properly dangered off across the openings.

§22A-2-16. Examinations of reports of fire bosses.

The mine foreman shall also, each day, read carefully and countersign with ink or indelible pencil all reports entered in the record book of the fire bosses, and he shall supervise the fire boss or fire bosses, except as hereinafter provided in section twenty-one of this article.

§22A-2-17. Ascertainment, record and removal of all dangers.

The mine foreman shall give prompt attention to the removal of all dangers reported to him by his assistants, the fire boss, or any other person working in the mine, and in case it is impracticable to remove the danger at once, he shall notify all persons whose safety is menaced thereby to remain away from the area where the dangerous condition exists. He or his assistants or certified persons designated by him, shall at least once each week travel and examine the air courses, roads and openings that give access to old workings or falls, and make a record of the condition of all places where danger has been found, with ink or indelible pencil in a book provided for that purpose.

§22A-2-18. Duty of mine foreman to notify operator when unable to comply with law; duty of operator.

The mine foreman shall notify, in writing, the operator or superintendent of the mine, and the director, of his inability to comply with any of the requirements of this law, and it shall then become the duty of such operator or superintendent promptly to attend to the matter complained of by the mine foreman so as to enable him to comply with the provisions hereof. Every operator of a mine shall furnish all supplies necessary for the mine foreman to comply with the requirements of this law after being requested to do so in writing by the mine foreman.

§22A-2-19. Death or resignation of mine foreman; successor.

In case of the death or resignation of a mine foreman, the superintendent or manager shall appoint a certified man to act as mine foreman.

§22A-2-20. Preparation of danger signal by fire boss or certified person acting as such prior to examination; report; records open for inspection.

It shall be the duty of the fire boss, or a certified person acting as such, to prepare a danger signal (a separate signal for each shift) with red color at the mine entrance at the beginning of his shift or prior to his entering the mine to make his examination and, except for those persons already on assigned duty, no person except the mine owner, operator or agent, and only then in the case of necessity, shall pass beyond this danger signal until the mine has been examined by the fire boss or other certified person and the mine or certain parts thereof reported by him to be safe. When reported by him to be safe, the danger sign or color thereof shall be changed to indicate that the mine is safe in order that employees going on shift may begin work. Each person designated to make such fire boss examinations shall be assigned a definite underground area of such mine, and, in making his examination shall examine all active working places in the assigned area and make tests with an approved device for accumulations of methane and oxygen deficiency; examine seals and doors; examine and test the roof, face, and ribs in the working places and on active roadways and travelways, approaches to abandoned workings and accessible falls in active sections. He shall place his initials and the date at or near the face of each place he examines. Should he find a condition which he considers dangerous to persons entering such areas, he shall place a conspicuous danger sign at all entrances to such place or places. Only persons authorized by the mine management may enter such places while the sign is posted and only for the purpose of eliminating the dangerous condition. Upon completing his examination he shall report by suitable communication system or in person the results of this examination to a certified person designated by mine management to receive and record such report, at a designated station on the surface of the premises of the mine or underground, before other persons enter the mine to work in such coal-producing shifts. He shall also record the results of his examination with ink or indelible pencil in a book prescribed by the director, kept for such purpose at a place on the surface of the mine designated by mine management. All records of daily and weekly reports, as prescribed herein, shall be open for inspection by interested persons.

§22A-2-21. Fire bosses to have no superior officers.

In the performance of the duties devolving upon fire bosses, or certified persons acting as such, they shall have no superior officers, but all the employees working inside of such mine or mines shall be subordinate to them in their particular work.

§22A-2-22. Unlawful to enter mine until fire boss reports it safe; exceptions.

No person shall enter such mine or mines for any purpose at the beginning of work upon shift therein until such signal or warning has been given by the fire boss or bosses as to the safety thereof, as by statute provided, except under the direction of the fire boss or bosses, and then for the purpose of assisting in making the mine safe: Provided, however, That miners regularly employed on a shift during which the mine is being preshift examined by a fire boss or certified person shall be permitted to leave or enter the mine in the performance of their duties.

§22A-2-23. Authority of fire boss to perform other duties.

Notwithstanding any other provision in this article contained, any person who holds a certificate issued by the office of miners' health, safety and training certifying his or her competency to act as fire boss may perform the duties of a fire boss and any other duties, statutory or otherwise, for which he or she is qualified, in the same mine or section and on the same day or shift.

§22A-2-24. Control of coal dust; rock dusting.

(a) In all mines, dangerous accumulations of fine, dry coal and coal dust shall be removed from the mine, and all dry and dusty operating sections and haulageways and conveyors and back entries shall be rock dusted or dust allayed by such other methods as may be approved by the director.

(b) All mines or locations in mines that are too wet or too high in incombustible content for a coal dust explosion to initiate or propagate are not required to be rock dusted during the time any of these conditions prevail. Coal dust and other dust in suspension in unusual quantities shall be allayed by sprinkling or other dust allaying devices.

(c) In all dry and dusty mines or sections thereof, rock dust shall be applied and maintained upon the roof, floor and sides of all operating sections, haulageways and parallel entries connected thereto by open crosscuts. Back entries shall be rock dusted. Rock dust shall be so applied to include the last open crosscut of rooms and entries, and to within forty feet of faces. Rock dust shall be maintained in such quantity that the incombustible content of the mine dust that could initiate or propagate an explosion shall not be less than sixty-five percent, but the incombustible content in return entries shall not be less than eighty percent.

(d) Rock dust shall not contain more than five percent by volume of quartz or free silica particles and shall be pulverized so that one hundred percent will pass through a twenty mesh screen and seventy percent or more will pass through a two hundred mesh screen.

§22A-2-25. Roof control programs and plans; refusal to work under unsupported roof.

(a) Each operator shall undertake to carry out on a continuing basis a program to improve the roof control system of each coal mine and the means and measures to accomplish such system. The roof and ribs of all active underground roadways, travelways and working places shall be supported or otherwise controlled adequately to protect persons from falls of the roof or ribs. A roof control plan and revisions thereof suitable to the roof conditions and mining systems of each coal mine and approved by the director shall be adopted and set out in printed form before new operations. The safety committee of the miners of each mine where such committee exists shall be afforded the opportunity to review and submit comments and recommendations to the director and operator concerning the development, modification or revision of such roof control plans. The plan shall show the type of support and spacing approved by the director. Such plan shall be reviewed periodically, at least every six months by the director, taking into consideration any falls of roof or rib or inadequacy of support of roof or ribs. A copy of the plan shall be furnished to the director or his or her authorized representative and shall be available to the miners and their representatives.

(b) The operator, in accordance with the approved plan, shall provide at or near each working face and at such other locations in the coal mine, as the director may prescribe, an ample supply of suitable materials of proper size with which to secure the roof thereof of all working places in a safe manner. Safety posts, jacks, or other approved devices shall be used to protect the workmen when roof material is being taken down, crossbars are being installed, roof bolt holes are being drilled, roof bolts are being installed and in such other circumstances as may be appropriate. Loose roof and overhanging or loose faces and ribs shall be taken down or supported. When overhangs or brows occur along rib lines they shall be promptly removed. All sections shall be maintained as near as possible on center. Except in the case of recovery work, supports knocked out shall be replaced promptly. Apprentice miners shall not be permitted to set temporary supports on a working section without the direct immediate supervision of a certified miner.

(c) The operator of a mine has primary responsibility to prevent injuries and deaths resulting from working under unsupported roof. Every operator shall require that no person may proceed beyond the last permanent support unless adequate temporary support is provided or temporary support is not required under an approved roof control plan and absence of such support will not pose a hazard to the miners.

(d) The immediate supervisor of any area in which unsupported roof is located shall not direct or knowingly permit any person to proceed beyond the last permanent support unless adequate temporary support is provided or temporary support is not required under an approved roof control plan and absence of such support will not pose a hazard to the miners.

(e) No miner shall proceed beyond the last permanent support in violation of a direct or standing order of an operator, a foreman or an assistant foreman, unless adequate temporary support is provided or temporary support is not required under an approved roof control plan and absence of such support will not pose a hazard to the miner.

(f) The immediate supervisor of each miner who will be engaged in any activity involving the securing of roof or rib during a shift shall, at the onset of any such shift, orally review those parts of the roof control plan relevant to the type of mining and roof control to be pursued by such miner. The time and parts of the plan reviewed shall be recorded in a log

book kept for such purpose. Each log book entry so recorded shall be signed by such immediate supervisor making such entry.

(g) Any action taken against a miner due, in whole or in part, to his or her refusal to work under unsupported roof, where such work would constitute a violation of this section, is prohibited as an act of discrimination pursuant to section twenty-two, article one of this chapter. Upon a finding of discrimination by the appeals board pursuant to subsection (b), section twenty-two, article one of this chapter, the miner shall be awarded by the appeals board all relief available pursuant to subsections (b) and (c), section twenty-two, article one of this chapter.

§22A-2-26. Roof support; specific requirements.

(a) Generally. -- The method of mining followed in any coal mine shall not expose the miner to unusual dangers from roof falls.

(b) Roadways, intersections and arches. The width of roadways shall not exceed sixteen feet unless additional support is added cross sectional. During the development of intersections, the roof between the tangents of the arches in the entry or room shall be supported with artificial roof supports prior to the development of such intersections. All areas where the arch is broken shall be considered as having unsupported roof and such roof should have artificial roof supports installed prior to any other work being performed in the area.

(c) Examinations and corrections. Where miners are exposed to danger from falls of roof, face and ribs, the operator shall examine and test the roof, face and ribs before any work or machine is started, and as frequently thereafter as may be necessary to insure safety. When dangerous conditions are found, they shall be corrected immediately. A probe or probes for methane detectors shall be provided on each working section other than longwall sections and sections mined solely with continuous miners with integral roof bolters.

(d) Roof bolt recovery. Roof bolts shall not be recovered where complete extraction of pillars is attempted, where adjacent to clay veins or at the locations of other irregularities, whether natural or otherwise, that induce abnormal hazards. Where roof bolt recovery is permitted, it shall be conducted only in accordance with methods prescribed in the approved roof control plan, and shall be conducted by experienced miners and only where adequate temporary support is provided.

§22A-2-27. Canopies or cabs; electric face equipment.

An authorized representative of the director may require in any coal mine where the height of the coal bed permits that electric face equipment, including shuttle cars, be provided with substantially constructed canopies or cabs to protect the miners operating such equipment from roof falls and from rib and face rolls.

§22A-2-28. Equipment to conform with height of seam.

The use of underground mining equipment of a size that does not conform to the height of the seam being mined, which creates unsafe working conditions for the miner operating the equipment or others, is prohibited. The board of coal mine health and safety shall promulgate such rules and regulations as are necessary to effectuate this section.

§22A-2-29. Use of authorized explosives; storage or use of unauthorized explosives.

Permissible explosives or permissible blasting devices only shall be used in blasting coal or other material in underground coal mines. It shall be unlawful to have, use or store any non-permissible explosives or non-permissible blasting devices in any coal mine or on the premises of the mine, without a permit from the director.

§22A-2-30. Surface magazines for explosives.

Separate surface magazines shall be provided for storage of explosives, detonators and blasting heater elements. Surface magazines shall be constructed of incombustible materials, be reasonably bulletproof and with no metal or sparking material exposed inside the magazine. Surface magazines shall be provided with doors constructed of at least one-fourth inch steel plate lined with a two-inch thickness of wood or the equivalent, properly screened ventilators, and with no openings except for entrances and ventilation, and shall be kept locked securely when unattended. The area for a distance of at least twenty-five feet in all directions shall be kept free of materials of a combustible nature; suitable warning signs shall be erected, so located that a bullet passing directly through the face of the sign will not strike the magazine. The location of magazines shall be not less than two hundred feet from any mine openings, occupied buildings or public roads unless barricaded. If magazines are illuminated electrically, the lamps shall be of vapor-proof type, properly installed and wired, and smoking and open lights shall be prohibited in or near any magazine.

§22A-2-31. Transportation of explosives.

Individual containers used to carry permissible explosives or detonators shall be constructed of substantial, nonconductive materials, kept closed and maintained in good condition. When explosives or detonators are transported underground in cars moved by means of locomotives, ropes, or other motive power, they shall be in substantially covered cars or in special substantially built covered containers used specifically for transporting detonators or explosives. Any container used for transportation or storage of explosives shall be properly identified or marked. Explosives or detonators shall not be hauled into or out of a mine within five minutes preceding or following a man trip. Where explosives and detonators are transported underground by belts, they shall be handled in the following manner: In the original and unopened cases, in special closed cases constructed of nonconductive material, or in suitable, individual containers. Clearance requirements shall be a minimum of eighteen inches; stop controls shall be provided at loading and unloading points, and an attendant shall supervise the loading and unloading. Neither explosives nor detonators shall be transported on flight or shaking conveyors, mechanical loading machines, locomotives, scrapers, cutting machines, drill trucks, or any self-propelled mobile equipment. If explosives and detonators are transported in the same explosives car or in the same special container, they shall be separated by at least four inches of hardwood partition or the equivalent;

the bodies of such cars or containers shall be constructed or lined with nonconductive material. No hand loader shall take into any mine any larger quantity of explosives or detonators than he may reasonably expect to use in any one shift.

§22A-2-32. Underground storage of explosives.

Explosives and detonators stored underground shall be kept in section boxes or magazines of substantial construction with no metal exposed on the inside, and be located at least fifteen feet from roadways and power wires in a well rock-dusted location, protected from falls of roof. If not kept in separate boxes or magazines not less than five feet apart, they may be kept in the same box or magazine if separated by at least a four-inch hardwood partition or the equivalent. Not more than a forty-eight hour supply of explosives or detonators shall be stored underground in section boxes or magazines. These boxes or magazines shall be kept at least one hundred feet from the faces and out of the direct line of blasting.

§22A-2-33. Preparation of shots; blasting practices.

(a) Only a certified "shot firer" designated by mine management shall be permitted to handle explosives and do blasting. Only electric detonators of proper strength fired with permissible shot firing units shall be used except under special permits as hereinafter provided, and drillholes shall be stemmed with at least twenty-four inches of incombustible material, or at least one half of the length of the hole shall be stemmed if the hole is less than four feet in depth, unless other permissible stemming devices or methods are used. Drillholes shall not be drilled beyond the limits of the cut, and as far as practicable, cuttings and dust shall be cleaned from the holes before the charge is inserted. Charges of explosives exceeding one and one-half pounds, but not exceeding three pounds, shall be used only if drillholes are six feet or more in depth. Ample warning shall be given before shots are fired, and care shall be taken to determine that all persons are in the clear before firing. Miners shall be removed from adjoining places and other places when there is danger of shots blowing through. No shots shall be fired in any place known to liberate explosive gas, until such place has been properly examined by a competent person who is designated by mine management for that purpose, and no shots shall be fired in any place where gas is detected with a permissible flame safety lamp until such gas has been removed by means of ventilation. After firing any shot, or shots, the person firing the same shall not return to the working face until the smoke has been cleared away and then he shall make a careful examination of the working face before leaving the place or before performing any other work in the place.

(b) Multiple shooting in coal or rock or both is authorized only under permit issued by the director. Permission to shoot more than ten shots simultaneously may be granted by the director only after consultation with interested persons, and such shooting will be performed by special methods and under precautions prescribed by the director. All multiple shooting in bottom or roof rock shall be performed in intake air, except by special permit from the director, after consultation with interested persons, as heretofore provided. Multiple blasting of more than ten shots performed under any permit granted by the director under this section shall be done only on non coal-producing shifts or idle days, except as may be provided as a condition of the permit granted.

(c) Regular or short-interval delay detonators may be used for blasting purposes with written permission from the director. Regular delay detonators shall not be used for blasting coal, but may be used for grading above or below coal seams and during shaft, slope, tunnel work and in faults or wants. Where short-interval delay detonators are permitted by said director to be used, the shot firing circuit must be tested with a blasting galvanometer before firing, and the leg wires connected in series. No instantaneous, regular, or zero-delay detonators are to be fired in conjunction with short-interval delay detonators. The delay interval between dependent rows must not be less than twenty-five milliseconds or more than one hundred milliseconds, and the entire series of any one round shall not provide a delay of more than five hundred milliseconds between the first and last shot. The total number of charged holes to be fired during any one round must not exceed the limit permitted by the director. Misfires must be tested with a blasting galvanometer before removing.

(d) Electrical equipment shall not be operated in the face areas, and only work in connection with timbering and general safety shall be performed while boreholes are being charged. Shots shall be fired promptly after charging. Mudcaps (adobes) or any other unconfined shots shall not be permitted in any coal mine. No solid shooting shall be permitted without written permission of the office.

(e) Blasting cables shall be well insulated and shall be as long as may be necessary to permit persons authorized to fire shots to get in a safe place out of the line of fire. The cable, when new, shall be at least one hundred twenty-five feet in length and never less than one hundred feet. Shooting cables shall be kept away from power wires and all other sources of electric current, connected to the leg wires by the person who fires the shot, staggered as to length or well separated at the detonator leg wires, and shunted at the battery until ready to connect to the blasting unit.

§22A-2-34. Misfires of explosives.

(a) Where misfires occur with electric detonators, a waiting period of at least five minutes shall elapse before anyone returns to the shot. After such failure, the blasting cable shall be disconnected from the source of power and the battery ends short-circuited before electric connections are examined.

(b) Explosives shall be removed by firing a separate charge at least two feet away from and parallel to the misfired charge or by washing the stemming and the charge from the borehole with water, or by inserting and firing a new primer after the stemming has been washed out.

(c) A careful search of the working place, and, if necessary, of the coal after it reaches the tiple shall be made after blasting a misfired hole, to recover any undetonated explosive.

(d) The handling of a misfired shot shall be under the direct supervision of the mine foreman or a certified person designated by him.

§22A-2-35. Other blasting devices.

(a) The provisions governing the handling, storage, transportation and use of permissible explosives shall apply to all other blasting devices employing a heater element when used underground.

(b) Where compressed air is used for blasting, the airlines shall be grounded at the compressor and, if practical, at other low-resistant ground connections along the lines. They shall not be connected in any way to rails, waterlines, or other electric return conductors and shall be adequately insulated and protected where they cross electric wires, underneath track, or at places where equipment passes over or under. Steel, copper, or other airlines connected therewith shall not be handled or repaired when air pressure is in the line. Shutoff valves shall be installed every thousand feet in all compressed-air blasting lines and at all points where branch lines leave the main line and blowdown valves shall not be less than fifty feet from the face and shall be around a corner.

(c) When misfires occur with any other blasting devices, they shall be handled in a safe manner and under the supervision of the mine foreman or a certified person designated by him.

§22A-2-36. Hoisting machinery; telephones; safety devices; hoisting engineers and drum runners.

(a) The operator of every coal mine worked by shaft shall provide and maintain a metal tube, telephone or other approved means of communication from the top to the bottom and intermediate landings of such shafts, suitably adapted to the free passage of sound, through which conversation may be held between persons at the top and at the bottom of the shaft; a standard means of signaling; an approved safety catch, bridle chains, automatic stopping device, or automatic overwind; a sufficient cover overhead on every cage used for lowering or hoisting persons; an approved safety gate at the top of the shaft; and an adequate brake on the drum of every machine used to lower or hoist persons in such shaft. Such operator shall have the machinery used for lowering and hoisting persons into or out of the mine kept in safe condition, equipped with a reliable indicator, and inspected once in each twenty-four hours by a qualified electrician. Where a hoisting engineer is required, he or she shall be readily available at all times when men are in the mine. He or she shall operate the empty cage up and down the shaft at least one round trip at the beginning of each shift, and after the hoist has been idle for one hour or more before hoisting or lowering men; there shall be cut out around the side of the hoisting shaft or driven through the solid strata at the bottom thereof, a traveling way, not less than five feet high and three feet wide to enable a person to pass the shaft in going from one side of it to the other without passing over or under the cage or other hoisting apparatus. Positive stop blocks or derails shall be placed near the top and at all intermediate landings of slopes and surface inclines and at approaches to all shaft landings. A waiting station with sufficient room, ample clearance from moving equipment, and adequate seating facilities shall be provided where men are required to wait for man trips or man cages, and the miners shall remain in such station until the man trip or man cage is available.

(b) No operator of any coal mine worked by shaft, slope or incline, shall place in charge of any engine or drum used for lowering or hoisting persons employed in such mine any but competent and sober engineers or drum runners; and no engineer or drum runner in charge of such machinery shall allow any person, except such as may be designated for this purpose by the operator, to interfere with any part of the machinery; and no person shall interfere with any part of the machinery; and no person shall interfere with or intimidate the engineer or drum runner in the discharge of his or her duties. Where the mine is operated or worked by shaft or slope, a minimum space of two and one-half square feet per person shall be available for each person on any cage or car where men are transported. In no instance shall more than twenty miners be transported on a cage or car without the approval of the director. No person shall ride on a loaded cage or car in any shaft, slope, or incline: Provided, that this does not prevent any trip rider from riding in the performance of his or her authorized duties. No engineer is required for automatically operated cages, elevators, or platforms. Cages and elevators shall have an emergency power source unless provided with other escapeway facilities.

(c) Each automatic elevator shall be provided with a telephone or other effective communication system by which aid or assistance can be obtained promptly.

(d) A "stop" switch shall be provided in the automatic elevator compartment that will permit the elevator to be stopped at any location in the shaft.

§22A-2-37. Haulage roads and equipment; shelter holes; prohibited practices; signals; inspection.

(a) The roadbed, rails, joints, switches, frogs and other elements of all haulage roads shall be constructed, installed and maintained in a manner consistent with speed and type of haulage operations being conducted to ensure safe operation. Where transportation of personnel is exclusively by rail, track shall be maintained to within five hundred feet of the nearest working face, except that when any section is fully developed and being prepared for retreating, then the distance of such maintenance can be extended to eight hundred feet if a rubber tired vehicle is readily available.

(b) Track switches, except room and entry development switches, shall be provided with properly installed throws, bridle bars and guard rails; switch throws and stands, where possible, shall be placed on the clearance side.

(c) Haulage roads on entries shall have a continuous, unobstructed clearance of at least twenty-four inches from the farthest projection of any moving equipment on the clearance side.

(d) On haulage roads where trolley lines are used, the clearance shall be on the side opposite the trolley lines.

(e) On the trolley wire or "tight" side, there shall be at least twelve inches of clearance from the farthest projection of any moving equipment.

(f) Warning lights or reflective signs or tapes shall be installed along haulage roads at locations of abrupt or sudden changes in the overhead clearance.

(g) The clearance space on all haulage roads shall be kept free of loose rock, coal, supplies or other material: Provided, that not more than twenty-four inches need be kept free of such obstructions.

(h) Ample clearance shall be provided at all points where supplies are loaded or unloaded along haulage roads or conveyors which in no event shall be less than twenty-four inches.

(i) Shelter holes shall be provided along haulage entries. Such shelter holes shall be spaced not more than one hundred feet apart, except when variances are authorized by the director with unanimous agreement of the mine safety and technical review committee. Shelter holes shall be on the side of the entry opposite the trolley wire except that shelter holes may be on the trolley wire and feeder wire side if the trolley wire and feeder wire are guarded in a manner approved by the director.

(j) Shelter holes shall be at least five feet in depth, not more than four feet in width, and as high as the traveling space, unless the director with unanimous agreement of the mine safety and technical review committee grants a waiver. Room necks and crosscuts may be used as shelter holes even though their width exceeds four feet.

(k) Shelter holes shall be kept clear of refuse and other obstructions.

(l) Shelter holes shall be provided at switch throws and manually operated permanent doors.

(m) No steam locomotive shall be used in mines where miners are actually employed in the extraction of coal, but this shall not prevent operation of a steam locomotive through any tunnel haulway or part of a mine that is not in actual operation and producing coal.

(n) Underground equipment powered by internal combustion engines using petroleum products, alcohol, or any other compound shall not be used in a coal mine, unless the equipment is diesel-powered equipment approved, operated and maintained as provided in article two-a of this chapter.

(o) Locomotives, personnel carriers, mine cars, supply cars, shuttle cars, and all other haulage equipment shall be maintained in a safe operating condition. Each locomotive, personnel carrier, barrier tractor and other related equipment shall be equipped with a suitable lifting jack and handle. An audible warning device and headlights shall be provided on each locomotive and each shuttle car. All other mobile equipment, using the face areas of the mine, shall be provided with a conspicuous light or other approved device so as to reduce the possibility of collision.

(p) No persons other than those necessary to operate a trip or car shall ride on any loaded car or on the outside of any car. Where pusher locomotives are not used, the locomotive operator shall have an assistant to assist him in his duties.

(q) The pushing of trips, except for switching purposes, is prohibited on main haulage roads: Provided, that nothing herein shall prohibit the use of a pusher locomotive to assist the locomotive pulling a trip. Motormen and trip riders shall use care in handling locomotives and cars. It shall be their duty to see that there is a conspicuous light on the front and rear of each trip or train of cars when in motion: Provided, however, that trip lights need not be used on cars being shifted to and from loading machines, or on cars being handled at loading heads during gathering operations at working faces. No person except the operator or his assistant shall ride on locomotives or loaded cars. An empty car or cars shall be used to provide a safe distance between the locomotive and the material car when rail, pipe or long timbers are being hauled. A safe clearance shall be maintained between the end car or trips placed on side tracks and moving traffic. On haulage roads the clearance point shall be marked with an approved device.

(r) No motorman, trip rider or brakeman shall get on or off cars, trips or locomotives while they are in motion, except that a trip rider or brakeman may get on or off the rear end of a slowly moving trip or the stirrup of a slowly moving locomotive to throw a switch, align a derail or open or close a door.

(s) Flying or running switches and riding on the front bumper of a car or locomotive are prohibited. Back poling shall be prohibited except with precaution to the nearest turning point (not over eighty feet), or when going up extremely steep grades and then only at slow speed. The operator of a shuttle car shall face in the direction of travel except during the loading operation when he shall face the loading machine.

(t) (1) A system of signals, methods or devices shall be used to provide protection for trips, locomotives and other equipment coming out onto tracks used by other equipment.

(2) In any coal mine where more than three hundred fifty tons of coal is produced on any shift in each twenty- four hour period, a dispatcher shall be on duty when there are movements of track equipment underground, including time when there is no production of coal. Such traffic shall move only at the direction of the dispatcher.

(3) The dispatcher's only duty shall be to direct traffic: Provided, That the dispatcher's duties may also include those of the responsible person required by section forty-two of this article: Provided, however, That the dispatcher may perform other duties which do not interfere with his dispatching responsibilities and do not require him to leave the dispatcher's station except as approved by the mine safety and technical review committee.

(4) Any dispatcher's station shall be on the surface.

(5) All self-propelled track equipment shall be equipped with two-way communications.

(u) Motormen shall inspect locomotives, and report any mechanical defects found to the proper supervisor before a locomotive is put in operation.

(v) A locomotive following another trip shall maintain a distance of at least three hundred feet from the rear end of the trip ahead, unless such locomotive is coupled to the trip ahead.

(w) Positive stop blocks or derails shall be installed on all tracks near the top and at landings of shafts, slopes and surface inclines. Positive-acting stop blocks or derails shall be used where necessary to protect persons from danger of runaway haulage equipment.

(x) Shuttle cars shall not be altered by the addition of sideboards so as to inhibit the view of the operator.

(y) Mining equipment shall not be parked within fifteen feet of a check curtain or fly curtain.

(z) All self-propelled track haulage equipment shall be equipped with an emergency stop switch, self-centering valves, or other devices designed to de-energize the traction motor circuit in the event of an emergency. All track mounted trolley equipment shall be equipped with trolley pole swing limiters or other means approved by the mine safety and technical review committee to restrict movement of the trolley pole when it is disengaged from the trolley wire. Battery powered mobile equipment shall have the operating controls clearly marked to distinguish the forward and reverse positions.

§22A-2-38. Transportation of miners by cars; self-propelled equipment; belts.

(a) Man trips shall be pulled, unless self-propelled, at safe speeds consistent with the condition of roads and type of equipment used, but not to exceed twelve miles an hour. Each man trip shall be under the charge of a certified person or other competent person designated by a mine foreman or assistant mine foreman. It shall be operated independently of any loaded trip of coal or other heavy material, but may transport tools, small machine parts and supplies. When mine cars are used for man trips, a locomotive shall be used on each end of the trip.

(b) Cars on the man trip shall not be overloaded, and sufficient cars in good mechanical condition shall be provided. Sufficient space shall be afforded so that no miner shall have to be transported in a hazardous position.

(c) No person shall ride under the trolley wire unless the man cars used are suitably covered and insulated. No person shall ride on loaded timber cars, loaded supply trucks, empty timber cars or empty supply trucks which are not equipped with side guards, on top of locomotives, on chain conveyors, inside shuttle cars, on the tops of machinery or equipment, or on the sides of machinery or equipment, except for operators of such machinery or equipment.

(d) Miners shall not load or unload before the cars in which they are to ride, or are riding, come to a full stop. Miners shall proceed in an orderly manner to and from man trips.

(e) When belts are used for transporting miners, a minimum clearance of eighteen inches shall be maintained between the belt and the roof or crossbars, projecting equipment, cap pieces, overhead cables, wiring and other objects. Visible reflectors shall be placed where projected equipment, cap pieces, overhead cables, wiring or other pieces cross the belt line. Where the height of the coal seam permits, the clearance shall not be less than twenty-four inches.

(f) The belt speed shall not exceed two hundred fifty feet per minute where the minimum overhead clearance is eighteen inches, or three hundred feet per minute where the minimum overhead clearance is twenty-four inches, while miners are loading, unloading, or being transported. A signaling system or method shall be provided for stopping the belt and miners shall ride not less than six feet apart.

(g) An assistant mine foreman or some other person designated by the mine foreman shall supervise the loading and unloading of belts and man trips. Where miners are required to cross over belts, adequate and safe facilities shall be provided.

(h) Positive-acting stop controls shall be installed along all belt conveyors used to transport miners, and such controls shall be readily accessible, and maintained so that the belt can be stopped or started at any location.

(i) Belt conveyors used for man trips shall be stopped while men are loading or unloading.

(j) There shall be at least thirty-six inches of side clearance where miners board or leave such belt conveyors.

(k) Adequate illumination including colored lights or reflective signs shall be installed at all loading and unloading stations. Such colored lights and reflective signs shall be so located as to be observable to all persons riding the belt conveyor.

(l) Telephone or other suitable communications shall be provided at points where miners are regularly loaded on or unloaded from belt conveyors.

(m) After supplies have been transported on man trip cars, such cars shall be examined for unsafe conditions prior to the transportation of miners.

(n) While trackmen are working on haulageways, the dispatcher, or if there is no dispatcher, such other person responsible for communications with haulage crews shall give notice to haulage crews to maintain traffic under a slow and safe operating speed at the point of construction or repair.

§22A-2-39. Belt conveyor; installation; maintenance; examination of belt conveyors and belt entries.

(a) On or after the first day of July, one thousand nine hundred seventy-one, all conveyor belts acquired for use underground shall be flame-resistant conveyor belts.

(b) A clear travelway at least twenty-four inches wide shall be provided on both sides of all belt conveyors installed after the first day of July, one thousand nine hundred seventy-one. Where roof supports are installed within twenty-four inches of a belt conveyor, a clear travelway at least twenty-four inches wide shall be provided on the side of such support farthest from the conveyor.

(c) On belt conveyors that do not transport men, stop and start controls shall be installed at intervals not to exceed one thousand feet. Such controls shall be properly installed and positioned so as to be readily accessible.

(d) Persons shall not cross moving belt conveyors, except where suitable crossing facilities are provided.

(e) All belt conveyors shall be inspected by a certified belt examiner, mine foreman-fire boss or assistant mine foreman-fire boss for frozen rollers and fire hazards following the last production shift each week, also before holidays, vacation periods, as hereinafter provided, with records kept of daily inspection.

(f)(1) Belt conveyors on which coal is transported on any shift shall be examined during each coal-producing shift. Such examination shall be made of belt conveyors and belt conveyor entries for unsafe conditions including, but not limited to, mine gases, frozen rollers, hazardous roof or rib conditions and fires.

(2) Whenever an on-shift examination of a belt conveyor and belt conveyor entry has not been made during the preceding shift, an examination shall be made of the belt conveyor and belt conveyor entry prior to the conveyor being started; or if any miner is going to enter the belt conveyor entry, then the area where such miner will be working shall be examined. Such examination shall be made by a certified mine foreman-fire boss, assistant mine foreman-fire boss, or a certified belt examiner. Thereafter, on-shift examinations by a certified belt examiner, mine foreman-fire boss or assistant mine foreman-fire boss shall be made as herein required.

(g) In the conduct of the examination, the belt examiner, mine foreman-fire boss or assistant mine foreman-fire boss shall travel the full extent of the belt conveyor or belt conveyor entry assigned and shall place his initials and the date and time of his examination at or near each belt head and along each belt conveyor he examines. Should the belt examiner, mine foreman-fire boss or assistant mine foreman-fire boss find a condition which he considers dangerous to persons entering such area, he shall erect a danger sign to prevent other persons from entering the area and notify his immediate supervisor of the condition. Only state or federal inspectors or authorized representatives of the miners, and persons authorized by mine management to correct the condition, may enter such area while the danger sign is posted. At the conclusion of each shift, belt examiners, mine foreman-fire bosses or assistant mine foreman-fire bosses shall record in a book provided for that purpose the results of their examination, including comments concerning the physical condition of the belt conveyor and the area where the belt conveyor is located. Such book shall be examined and countersigned by the mine foreman or his assistant and by the person conducting such examination on the next oncoming shift.

(h) The examinations set forth in this section shall be the only examinations required of belt conveyors and belt conveyor entries, notwithstanding any provision of sections fourteen, twenty or any other section of this chapter relating to the examination of belt conveyors and belt conveyor entries.

(i) The board of miner training, education and certification shall establish criteria and standards for the training, examination and certification of "belt examiners." Persons seeking to be certified as a "belt examiner" must hold a miner's certificate and have at least two years practical underground mining experience. Such training, examination and certification program shall, as a minimum, require a demonstration of knowledge of belt conveyors roof control, ventilation and gases.

(j) Deluge-type water sprays, water sprinklers, dry chemical sprinkler system or foam generators (designed to be automatically activated in the event of a fire or rise in the temperature at or near the belt drive) shall be installed at each main and secondary conveyor drive that are located underground.

(k) All underground belt conveyors shall be equipped with slippage and sequence switches.

(l) Telephones or other suitable communications shall be provided at points where supplies are regularly loaded or unloaded from the belt conveyors.

(m) After supplies have been transported on belt conveyors, such belts shall be examined by a belt examiner, mine foreman-fire boss or assistant mine foreman-fire boss for unsafe conditions prior to the transportation of men.

(n) No person shall be permitted to perform any work within the confines of the cargo space of a crusher or feeder, unless the crusher or feeder has been de-energized and locked out.

§22A-2-40. General provisions.

Operators of coal mines in which electricity is used as a means of power shall comply with the following provisions:

(1) All surface transformers, unless of a construction which will eliminate shock hazards, or unless installed at least eight feet above ground, shall be enclosed in a house or surrounded by a fence at least six feet high. If the enclosure is of metal, it shall be grounded effectively. The gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

(2) Underground transformers shall be air cooled or cooled with noninflammable liquid or inert gas.

(3) Underground stations containing circuit breakers filled with inflammable liquids shall be put on a separate split of air or ventilated to the return air, and shall be of fireproof construction.

(4) Transformers shall be provided with adequate overload protection.

(5) "Danger -- High Voltage" signs with the voltage indicated shall be posted conspicuously on all transformer enclosures, high-potential switchboards and other high-potential installations.

(6) Dry insulating platforms of rubber or other suitable nonconductive material shall be kept in place at each switchboard and at stationary machinery where shock hazards exist.

(7) Capacitors used for power factor connection shall be noninflammable liquid filled. Suitable drain-off resistors or other means to protect miners against electric shock following removal of power shall be provided.

(8) All unattended underground loading points where electric driven hydraulic systems are used shall utilize a fireproof oil or emulsion.

(9) Before electrical changes are made to permissible equipment for use in a mine, they shall be approved by the director.

(10) Reverse current protection shall be provided at storage battery charging stations to prevent the storage batteries from energizing the power circuits in the event of power failure.

(11) In all mines all junction or distribution boxes used for making multiple power connections in by the last open crosscut shall be permissible.

(12) All hand-held electric drills, blower and exhaust fans, electric pumps, and such other low horsepower electric face equipment which are taken into or used in by the last open crosscut of any coal mine shall be permissible.

- (13) All electric face equipment which is taken into or used in by the last open crosscut of any coal mine shall be permissible.
- (14) In mines operated in coal seams which are located at elevations above the water table, the phrase "coal seams above the water table" means coal seams in a mine which are located at an elevation above a river or the tributary of a river into which a local surface water system naturally drains.
- (15) The operator of each coal mine shall maintain in permissible condition all electric face equipment, which is taken into or used in by the last open crosscut of any mine.
- (16) Except where permissible power connection units are used, all power-connection points out by the last open crosscut shall be in intake air.
- (17) All power circuits and electric equipment shall be de-energized before work is done on such circuits and equipment, except when necessary for trouble shooting or testing.
- (18) Energized trolley wires may be repaired only by a person trained to perform electrical work and to maintain electrical equipment and the operator of a mine shall require that such persons wear approved and tested insulated shoes and wireman's gloves.
- (19) No electrical work shall be performed on low-, medium-, or high-voltage distribution circuits or equipment, except by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices shall be locked out and suitably tagged by the persons who perform such work, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such persons who installed them, or, if such persons are unavailable, by persons authorized by the operator or his agent.
- (20) All electric equipment shall be examined weekly, tested, and properly maintained by a qualified person to assure safe operating conditions. When a potentially dangerous condition is found on electric equipment, such equipment shall be removed from service until such condition is corrected. A record of such examinations shall be kept and made available to an authorized representative of the director and to the miners in such mine.
- (21) All electric conductors shall be sufficient in size and have adequate current-carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating material.
- (22) All electrical connections or splices in conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.
- (23) Cables shall enter metal frames of motors, splice boxes, and electric compartment only through proper fittings. When insulated wire, other than cables, pass through metal frames, the holes shall be substantially bushed with insulated bushings.
- (24) All power wire (except trailing cables on mobile equipment, specially designed cables conducting high-voltage power to underground rectifying equipment or transformers, or bare or insulated ground and return wires) shall be supported on well-installed insulators and shall not contact combustible material, roof or ribs.
- (25) Power wires and cables, including, but not limited to, phone communication and control wires, except trolley wires, trolley feeder wires and bare signal wires, shall be insulated adequately and fully protected. The provisions of this subdivision shall not become effective until the first day of January, one thousand nine hundred seventy-eight.
- (26) Automatic circuit-breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and circuits against short circuit and overloads. Three-phase motors on all electric equipment shall be provided with overload protection that will de-energize all three phases in the event that any phase is overloaded.
- (27) Incandescent lamps installed along haulageways and at other locations shall not contact combustible material, and if powered from trolley or direct current feeder circuits, need not be provided with separate short circuits or overload protection, if the lamp is not more than eight feet in distance from such circuits.
- (28) In all main power circuits, disconnecting switches shall be installed underground within five hundred feet of the bottoms of shafts and boreholes through which main power circuits enter the underground area of the mine and within five hundred feet of all other places where main power circuits enter the underground area of the mine.
- (29) All electric equipment shall be provided with switches or other controls that are safely designed, constructed and installed.
- (30) Each underground, exposed power conductor that leads underground shall be equipped with suitable lightning arresters of approved type within one hundred feet of the point where the circuit enters the mine. Lightning arresters shall be connected to a low-resistance grounding medium on the surface which shall be separated from neutral ground by a distance of not less than twenty-five feet.
- (31) Except for areas of a coal mine in by the last open crosscut, incandescent lamps may be used to illuminate underground areas. When incandescent lamps are used in a track entry or belt entry or near track entries to illuminate special areas other than structures, the lamps shall be installed in weatherproof sockets located in positions such that the lamps will not come in contact with any combustible material. Lamps used in all other places must be of substantial construction and be fitted with a glass enclosure.
- (32) An authorized representative of the director may require in any mine that electric face equipment be provided with devices that will permit the equipment to be de-energized quickly in the event of an emergency.
- (33) An authorized representative of the director shall require manually operated emergency stop switches,

designed to de-energize the traction motor circuit when the contractors or controller fail to open, to be installed on all battery powered tractors, taken into or used in by the last open crosscut of any entry or room.

(34) Trailing cables used in coal mines shall meet the requirements for flame-resistant cables.

(35) Short circuit protection for trailing cables shall be provided by an automatic circuit breaker or other no less effective device approved by the director of adequate current-interrupting capacity in each ungrounded conductor. Disconnecting devices used to disconnect power from trailing cables shall be plainly marked and identified and such devices shall be equipped or designed in such a manner that it can be determined by visual observation that the power is disconnected.

(36) When two or more trailing cables junction to the same distribution center, means shall be provided to assure against connecting a trailing cable to the wrong size circuit breaker.

(37) One temporary splice may be made in any trailing cable. Such trailing cable may only be used for the next twenty-four hour period. No temporary splice shall be made in a trailing cable within twenty-five feet of the machine, except cable reel equipment. Temporary splices in trailing cables shall be made in a workmanlike manner and shall be mechanically strong and well insulated. Trailing cables or hand cables which have exposed wires or which have splices that heat or spark under load shall not be used. As used in this section, the term "splice" means a mechanical joining of one or more conductors that have been severed.

(38) When permanent splices in trailing cables are made, they shall be:

(a) Mechanically strong with adequate electrical conductivity and flexibility,

(b) Effectively insulated and sealed so as to exclude moisture, and

(c) Vulcanized or otherwise treated with suitable materials to provide flame-resistant qualities and good bonding to the outer jacket.

(39) Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections. No cables will be hung in a manner which will damage the insulation or conductors.

(40) Trailing cables shall be adequately protected to prevent damage by mobile equipment.

(41) Trailing cable and power cable connections to junction boxes and to electrical equipment shall not be made or broken under load.

(42) All metallic sheaths, armors and conduits enclosing power conductors shall be electrically continuous throughout and shall be grounded by methods approved by an authorized representative of the director.

(43) Except where waived by the director, metallic frames, casings and other enclosures of electric equipment that can become alive through failure of insulation or by contact with energized parts shall be grounded, and on or before the first day of January, one thousand nine hundred seventy-eight, shall have a ground monitoring system.

(44) In instance where single-phase 110-220 volt circuits are used to feed electrical equipment, the only method of grounding that will be approved is the connection of all metallic frames, casings and other enclosure of such equipment to a separate grounding conductor which establishes a continuous connection to a grounded center tap of the transformer.

(45) The attachment of grounding wires to a mine tract or other grounded power conductor will be approved if separate clamps, suitable for such purpose, are used and installed to provide a solid connection.

(46) The frames of all off-track, direct-current machines and the enclosures of related detached components shall be effectively grounded or otherwise maintained at no less safe voltages.

(47) Installation of silicon diodes shall be restricted to electric equipment receiving power from a direct-current system with one polarity grounded. Where such diodes are used on circuits having a nominal voltage rating of two hundred fifty, they must have a forward current rating of four hundred amperes or more, and have a peak inverse voltage rating of four hundred or more. Where such diodes are used on circuits having nominal voltage rating of five hundred fifty, they must have a forward current rating of two hundred fifty amperes or more, and have a peak inverse voltage rating of eight hundred or more.

(48) In addition to the grounding diode, a polarizing diode must be installed in the machine control circuit to prevent operation of the machine when the polarity of a trailing cable is reversed.

(49) When installed on permissible equipment, all grounding diodes, over-current devices, and polarizing diodes must be placed in explosion-proof compartments.

(50) High-voltage lines, both on the surface and underground, shall be de-energized and grounded before work is performed on them, except that repairs may be permitted, in the case of energized surface high-voltage lines, if such repairs are made by a qualified person in accordance with procedures and safeguards, including, but not limited to, a requirement that the operator of such mine provide, test and maintain protective devices in making such repairs.

(51) When two or more persons are working on an energized high-voltage surface line simultaneously, and any one of them is within reach of another, such persons shall not be allowed to work on different phases or on equipment with different potentials.

(52) All persons performing work on energized high-voltage surface lines shall wear protective rubber gloves, sleeves, and climber guards if climbers are worn. Protective rubber gloves shall not be worn wrong side out or without protective leather gloves. Protective devices worn by a person assigned to perform repairs on high-voltage surface lines shall be worn continuously from the time he leaves the ground until he returns to the ground, and, if such devices are employed for extended periods, such person shall visually inspect the equipment assigned him for defects before each use, and, in no case, less than twice each day.

(53) Disconnecting or cutout switches on energized high-voltage surface lines shall be operated only with insulated sticks, fuse tongs or pullers which are adequately insulated and maintained to protect the operator from the voltage to which he

is exposed. When such switches are operated from the ground, the person operating such devices shall wear protective rubber gloves.

(54) Solely for purposes of grounding ungrounded high-voltage power systems, grounded messenger wires used to suspend the cables of such systems may be used as a grounding medium.

(55) When not in use, power circuits underground shall be de-energized on idle days and idle shifts, except that rectifiers and transformers may remain energized.

(56) High-voltage circuits entering the underground area of any coal mine shall be protected by suitable circuit breakers of adequate interrupting capacity. Such breakers shall be equipped with devices to provide protection against undervoltage, grounded phase, short circuit and overcurrent.

(57) Circuit breakers protecting high-voltage circuits entering an underground area of any coal mine shall be located on the surface and in no case installed either underground or within a drift.

(58) One circuit breaker may be used to protect two or more branch circuits, if the circuit breaker is adjusted to afford overcurrent protection for the smallest conductor.

(59) The grounding resistor, where required, shall be of the proper ohmic value to limit the voltage drop in the grounding circuit external to the resistor to not more than one hundred volts under fault conditions. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

(60) High-voltage circuits extending underground and supplying portable mobile or stationary high-voltage equipment shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the source transformers, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend along with the power conductors and serve as a grounding conductor for the frames of all high-voltage equipment supplied power from the circuit, except that the director or his authorized representative may permit ungrounded high-voltage circuits to be extended underground to feed stationary electrical equipment if such circuits are either steel armored or installed in grounded, rigid steel conduit throughout their entire length, and upon his finding that such exception does not pose a hazard to the miners. Within one hundred feet of the point on the surface where high-voltage circuits enter the underground portion of the mine, disconnecting devices shall be installed and so equipped or designed in such a manner that it can be determined by visual observation that the power is disconnected, except that the director or his authorized representative may permit such devices to be installed at a greater distance from such area of the mine if he determines, based on existing physical conditions, that such installation will be more accessible at a greater distance and will not pose any hazard to the miners.

(61) High-voltage resistance grounded systems serving portable or mobile equipment shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure continuity, and the fail-safe ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken, or other no less effective device approved by the director or his authorized representative to assure such continuity.

(62) Underground high-voltage cables used in resistance grounded systems shall be equipped with metallic shields around each power conductor with one or more ground conductors having a total cross-sectional area of not less than one half the power conductor, and with an insulated internal or external conductor not smaller than No. 10 (A.W.G.) for the ground continuity check circuit.

(63) All such cables shall be adequate for the intended current and voltage. Splices made in such cables shall provide continuity of all components.

(64) Single-phase loads, such as transformer primaries, shall be connected phase-to-phase.

(65) All underground high-voltage transmission cables shall be installed only in regularly inspected air courses and haulageways, and shall be covered, buried, or placed so as to afford protection against damage, guarded where men regularly work or pass under them unless they are six and one-half feet or more above the floor or rail, securely anchored, properly insulated, and guarded at ends, and covered, insulated, or placed to prevent contact with trolley wires and other low-voltage circuits.

(66) Disconnecting devices shall be installed at the beginning of branch lines in underground high-voltage circuits and equipped or designed in such a manner that it can be determined by visual observation that the circuit is de-energized when the switches are open.

(67) Circuit breakers and disconnecting switches underground shall be marked for identification.

(68) In the case of high-voltage cables used as trailing cables, temporary splices shall not be used and all permanent splices shall be made in accordance with the manufacturers' specifications.

(69) Frames, supporting structures and enclosures of stationary, portable, or mobile underground high-voltage equipment and all high-voltage equipment supplying power to such equipment receiving power from resistance grounded systems shall be effectively grounded to the high-voltage ground.

(70) Low-and medium-voltage power circuits serving three-phase alternating current equipment serving portable or mobile equipment shall be protected by suitable circuit breakers of adequate interrupting capacity which are properly tested and maintained as prescribed by the director. Such breakers shall be equipped with devices to provide protection against under-voltage, grounded phase, short circuit and overcurrent.

(71) Power centers and portable transformers shall be de-energized before they are moved from one location to another, except that, when equipment powered by sources other than such centers or transformers is not available, the director may permit such centers and transformers to be moved while energized, if he determines that another equivalent or

greater hazard may otherwise be created, and if they are moved under the supervision of a qualified person, and if such centers and transformers are examined prior to such movement by such person and found to be grounded by methods approved by an authorized representative of the director and otherwise protected from hazards to the miner. A record shall be kept of such examinations. High-voltage cables, other than trailing cables, shall not be moved or handled at any time while energized, except that when such centers and transformers are moved while energized as permitted under this section, energized high-voltage cables attached to such centers and transformers may be moved only by a qualified person and the operator of such mine shall require that such person wear approved and tested insulated wireman's gloves.

(72) Low-and medium-voltage three-phase alternating-current circuits used underground shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the power center, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend along with the power conductors and serve as a grounding conductor for the frames of all the electrical equipment supplied power from the circuit, except that the director or his authorized representative may permit underground low- and medium-voltage circuits to be used underground to feed such stationary electrical equipment if such circuits are either steel armored or installed in grounded rigid steel conduit throughout their entire length. The grounding resistor, where required, shall be of the proper ohmic value to limit the ground fault current to twenty-five amperes. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

(73) Low-and medium-voltage resistance grounded systems serving portable or mobile equipment shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure continuity which ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken, or other not less effective device approved by the director or his authorized representative to assure such continuity, except that an extension of time, not in excess of twelve months, may be permitted by the director on a mine-to-mine basis if he determines that such equipment is not available. Cable couplers shall be constructed so that the ground check continuity conductor shall be broken first and the ground conductors shall be broken last when the coupler is being uncoupled.

(74) Disconnecting devices shall be installed in conjunction with circuit breakers serving portable or mobile equipment to provide visual evidence that the power is connected.

(75) Circuit breakers shall be marked for identification.

(76) Single-phase loads shall be connected phase-to-phase.

(77) Trailing cables for medium-voltage circuits shall include grounding conductors, a ground check conductor, and grounded metallic shields around each power conductor or a ground metallic shield over the assembly, except that on equipment employing cable reels, cables without shields may be used if the insulation is rated two thousand volts or more.

(78) Trolley wires and trolley feeder wires shall be provided with cutout switches at intervals of not more than two thousand feet and near the beginning of all branch lines.

(79) Trolley wires and trolley feeder wires shall be provided with overcurrent protection.

(80) Trolley wires and trolley feeder wires, high-voltage cables, and transformers shall not be located within fifteen feet of the last open crosscut and shall be kept at least one hundred fifty feet from pillar workings.

(81) Trolley wires, trolley feeder wires, and bare signal wires shall be insulated adequately where they pass through doors and stoppings and where they cross other power wires and cables. Trolley wires and trolley feeder wires shall be guarded adequately:

(a) At all points where men are required to work or pass regularly under the wires.

(b) On both sides of all doors and stoppings.

(c) At man-trip stations.

(82) Temporary guards shall be provided where trackmen and other persons work in close proximity to trolley wires and trolley feeder wires.

(83) Adequate precaution shall be taken to ensure that equipment being moved along haulageways will not come in contact with trolley wires or trolley feeder wires.

(84) Trolley and feeder wires shall be installed as follows: Where installed on permanent haulage, they shall be:

(a) At least six inches outside the track gauge line.

(b) Kept taut and not permitted to touch the roof, rib or crossbars. Particular care shall be taken where they pass through door openings to preclude bare wires from coming in contact with combustible material.

(c) Installations of trolley wire hangers shall be provided within three feet of each splice in a trolley wire.

§22A-2-41. Bonding track used as power conductor.

Where track is used as a power conductor, rails and switches on main entries shall be bonded and cross-bonded in such manner as to assure adequate return. At least one rail on secondary track-haulage roads shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than two hundred feet: Provided, however, That rail joints in such secondary haulage roads need not be bonded where a copper feeder adequate in size parallels the track and is electrically connected thereto at intervals of not more than two hundred feet by cross bonds.

§22A-2-42. Telephone service or communication facilities.

Telephone service or equivalent two-way communication facilities shall be provided in all mines at least one of which shall be in service at all times as follows:

(a) A telephone or equivalent two-way communication facility shall be located on the surface within five hundred feet of all main portals, and shall be installed either in a building or in a box-like structure designed to protect the facilities

from damage by inclement weather. At least one of these communication facilities shall be at a location where a responsible person who is always on duty when miners are underground can hear the facility and respond immediately in the event of an emergency. "Two-way communication facility" shall mean a system maintained to allow voice contact to come in and out of the working section at all times.

(b) (1) Telephones or equivalent two-way communication facilities provided at each working section shall be located not more than five hundred feet outby the last open crosscut and not more than eight hundred feet from the farthest point of penetration of the working places on such section.

(2) The incoming communication signal shall activate an audible alarm, distinguishable from the surrounding noise level, or a visual alarm that can be seen by a miner regularly employed on the working section.

(3) If a communication system other than telephones is used and its operation depends entirely upon power from the mine electric system, means shall be provided to permit continued communication in the event the mine electric power fails or is cut off: Provided, That where trolley phones and telephones are both used, an alternate source of power for the trolley phone system is not required.

(4) Telephones or equivalent two-way communication facilities shall be maintained in good operating condition at all times. In the event of any failure in the system that results in loss of communication, repairs shall be started immediately, and the system restored to operating condition as soon as possible.

(5) Where required by the director, trucks used for haulage of coal, miners, or supplies by an operator shall be equipped with two-way communication instruments.

(c) On or after the first day of January, one thousand nine hundred seventy-eight, unless the director for good cause grants a waiver, all such telephones or equivalent two-way communications shall be connected to regular telephonic and other means of communication available in the community so that in the event of an emergency, emergency medical attendants or other personnel can communicate to and from the mine directly to health care facilities.

(d) Telephone lines and cables shall be carried on insulators installed on the opposite side from power or trolley wires, and where they cross power or trolley wires, they shall be insulated adequately. Lightning arresters shall be provided at the points where telephone circuits enter the mine.

§22A-2-43. Electric equipment in mines.

(a) Methane. -- Electric equipment shall not be taken into or operated in any place where methane can be detected with a flame safety lamp or other approved methane detector at one percent or more at any point not less than twelve inches from the roof, face or rib.

(b) Return air. -- In all mines, electric haulage locomotives operated from trolley wire and other electrical equipment or devices which may ignite gas shall not be used in return air, unless permission is granted by the director for a specified area. For the purpose of this provision, air used to ventilate a section of a mine shall not be considered return air until such time as the air has ventilated all of the workings in the section.

(c) Qualified person to operate cutting machine. -- No person shall be placed in charge of a coal-cutting machine in any mine who is not a qualified person, capable of determining the safety of the roof and sides of the working places and of detecting the presence of explosive gas, unless they are accompanied by a certified or qualified person who has passed such an examination.

(d) Inspections. -- In any mine no machine shall be brought in by the last breakthrough next to the working face until the machine man shall have made an inspection for gas in the place where the machine is to work. If explosive gas in excess of one percent is found in the place, the machine shall not be taken in until the danger is removed.

(e) Indication of gas. -- In working places a suitable approved apparatus for the detection of explosive gas, shall be provided for use with each mining machine when working, and should any indication of explosive gas in excess of one percent appear on any apparatus used for the detection of explosive gas, the person in charge shall immediately stop the machine, cut off the current at the nearest switch and report the condition to the mine foreman or supervisor. The machine shall not again be started in such place until the condition found has been corrected and been pronounced safe by a certified person.

(f) Periodic gas examinations. -- No electric equipment shall be operated in a mine for a longer period than twenty minutes without an examination as above described being made for gas; and if gas is found in excess of one percent, the current shall at once be switched off the machine, and the trailing cable shall forthwith be disconnected from the power supply until the place is pronounced safe.

(g) Operation of mining machines. -- Machine runners and helpers shall use care while operating mining machines. They shall examine the roof of the working place to see that it is safe before starting to operate the machine. They shall not move the machine while the cutter chain is in motion.

§22A-2-44. Hand-held electric drills and rotating tools; trailing cables.

Electric drills and other electrically operated rotating tools intended to be held in the hand shall have the electric switch constructed so as to break the circuit when the hand releases the switch and shall be equipped with friction or safety clutches.

§22A-2-45. Installation of lighting.

Electric lights or other approved methods of lighting shall be installed so that they do not come in contact with combustible materials, and the wires shall be supported by suitable insulators and fastened securely to the power conductors.

§22A-2-46. Welding and cutting.

(a) A record shall be kept of oxygen and gas tanks or cylinders taken into a mine and the date shall be recorded when they are removed from the mine. No more tanks or cylinders than necessary to perform the work efficiently shall be permitted underground at one time.

(b) Propane torches may be used in lieu of blowtorches. Only approved apparatus such as torches, regulators, pressure reducing valves, hoses, check valves and gas cylinders shall be used.

(c) Welding and cutting may be done in mines: Provided, That all equipment and gauges are maintained in safe condition and not abused, that suitable precautions are taken against ignition of methane, coal dust, or combustible materials, that means are provided for prompt extinguishment of fires accidentally started, and that only persons who have demonstrated competency in welding and cutting are entrusted to do this work. Adequate eye protection shall be used by all persons doing welding or cutting, and precautions shall be taken to prevent other persons from exposure that might be harmful to their eyes. A suitable wrench designed for compressed tanks shall be provided to the person authorized to use the equipment.

(d) Transportation of oxygen and gas tanks or cylinders shall be permitted on self-propelled machinery or belt conveyors specially equipped for safe holding of the containers in transportation. In no instance shall such transportation be permitted in conjunction with any mantrip, unless such mantrip is especially equipped with a compartment, lined with at least four inches of foam rubber or the equivalent, and capable of tightly securing the tank inside the manufactured frame of the vehicle.

(e) Empty oxygen and gas tanks or cylinders shall be marked "empty" and shall be removed from the mine promptly in safe containers provided for transportation of the same.

(f) When tanks and cylinders are not in use and when they are being transported, valve protection caps and plugs shall be placed on all tanks or cylinders for which caps and plugs are available. No oxygen tanks, gas tanks or cylinders shall be transported with the hoses and gauges attached thereto.

(g) In all mines a certified person, pursuant to section twelve of this article, shall examine for gas with permissible flame safety lamps or other approved detectors before and during welding or cutting. The safety of the equipment and methods used in such cases shall be subject to approval of the director. If equipment is mobile, it shall be removed outby the last open breakthrough before cutting and welding may be performed on such equipment.

§22A-2-47. Responsibility for care and maintenance of face equipment.

Mine operators shall maintain face equipment in safe operating condition. Equipment operators shall exercise reasonable care in the operation of the equipment entrusted to them and shall promptly report defects known to them.

§22A-2-48. When respiratory equipment to be worn; control of dust.

Miners exposed for short periods to gas-, dust-, fume-, and mist-inhalation hazards shall wear permissible respiratory equipment. Dust shall be controlled by the use of permissible dust collectors or other approved methods.

§22A-2-49. Safeguards for mechanical equipment.

(a) The cutter chains of mining machines shall be locked securely by mechanical means or electrical interlocks while such machines are parked or being trammed. Loading machines shall not be trammed with loading arms in motion, except when loading materials.

(b) Belt, chain or rope drives and the moving parts of machinery which are within seven feet of the floor, ground or platform level, unless isolated, shall be guarded adequately. Repair pits shall be kept covered or guarded at all times when not in use. Machinery shall not be lubricated or repaired while in motion, except where safe remote lubricating devices are used. Machinery shall not be started until the person lubricating or repairing it has given a clear signal. Guards which have been removed shall be replaced before the machinery is again put into use. Provision shall be made to prevent accumulations of spilled lubricants.

(c) Mechanically operated grinding wheels shall be equipped with safety washers, substantial retaining hoods, and, unless goggles are used, eye shields.

(d) No person shall stand along the side of the boom, or pass or stand along the loading head or cutting head, on a continuous miner or loading machine in operation.

(e) Braking devices shall be guarded to prevent accidental release. When required by the director, track-mounted mobile equipment shall be equipped with workable sanding devices.

(f) All battery powered equipment shall be equipped with under-voltage indicator which will indicate when the voltage is less than three-fourths of its rated capacity, at which time such equipment shall be withdrawn from use except for the purpose of returning the vehicle to the recharging station.

(g) On and after the first day of January, one thousand nine hundred eighty-eight, all manually operated valves and levers of equipment of the same manufacturer and model shall have the same direction of activation and direction of operations.

§22A-2-50. Procurement of dust-tight electrical equipment; fireproof construction; dust control; repairs; welding; handrails and toeboards; protection of personnel on conveyors; back guards on ladders; walkways or safety devices around thickeners.

(a) In unusually dusty locations, electric motors, switches and controls shall be of dust-tight construction or enclosed with reasonably dust-tight housings or enclosures.

(b) After the first day of July, one thousand nine hundred seventy-one, all structures erected on the surface within one hundred feet of any mine opening shall be of fireproof construction.

(c) Means and methods shall be provided to assure that structures and the immediate area surrounding the same shall be reasonably free of coal dust accumulations.

(d) Where coal is dumped at or near air intake openings, reasonable provisions shall be made to prevent dust from entering the mine.

(e) Where repairs are being made to the plant, proper scaffolding and proper overhead protection shall be provided for workmen wherever necessary.

(f) Welding shall not be done in dusty atmospheres and dusty locations shall be well cleaned, and fire-fighting apparatus shall be readily available during welding.

(g) Stairways, elevated platforms and runways shall be equipped with handrails. Railroad car trimmer platforms are excepted from such requirement.

(h) Elevated platforms and stairways shall be provided with toeboards where necessary, and they shall be kept clear of refuse and ice and maintained in good repair.

(i) Personnel who are required frequently and regularly to travel on belts or chain conveyors extended to heights of more than ten feet shall be provided with adequate space and protection in order that they may work safely. Permanent ladders extending more than ten feet shall be provided with back guards. Walkways around thickeners that are less than four feet above the walkway shall be adequately guarded. Employees required to work over thickeners shall wear a safety harness adequately secured, unless walkways or other suitable safety devices are provided.

§22A-2-51. Housekeeping.

Good housekeeping shall be practiced in and around mine buildings and yards. Such practices include cleanliness, orderly storage of materials, and the removal of possible sources of injury, such as stumbling hazards, protruding nails and broken glass.

§22A-2-52. Storage of flammable liquids in lamphouse.

Naphtha or other flammable liquids in lamphouses shall be kept in approved containers or other safe dispensers.

§22A-2-53. Smoking in and around surface structures.

Smoking in or about surface structures shall be restricted to places where it will not cause fire or an explosion.

§22A-2-53(a) Railroad cars; dumping areas; other surface areas.

(1) Employees handling railroad cars shall have access to and use an approved distinct audible signaling device to give warning when cars are in motion. Safety belts shall be worn and properly attached by all car droppers handling railroad cars. Railroad cars shall be maintained under control at all times. Cars shall be dropped at a safe rate of speed and in such a manner that will ensure the car dropper maintains a safe position while working and traveling around the car. Railroad cars shall not be coupled or uncoupled manually from the inside of curves unless the railroad and cars are so designed to eliminate any hazard from coupling or uncoupling from inside of curves.

(2) All dumping ramps shall be of a sufficient width to ensure safe operation of vehicles used thereon.

(3) All access roads leading to and from bath houses, portals, and other areas on which persons are expected to travel to and from work, shall be of sufficient width and be maintained in good condition. On haulage roads, guardrails or berms shall be provided on the outer bank of all elevated roads.

(4) Mobile surface loading and haulage equipment shall be inspected by a competent person before such equipment is placed into operation. Equipment defects affecting safety shall be corrected before the equipment is used.

(5) Safety protection, such as safety belts, lifelines, or lanyards to prevent a person from falling shall be provided at all times that miners are working in an area where the potential fall distance exceeds fifteen feet, except that safety belts shall not be used where they are impractical or would pose a greater hazard. Safety nets shall be provided when work places are more than twenty-five feet above the ground where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts are impractical.

§22A-2-53(b) Haulage or surface areas.

(1) Traffic directions which differ from standard highways practice shall be posted on signs along the haulage roads at strategic points in letters at least three inches high.

(2) Well marked signs conspicuously placed, shall be properly located to alert drivers to existing danger areas, such as the approach to a dangerous curve or an extreme grade.

(3) Traffic rules, signals and warning signs shall be standardized at each mine.

(4) Where side or overhead clearances on haulage roads or loading or dumping locations are hazardous to mine workers, such areas shall be conspicuously marked and warning devices shall be installed when necessary to ensure the safety of the workers.

(5) Flashers, flares, or other means of signaling shall be used to warn approaching drivers of a hazard created by an obstruction in the roadway.

(6) Regulatory signs shall be used to indicate the required method of traffic movement.

(7) Posted warning signs shall be used where necessary to indicate potential hazardous conditions.

(8) Object marking shall be used to mark physical obstructions in or near the haulageway that presents possible hazards.

(9) All signs and markings shall be displayed and utilized so as to be as effective as possible.

(10) Where side or overhead clearance on any haulage road or at any loading or dumping location at a surface mine is hazardous to any person, such hazard shall be corrected immediately, and all necessary precautions taken while such hazard is being corrected.

- (11) Haulage roads shall be located an adequate distance from highwalls and spoil banks to minimize the danger of falling material onto personnel and equipment.
- (12) When dust created by haulage is thrown into suspension in such quantities that may obscure the vision of the operators of vehicles, an adequate means shall be taken to allay such dust.
- (13) Only authorized persons shall be permitted on haulage roads and at loading or dumping locations.
- (14) Berms or guards shall be provided where required on the outer bank of elevating roadways.
- (15) The width and grade to be utilized in haulage road construction shall be determined for each specific situation based upon terrain configuration, vehicle characteristics and driver visibility for safe haulage.
- (16) Haulage roads shall be constructed of sufficient width to permit the driver to maneuver his vehicle to avoid striking unexpected obstacles on the roadway where reclamation regulations permit.
- (17) Provisions shall be made to adequately drain and remove excessive water from the haulage roads.
- (18) Haulage roads shall be constructed, installed and maintained in a manner consistent with the speed and type of haulage operations being conducted to ensure safe operation. All roads leading to and from work sites on which persons are expected to travel to and from work or to haul coal or supplies, shall be of sufficient width and be maintained in good condition.
- (19) Haulage operations shall be stopped when the haulage surface has deteriorated to the extent that it presents a danger to the safety of the haulage operation.
- (20) All haulage vehicles placed into service after the effective date of this section shall be equipped with an approved supplementary emergency braking system.
- (21) All power lines constructed over haulage roads after the effective date of this section shall be maintained at a minimum of twelve feet above all equipment used on haulage roads, including dump trucks in a raised position.

§22A-2-53(c) Ramps; tipples; cleaning plants; other surface areas.

- (1) Surface installations generally. Surface installations, all general mine structures, enclosures and other facilities, including custom coal preparation facilities shall be maintained in good condition. In unusually dusty locations, electric motors, switches and controls shall be of dust-tight construction, or enclosed with reasonable dust-tight housings or enclosures. Openings in surface installations through which men or material may fall shall be protected by railings, barriers, covers or other protective devices. Illumination sufficient to provide safe working conditions shall be provided in and on all surface structures, paths, walkways, switch panels, loading and dumping sites, working areas and parking areas. Materials shall be stored and/or stacked in a manner to prevent stumbling or falling. Compressed and liquid gas cylinders shall be secured in a safe manner. Adequate ventilation shall be provided in tipples and preparation plants. Coal dust in or around tipples or cleaning plants shall not be permitted to exist or accumulate in dangerous amounts.
- (2) Machinery guards. Gears, sprockets, chains, drive head, tail and take-up pulleys, flywheels, couplings, shafts, saw blades, fan inlets and similar exposed moving machine parts with which persons may come in contact shall be guarded adequately. Except when testing is necessary, machinery guards shall be secured in place while being operated. Belt rollers shall not be cleaned while belts are in motion.
- (3) Fire protection. Where cutting or welding is performed at any location, a means of prompt extinguishments of any fire accidentally started shall be provided. Adequate fire-fighting facilities, required by the office of miners' health, safety and training, shall be provided on all floors. At least two exits shall be provided for every floor of tipples and cleaning plants constructed after the effective date of this section. Signs warning against smoking and open flames shall be posted so they can be readily seen in areas or places where fire or explosion hazards exist. Smoking or an open flame in or about surface structures shall be restricted to locations where it will not cause fire or an explosion.
- (4) Repairs of machinery. Machinery shall not be lubricated or repaired while in motion, except where safe remote lubricating devices are used. Machinery shall not be started until the person lubricating or repairing it has given a clear signal. Means and methods shall be provided to assure that structures and the immediate area surrounding the same shall be reasonably free of coal dust accumulations. Where repairs are made to tipples, or cleaning plants, proper scaffolding and proper overhead protection shall be provided for workmen when necessary. Where overhead repair work is being performed at surface installations, adequate protection shall be provided for all persons working or passing below.
- (5) Stairs, platforms, etc. Stairways, elevated platforms and runways shall be equipped with handrails. Railroad car trimmer platforms are exempted from such requirements. Where required, elevated platforms and stairways shall be provided with toeboards. They shall be kept clear of refuse and ice and maintained in good condition.
- (6) Belts, etc. Drive belts shall not be shifted while in motion unless such machines are provided with mechanical shifters. Belt dressing shall not be applied while in motion. Belts, chains and ropes shall not be guided into power-driven moving pulleys, sprockets or drums with the hand except with equipment especially designed for hand feeding.
- (7) Conveyors and crossovers. When the entire length of a conveyor is visible from the starting switch, the operator shall visually check to make certain that all persons are in the clear before starting the conveyor. When the entire length of the conveyor is not visible from the starting switch, a positive audible or visible warning system shall be installed and operated to warn persons when the conveyor will be started. Crossovers shall be provided where necessary to cross conveyors. All crossovers shall be of substantial construction, with rails, and maintained in good condition. Moving conveyors shall be crossed only at designated crossover points. A positive audible or visible warning system shall be installed and operated to warn persons that a conveyor or other tippie equipment is to be started. Pulleys of conveyors shall not be cleaned manually while the conveyor is in operation. Guards, nets or other suitable protection shall be provided where

tramways pass over roadways, walkways or buildings. Where it is required to cross under a belt, adequate means shall be taken to prohibit a person from making contact with a moving part.

(8) Ladders. All ladders shall be securely fastened. Permanent ladders more than ten feet in height shall be provided with backguards. Ladders shall be of substantial construction and maintained in good condition. Wooden ladders shall not be painted. Fixed ladders shall not incline backward at any point unless equipped with backguards. Fixed ladders shall be anchored securely and installed with at least three inches of toe clearance. Side rails of fixed ladders shall project at least three feet above landings, or substantial handholds shall be provided above the landing. No person shall be permitted to work off of the top step of any ladder. Metal ladders shall not be used with electrical work, where there is danger of the ladder coming into contact with power lines or an electrical conductor. The maximum length of a step ladder shall be twenty feet and an extension ladder sixty feet.

(9) Hoisting. Hitches and slings used to hoist materials shall be suitable for handling the type of material being hoisted. Persons shall stay clear of hoisted loads. Tag lines shall be attached to hoisted materials that require steadying or guidance. A hoist shall not lift loads greater than the rated capacity of the hoist being used.

(10) Railroad track construction and maintenance.

(a) All parts of the track haulage road under the ownership or control of the operator shall be strictly constructed and maintained. Rails shall be secured at all points by means of plates or welds. When plates are used, plates conforming with the weight of the rail shall be installed and broken plates shall be replaced immediately. Appropriate bolts shall be inserted and maintained in all bolt holes. The appropriate number of bolts conforming with the appropriate rail plate for the weight of the rail shall be inserted, tightly secured, and maintained.

(b) All points shall be installed and maintained so as to prevent bad connections. Varying weights of rail shall not be joined without proper adapters. Tracks shall be blocked and leveled and so maintained so as to prevent high and low joints.

(c) Tracks shall be gauged so as to conform with the track mounted equipment. Curves shall not be constructed so sharp as to put significant pressure on the tracks of the track-mounted equipment.

(d) Severely worn or damaged rails and ties shall be replaced immediately.

(e) When mining operations are performed within any twenty-four hour period, operations shall be inspected at least every twenty-four hours to assure safe operation and compliance with the law and rules. The results of which inspection shall be recorded.

(f) Personnel who are required frequently and regularly to travel on belts or chain conveyors extended to heights of more than ten feet shall be provided with adequate space and protection in order that they may work safely. Permanent ladders extending more than ten feet shall be provided with back guards. Walkways around thickeners that are less than four feet above the walkway shall be adequately guarded. Employees required to work over thickener shall wear a safety harness adequately secured, unless walkways or other suitable safety devices are provided.

§22A-2-54. Duties of persons subject to article; rules and regulations of operators.

(a) It shall be the duty of the operator, mine foreman, supervisors, mine examiners, and other officials to comply with and to see that others comply with the provisions of this article.

(b) It shall be the duty of all employees and checkweighmen to comply with this article and to cooperate with management and the office of miners' health, safety and training in carrying out the provisions hereof.

(c) Reasonable rules of an operator for the protection of employees and preservation of property that are in harmony with the provisions of this article and other applicable laws shall be complied with. They shall be printed on cardboard or in book form in the English language and posted at some conspicuous place about the mine or mines, and given to each employee upon request.

§22A-2-55. Protective equipment and clothing.

(a) Welders and helpers shall use proper shields or goggles to protect their eyes. All employees shall have approved goggles or shields and use the same where there is a hazard from flying particles or other eye hazards.

(b) Employees engaged in haulage operations and all other persons employed around moving equipment on the surface and underground shall wear snug-fitting clothing.

(c) Protective gloves shall be worn when material which may injure hands is handled, but gloves with gauntleted cuffs shall not be worn around moving equipment.

(d) Safety hats and safety-toed shoes shall be worn by all persons while in or around a mine: Provided, that metatarsal guards are not required to be worn by persons when working in those areas of underground mine workings which average less than forty-eight inches in height as measured from the floor to the roof of the underground mine workings.

(e) Approved eye protection shall be worn by all persons while being transported in open-type man trips.

(f)(1) A self-contained self-rescue device approved by the Director shall be worn by each person underground or kept within his immediate reach and the device shall be provided by the operator. The self-contained self-rescue device shall be adequate to protect a miner for one hour or longer. Each operator shall train each miner in the use of such device and refresher training courses for all underground employees shall be held during each calendar year.

(2) In addition to the requirements of subdivision (1) of this subsection, the operator shall also provide caches of additional self-contained self-rescue devices throughout the mine in accordance with a plan approved by the director. Each additional self-contained self-rescue device shall be adequate to protect a miner for one hour or longer. The total number of additional self-contained self-rescue devices, the total number of storage caches and the placement of each cache

throughout the mine shall be established by rule pursuant to subsection (i) of this section. A luminescent sign with the words "SELF- CONTAINED SELF-RESCUER" or "SELF-CONTAINED SELF-RESCUERS" shall be conspicuously posted at each cache and luminescent direction signs shall be posted leading to each cache. Lifeline cords or other similar device, with reflective material at 25-foot intervals, shall be attached to each cache from the last open crosscut to the surface. The operator shall conduct weekly inspections of each cache, and each lifeline cord or other similar device to ensure operability.

(3) Any person that, without the authorization of the operator or the director, knowingly removes or attempts to remove any self- contained self-rescue device or lifeline cord from the mine or mine site with the intent to permanently deprive the operator of the device or lifeline cord or knowingly tampers with or attempts to tamper with such device or lifeline cord shall be deemed guilty of a felony and, upon conviction thereof, shall be imprisoned in a state correctional facility for not less than one year nor more than ten years or fined not less than ten thousand dollars nor more than one hundred thousand dollars, or both.

(g)(1) A wireless emergency communication device approved by the director and provided by the operator shall be worn by each person underground. The wireless emergency communication device shall, at a minimum, be capable of receiving emergency communications from the surface at any location throughout the mine. Each operator shall train each miner in the use of the device and provide refresher training courses for all underground employees during each calendar year. The operator shall install in or around the mine any and all equipment necessary to transmit emergency communications from the surface to each wireless emergency communication device at any location throughout the mine.

(2) Any person that, without the authorization of the operator or the director, knowingly removes or attempts to remove any wireless emergency communication device or related equipment from the mine or mine site with the intent to permanently deprive the operator of the device or equipment or knowingly tampers with or attempts to tamper with the device or equipment shall be guilty of a felony and, upon conviction thereof, shall be imprisoned in a state correctional facility for not less than one year nor more than ten years or fined not less than ten thousand dollars nor more than one hundred thousand dollars , or both.

(h)(1) A wireless tracking device approved by the director and provided by the operator shall be worn by each person underground. In the event of an accident or other emergency, the tracking device shall be capable of providing real-time monitoring of the physical location of each person underground: Provided, that no person shall discharge or discriminate against any miner based on information gathered by a wireless tracking device during non-emergency monitoring. Each operator shall train each miner in the use of the device and provide refresher training courses for all underground employees during each calendar year. The operator shall install in or around the mine all equipment necessary to provide real-time emergency monitoring of the physical location of each person underground.

(2) Any person that, without the authorization of the operator or the director, knowingly removes or attempts to remove any wireless tracking device or related equipment, approved by the director, from a mine or mine site with the intent to permanently deprive the operator of the device or equipment or knowingly tampers with or attempts to tamper with the device or equipment shall be guilty of a felony and, upon conviction thereof, shall be imprisoned in a state correctional facility for not less than one year nor more than ten years or fined not less than ten thousand dollars nor more than one hundred thousand dollars , or both.

(i) The director may promulgate emergency and legislative rules to implement and enforce this section pursuant to the provisions of article three, chapter twenty-nine-a of this code.

§22A-2-55(a) Safety helmets.

All surface mine employees shall be required to wear safety helmets when working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns: Provided, That such employees shall not be required to wear such safety helmet while operating machinery equipped with a falling object protective structure which satisfies the impact and penetration requirements established by the American National Standards Institute, Safety Requirements for Industrial Head Protection, Standard Z89.1, unless the director finds that the dangers set forth herein may be present: Provided, however, That such employees shall be required to wear safety helmets while not operating such equipment including period of travel to and from such equipment.

The safety helmets required hereunder shall meet the specifications for such helmets as prescribed by the mine health and safety administration.

§22A-2-56. Checking systems.

Each mine shall have a check-in and check-out system which will provide positive identification of every person underground and will provide an accurate record of the persons in the mine kept on the surface in a place that will not be affected in the event of an explosion. Said record shall bear a number or name identical to the identification check that is securely fastened to the lamp belt of all persons underground. The identification check shall be made of a rust-resistant metal of no less than sixteen gauge.

§22A-2-57. No act permitted endangering security of mine; search for intoxicants, matches, etc.

(a) No miner, worker or other person shall knowingly injure any shaft, lamp, instrument, air course, or brattice, or obstruct or throw open airways, or carry matches or open lights in the places worked by safety lights, or disturb any part of the machinery or appliances, open a door closed for directing ventilation and not close it again, or enter any part of a mine against caution, or disobey any order of any mine foreman or assistant mine foreman given in carrying out any of the provisions of this section.

(b) Open lights, smoking, and smokers' articles, including matches, are prohibited in all mines. No person shall at any time enter mines with or carry therein any matches, pipes, cigars, cigarettes, or any device for making lights or fire not authorized or approved. The operator shall at frequent intervals search, or cause to be searched, any person, including his clothing and material belongings, entering or about to enter the mine, or inside the mine, to prevent such person from taking or carrying therein any of the above-mentioned articles.

(c) No person shall at any time carry into any mine any intoxicants or enter any mine while under the influence of intoxicants.

§22A-2-58. Fire protection.

(a) Suitable fire protection shall be provided at surface installations of fans, shops, tipples, and preparation plants, substations, hoist rooms and compressor stations.

(b) Fire drills and demonstration of various types of available fire-fighting equipment shall be held for employees at least every six months.

(c) The location of pipelines, location of valves, and fire taps shall be shown on a map of the mine and kept available at the mine office at all times.

(d) Each coal mine shall be provided with suitable fire-fighting equipment adapted for the size and condition of the mine. Fire-fighting equipment required under this article shall meet the following requirements:

(1) Waterlines shall be capable of delivering fifty gallons of water at a nozzle pressure of fifty pounds per square inch.

(2) A portable water car shall be of at least one thousand gallons capacity, and shall have at least three hundred feet of fire hose with nozzles. A portable water car shall be capable of providing a flow through the hose of fifty gallons of water per minute at a nozzle pressure of fifty pounds per square inch.

(3) A portable chemical car shall carry enough chemicals to provide a fire extinguishing capacity equivalent to that of a portable water car.

(4) A portable foam-generating machine shall have facilities and equipment for supplying the machine with thirty gallons of water per minute at thirty pounds per square inch for a period of thirty-five minutes.

(5) A portable fire extinguisher shall be either a multipurpose dry chemical type, containing a nominal weight of five pounds of dry powder and enough expellant to apply the powder; or a foam-producing type containing at least two and one-half gallons of foam-producing liquid and enough expellant to supply the foam. Only fire extinguishers approved by the Underwriters Laboratories, Inc. or Factor Mutual Laboratories, carrying appropriate labels as to type and purpose shall be used after the first day of July, one thousand nine hundred seventy-one, and all new portable fire extinguishers acquired for use in a coal mine shall be of the multipurpose dry chemical type, having a 2A 10BC or higher rating.

(6) The fire hose shall be rubber-lined, mildew-proof and the cover shall be of flame-resistant qualities, meeting requirements for hose in Bureau of Mines Schedule 2G, except that the test flame shall be applied to the outer surface rather than to an open end. The bursting pressure shall be at least four times higher than the static water at the mine location; the maximum water pressure in the hose nozzle shall not exceed 100 p.s.i.g.

(e) Each working section of coal mines producing three hundred tons or more per shift shall be provided with two portable fire extinguishers and two hundred forty pounds of bagged rock dust or equivalent; waterlines shall extend to each section loading point and be equipped with enough fire hose to reach each working face unless the section loading point is provided with one of the following: (1) Two portable water cars or (2) two portable chemical cars, or (3) one portable water car or one portable chemical car and either a portable foam-generating machine or a portable high-pressure rock-dusting machine, fitted with at least two hundred fifty feet of hose and supplied with at least sixty sacks of rock dust.

(f) In all coal mines, waterlines shall be installed parallel to the entire length of belt conveyors and shall be equipped with fire hose outlets with valves at three-hundred-foot intervals along each belt conveyor and at tailpieces. At least five hundred feet of fire hose with fittings suitable for connection with each belt conveyor waterline system shall be stored at strategic locations along the belt conveyor. Waterlines may be installed in entries adjacent to the conveyor entry belt as long as the outlets project into the belt conveyor entry. Each working section of coal mines producing less than three hundred tons of coal per shift shall be provided with two portable fire extinguishers, two hundred forty pounds of bagged rock dust and at least five hundred gallons of water and at least three pails of ten-quart capacity. In lieu of the five hundred gallon water supply, a waterline with sufficient hose to reach the working places, a portable water car of five hundred fifty gallons capacity, or a portable all-purpose dry powder chemical car of at least one hundred twenty-five pounds capacity may be provided.

(g) In mines producing three hundred tons of coal or more per shift, waterlines shall be installed parallel to all haulage tracks using mechanized equipment in the track or adjacent entry and shall extend to the loading point of each working section. Waterlines shall be equipped with outlet valves at intervals of not more than five hundred feet, and five hundred feet of fire hose with fittings suitable for connection with such waterlines shall be provided at strategic locations. Two portable water cars, readily available, may be used in lieu of waterlines prescribed under this subsection.

(h) In mines producing less than three hundred tons of coal per shift, there shall be provided at five-hundred-foot intervals in all main and secondary haulage roads: (1) A tank of water of at least fifty-five gallon capacity with at least three pails of not less than ten-quart capacity, or (2) not less than two hundred forty pounds of bagged rock dust.

(i) Each track or off-track locomotive, self-propelled man-trip car, or personnel carrier shall be equipped with one portable fire extinguisher.

(j) Two portable fire extinguishers shall be provided at each permanent electrical installation. One portable fire extinguisher and two hundred forty pounds of rock dust or equivalent shall be provided at each temporary electrical installation.

(k) Two portable fire extinguishers and two hundred forty pounds of rock dust or equivalent shall be provided at each permanent underground oil storage station. One portable fire extinguisher shall be provided at each working section where twenty-five gallons or more of oil are stored in addition to extinguishers required under subsection (e) of this section.

(l) One portable fire extinguisher or two hundred forty pounds of rock dust or equivalent and water shall be provided at locations where welding, cutting, or soldering with arc or flame is being done.

(m) At each wooden door through which power lines pass there shall be one portable fire extinguisher or two hundred forty pounds of rock dust or equivalent within twenty-five feet of the door on the intake air side.

(n) At each mine producing three hundred tons of coal or more per shift, there shall be readily available the following materials at locations not exceeding two miles from each working section:

- (1) One thousand board feet of brattice boards
- (2) Two rolls of brattice cloth
- (3) Two handsaws
- (4) Twenty-five pounds of 8 wt nails
- (5) Twenty-five pounds of 10 wt nails
- (6) Twenty-five pounds of 16 wt nails
- (7) Three claw hammers
- (8) Twenty-five bags of wood fiber plaster or ten bags of cement (or equivalent material for stoppings)
- (9) Five tons of rock dust.

(o) At each mine producing less than three hundred tons of coal per shift, the above materials shall be available at the mine: Provided, however, That the emergency materials for one or more mines may be stored at a central warehouse or building supply company and such supply must be the equivalent of that required for all mines involved and within one hour's delivery time from each mine. This exception shall not apply where the active working sections are more than two miles from the surface.

§22A-2-59. First-aid equipment.

(a) Each operator of an underground coal mine shall maintain a supply of first-aid equipment at each of the following locations:

- (1) At the mine dispatcher's office and on the surface in close proximity to the mine entry.
- (2) At the bottom of each regularly traveled slope or shaft; however, where the bottom of such slope or shaft is not more than one thousand feet from the surface, such first-aid supplies may be maintained on the surface at the entrance of the mine.
- (3) At a point in each working section not more than five hundred feet outby the active working face or faces.

(b) The first-aid equipment required to be maintained shall include at least the following:

- (1) One stretcher
- (2) One broken-back board
- (3) Twenty-four triangular bandages
- (4) Eight four-inch bandage compresses
- (5) Sixteen two-inch bandage compresses
- (6) Twelve one-inch adhesive compresses
- (7) One foille
- (8) Two cloth blankets
- (9) One rubber blanket
- (10) Two tourniquets
- (11) One one-ounce bottle of aromatic spirits of ammonia
- (12) Two inflatable plastic arm splints
- (13) Two inflatable plastic leg splints
- (14) Six small splints, metal or wooden
- (15) Two cold packs.

(c) All first-aid supplies required to be maintained under the section shall be stored in suitable sanitary, dust-tight, moisture-proof containers and such supplies shall be accessible to the miners.

(d) No first-aid material shall be removed or diverted without authorization, except in case of accident in or about the mine.

(e) On all occasions when a person becomes sick or injured underground to the extent that he must go to the surface, he shall be accompanied by one or more persons.

§22A-2-60. Accessible outlets; safe roadways for emergencies; accessibility of first aid equipment; use of special capsule for removal of personnel.

(a) No operator or mine foreman of any coal mine shall employ any person to work in such mine, or permit any persons to be in the mine for the purpose of working therein unless they are provided with two openings or outlets to each seam, separated by natural strata, such openings to be not less than three hundred feet apart, if the mine be worked by

shaft; if the mine be worked by shaft and slope, such openings shall be separated by one hundred feet of natural strata; and not less than fifty feet apart at the outlets, if worked by slope or drift; but this requirement of a distance of three hundred feet between openings or outlets to shaft mines shall not apply where such openings or outlets have been made prior to the first day of July, one thousand nine hundred seventy-one.

(b) At least two separate and distinct travelable passageways designated as escapeways shall be maintained to ensure passage at all times to any person, including disabled persons. The escapeway openings to the surface shall be separated in such manner as shall be prescribed by the director. If at least two escapeways are not available for any reason, all miners in the affected area other than those requisite to remedy the situation shall be withdrawn from the affected area until such time as the escapeway is made passable. Where the height of the coal bed is more than five feet, the escapeways shall be maintained at a height of at least five feet excluding necessary roof support, and the travelway in such escapeway shall be maintained at a width of at least six feet, excluding necessary roof support and in those situations where the height of the coal bed is less than five feet the escapeway should be maintained to the height of the coal bed excluding any necessary roof support, and the travelway in such escapeway shall be maintained at a width of at least six feet. At least one escapeway ventilated with intake air, maintained to the last open crosscut, shall be provided from each working section continuously to the nearest available opening on the surface, and shall be maintained in safe condition and properly marked. Mine openings shall be adequately protected to prevent the entrance into the underground area of the mine of floodwater. Escape facilities approved by the director, properly maintained and frequently tested, shall be present at or in each escape shaft or slope to allow all persons, including disabled persons, to escape quickly to the surface in event of an emergency. Return airways entries designated as escapeways shall be provided with permissible two-way communication systems to the surface, and such systems shall be located at points not to exceed every four thousand feet. On or after the first day of April, one thousand nine hundred seventy-eight, each operator shall provide lifeline cords, with reflective material at twenty-five foot intervals, from the last open crosscut to the surface along a designated escapeway ventilated by return air: Provided, That in case of a shaft mine such lifeline cords shall extend from the last open crosscut to the bottom of the designated escape shaft. Such lifeline cord shall be of durable construction sufficient to allow miners to see and to use effectively to guide themselves out of the mine in the event of an emergency.

(c) Escapeways shall be inspected and traveled at least once each week by a certified mine examiner who shall place his initials and the date in a conspicuous place or places and who shall file a written report thereon which shall be kept on the surface.

(d) When new coal mines are opened, not more than twenty miners shall be allowed at any one time in any mine until a connection has been made between the two mine openings, and such connections shall be made as soon as possible.

(e) When only one opening is available because of final mining of pillars, not more than twenty miners shall be allowed in such mine at any one time, and the distance between the mine opening and working face shall not exceed five hundred feet.

(f) First-aid materials and such other equipment as the director may require shall be maintained within five hundred feet of each area in which miners are regularly working to which they may have access in case of an emergency and for protection against hazards.

(g) Each working area of the mine not serviced by track-mounted or rubber-tired vehicles which uses conveyor belts for removal of coal shall be equipped with a special capsule in which an injured person can be placed and transported on the belt to the surface or to other transportation facilities. The director shall within nine months of the eighth day of July, one thousand nine hundred seventy-seven, promulgate standards and guidelines, or allow to continue in effect any present standards and guidelines, as to what such "special capsule" as used in this subsection shall include. Each section of the mine using or serviced by track-mounted or rubber-tired equipment shall have readily available a vehicle which can be used to promptly remove a person in case of injury.

§22A-2-61. Coal storage bins; recovery tunnels; coal storage piles.

(a) Coal storage bins hereafter constructed with vertical sides fifty feet or over in height shall be provided with ventilators or louvers or both to provide adequate ventilation. Where roofs are constructed over coal storage bins, adequate ventilation shall be provided by stacks, ventilators, louvers or mechanical means.

(b) Where cutting or welding is performed at any location where coal is stored, means of prompt extinguishments of any fire accidentally started shall be provided, and the area where cutting or welding is performed shall be adequately watered down and rock-dusted.

(c) A qualified person shall test for methane with a methane detector prior to and during cutting and welding operations inside or underneath a coal storage bin.

(d) Electric motors, switches and controls for coal storage bins hereafter acquired shall be of dust-tight construction.

(e) Repairs to electric equipment shall not be made when the surrounding atmosphere contains dangerous amounts of gas or dust.

(f) Where electric lights are used in recovery tunnels of over one hundred feet in length, the wiring shall be in rigid conduit and shall be enclosed in waterproof receptacles.

(g) An escapeway shall be provided from any recovery tunnel hereafter constructed to a safe place on the surface; such escapeway shall be at least thirty inches in diameter and where inclined, a ladder shall be provided to extend full length of the escapeway to facilitate emergency exit.

(h) Extreme caution shall be exercised by all employees required to work at or near coal storage piles during coal recovery operations to avoid injury by coal slides or by being in or drawn into a chute.

§22A-2-62. Thermal coal dryers and plants.

Thermal coal dryer plants shall be hereafter constructed, maintained and operated in compliance with the following provisions:

- (1) Good housekeeping shall be practiced in and around thermal dryer plants.
- (2) Adequate fire-fighting facilities shall be provided on all floors.
- (3) When welding and cutting operations are to be performed in a dryer structure, the area shall be wetted down thoroughly and adequate fire-fighting apparatus shall be readily available during the operation.
- (4) Only qualified persons shall be permitted to operate dryers; however, this provision shall not prohibit qualified persons from training other persons to become qualified operators.
- (5) Dryer control panels shall be provided with audible and visible alarm devices; such devices should be adjusted to function at somewhat less than maximum dryer temperature.
- (6) A bypass or relief stack equipped with an automatically operated damper shall be provided for bypassing gases from the heating units to the outside atmosphere during emergency or normal shutdown operations.
- (7) Thermal coal dryers hereafter installed shall not be enclosed except that roofs may be used. Whenever it is deemed necessary to enclose thermal dryers, such equipment shall be in a fireproof structure.
- (8) Dryer installations and discharge stacks shall be protected with adequate explosion release vents that open to the outside atmosphere.
- (9) Thermal coal dryers shall be located at a safe distance from tipples, cleaning plants, mine openings and surface buildings, such as oil storage areas, explosive magazines, and other buildings where coal dust, sparks and flames are likely to enter and become ignited or otherwise cause danger of fires.
- (10) Dryers shall be equipped with quick-response heat control devices which, in the event of super-elevated temperatures, will automatically divert the hot inlet gases into a bypass stack, thereby bypassing the drying chamber and at the same time stopping the fuel from being supplied to the air heater.
- (11) All dryers, conveyors and other fine coal transporting machines shall be constructed as dust-tight as practicable. Where necessary, such equipment shall be provided with removable covers for inspection and cleaning and shall be provided with vent pipes to the outside atmosphere to permit the escape of distilled gases.
- (12) Dryers shall be examined thoroughly after normal and emergency shutdown for fires and coal dust accumulations.
- (13) Dryer controls, valves and mechanical equipment shall be frequently inspected, and no dryer shall be operated with defective mechanical equipment.
- (14) The gauges of temperature control instruments shall be of the recording type.
- (15) Operating rules suitable for the characteristics of each dryer system and the materials processed shall be developed and shall be available at the control panel.
- (16) Electrical equipment, electrical wiring and lighting fixtures shall be of dust-tight construction.
- (17) Adequate illumination shall be provided.
- (18) Dryers shall not be operated beyond their rated evaporation capacity.
- (19) Fluid bed dryers shall be provided with water sprays of sufficient capacity for use in event of fire.
- (20) After shutdowns, thermal dryers shall be cleared of hot coals so as to minimize ignitions on succeeding startups.
- (21) Thermal coal dryers previously installed in a tipple or cleaning plant shall be separated where practicable from other working areas by substantial partitions capable of providing greater resistance to explosion pressures than an exterior wall or walls.
- (22) When it is necessary to use extension cables for emergency illumination, such lighting devices shall be dust-tight and adequately guarded. When it becomes necessary to perform work in dryer system bins or any other dusty areas, permissible cap lamps shall be used for illumination.

§22A-2-63. No mine to be opened or reopened without prior approval of the Director of the Office of Miners' Health, Safety and Training; certificate of approval; approval fees; extension of certificate of approval; certificates of approval not transferable; section to be printed on certificates of approval.

(a) No mine may be opened or reopened unless prior approval has been obtained from the Director of the Office of Miners' Health, Safety and Training. The Director may not unreasonably withhold approval. The operator shall pay a fee of one hundred dollars for the approval, which shall be tendered with the application for approval: Provided, that mines producing coal solely for the operator's use shall be issued a permit without charge if coal production will be less than fifty tons a year.

Within thirty days after the first day of January of each year, the holder of a permit to open a mine shall apply for the extension of the permit for an additional year. The permit, evidenced by a document issued by the Director, shall be granted as a matter of right for a fee of one hundred dollars if, at the time application is made, the permit holder is in compliance with the provisions of section seventy-seven of this article and has paid or otherwise appealed all coal mine assessments issued to the mine if operated by the permit holder and imposed under article one of this chapter.

Applications for extension of permits not submitted within the time required shall be processed as an application to open or reopen a mine and shall be accompanied by a fee of one hundred dollars.

(b) Permits issued pursuant to this section are not transferable.

(c) If the operator of a mine is not the permit holder as defined in subsection (a) of this section, then the operator shall apply for and obtain a certificate of approval to operate the mine on which the permit is held prior to commencing operations. The operator shall pay a fee of one hundred dollars, which payment shall be tendered with the application for approval. The approval, evidenced by a certificate issued by the Director, shall be granted if, at the time application is made, the applicant is in compliance with the provisions of section seventy-seven of this article and has paid or otherwise appealed all coal mine assessments imposed on the applicant for the certificate of approval under article one of this chapter.

(d) In addition to the Director's authority to file a petition for enforcement under subdivision (4), subsection (a), section twenty-one, article one of this chapter, if an operator holding a certificate of approval issued pursuant to subsection (c) of this section, has been assessed a civil penalty in accordance with section twenty-one, article one of this chapter, and its implementing rules, and the penalty has become final, fails to pay the penalty within the time prescribed in the order, the Director or the authorized representative of the Director, by certified mail, return receipt requested, shall send a notice to the operator advising the operator of the unpaid penalty. If the penalty is not paid in full within sixty days from the issuance of the notice of delinquency by the Director, then the Director may revoke the operator's certificate of approval: Provided, That the operator to whom the delinquency notice is issued has thirty days from receipt of the delinquency notice to request, by certified mail, return receipt requested, a public hearing held in accordance with the procedures of section seventeen, article one of this chapter, and its implementing rules, including application for temporary relief. Once the operator's certificate of approval is revoked pursuant to this subsection, the operator may not obtain any certificate of approval under the provisions of this section to operate any other mine until that operator pays the delinquent penalties that have become final.

(e) Every firm, corporation, partnership or individual that contracts to perform services or construction at a coal mine is considered to be an operator and shall apply for and obtain a certificate of approval prior to commencing operations: Provided, That these persons shall only be required to obtain one certificate annually: Provided, however, That persons such as, but not limited to, consultants, mine vendors, office equipment suppliers and maintenance and delivery personnel are excluded from this requirement to obtain a certificate of approval. Operators who are required to obtain a certificate of approval pursuant to the provisions of this subsection shall pay a fee of one hundred dollars which shall be tendered with the application for approval. Approval evidenced by a certificate issued by the Director, shall be granted if, at the time the application is made, the applicant has paid or otherwise appealed all coal mine assessments imposed on the applicant under article one of this chapter.

Within thirty days after the first day of January of each year, the holder of a certificate of approval shall apply for the extension of that approval for an additional year. Applications for extension shall be accompanied by a fee of one hundred dollars. An extension shall be granted if, at the time application is made, the applicant has paid or otherwise appealed all coal mine assessments imposed on the applicant under article one of this chapter. All delinquent assessments which have been imposed upon a certificate of approval holder or applicants under this section may not be imposed upon any permit holder or certificate of approval holder or any applicant pursuant to subsection (a) or (c) of this section.

(f) The provisions of this section shall be printed on the reverse side of every permit issued under subsection (a) of this section and certificate of approval issued under subsection (e) of this section.

(g) The district mine inspector shall conduct a pre-inspection of the area proposed for underground mining prior to issuance of any new opening permit approval.

(h) All moneys collected by the Office of Miner's Health, Safety and Training for the approval fees set forth in subsections (a), (c) and (e) of this section shall be deposited with the treasurer of the state of West Virginia to the credit of the general administration -- operating permit fees fund. The operating permit fees fund shall be used by the Director who is authorized to expend the moneys in the fund for the administration of this chapter.

§22A-2-64. Sealing permanently closed or abandoned mines.

(a) After the first day of July, one thousand nine hundred seventy-one, when any coal mine is worked out or indefinitely closed, such mine openings shall be properly sealed within ninety days after the mine is abandoned.

(b) Mines temporarily inactive for less than ninety days shall be adequately fenced with conspicuous signs prohibiting the possible entrance of unauthorized persons.

(c) Shaft openings shall be effectively capped or filled. Filling shall be for the entire depth of the shaft. Caps shall consist of a six inch thick concrete cap or other equivalent means approved by the director.

(d) Caps shall be equipped with a vent pipe at least two inches in diameter extending for a distance of at least fifteen feet above the surface shaft.

§22A-2-65. Mining close to abandoned workings.

Any operator working up to an abandoned coal mine may be permitted to work to his property line, if approved by the director, but in such cases precaution must be taken as provided in this article.

§22A-2-66. Accident; notice; investigation by Office of Miners' Health, Safety and Training.

(a) For the purposes of this section, the term "accident" means:

- (1) The death of an individual at a mine;
- (2) An injury to an individual at a mine which has a reasonable potential to cause death;
- (3) The entrapment of an individual;
- (4) The unplanned inundation of a mine by a liquid or gas;
- (5) The unplanned ignition or explosion of gas or dust;
- (6) The unplanned ignition or explosion of a blasting agent or an explosive;
- (7) An unplanned fire in or about a mine not extinguished within five minutes of ignition;
- (8) An unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage;
- (9) A coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than one hour;
- (10) An unstable condition at an impoundment, refuse pile or culm bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area, or the failure of an impoundment, refuse pile or culm bank;
- (11) Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than thirty minutes; and
- (12) An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs.

(b) Whenever any accident occurs in or about any coal mine or the machinery connected therewith, it is the duty of the operator or the mine foreman in charge of the mine to give immediate notice, within fifteen minutes of ascertaining the occurrence of an accident, to the Mine and Industrial Accident Emergency Operations Center at the statewide telephone number established by the Director of the Division of Homeland Security and Emergency Management pursuant to the provisions of article five-b, chapter fifteen of this code stating the particulars of the accident: Provided, That the operator or the mine foreman in charge of the mine may comply with this notice requirement by immediately providing notice to the appropriate local organization for emergency services as defined in section eight, article five of said chapter, or the appropriate local emergency telephone system operator as defined in article six, chapter twenty-four of this code: Provided, however, That nothing in this subsection shall be construed to relieve the operator from any reporting or notification requirement under federal law.

(c) The director shall impose, pursuant to rules authorized in this section, a civil administrative penalty of one hundred thousand dollars on the operator if it is determined that the operator or the mine foremen in charge of the mine failed to give immediate notice as required in this section: Provided, That the director may waive imposition of the civil administrative penalty at any time if he or she finds that the failure to give immediate notice was caused by circumstances wholly outside the control of the operator.

(d) If anyone is killed, the inspector shall immediately go to the scene of the accident and make recommendations and render assistance as he or she may deem necessary for the future safety of the men and investigate the cause of the explosion or accident and make a record. He or she shall preserve the record with the other records in his or her office. The cost of the investigation records shall be paid by the Office of Miners' Health, Safety and Training. A copy shall be furnished to the operator and other interested parties. To enable him or her to make an investigation, he or she has the power to compel the attendance of witnesses and to administer oaths or affirmations. The director has the right to appear and testify and to offer any testimony that may be relevant to the questions and to cross-examine witnesses.

§22A-2-67. Written report of accident.

Whenever any accident occurs in or about any coal mine to any employee or person connected with the mining operation, resulting in personal injury or death, the operator shall, within twenty-four hours, report the same in writing to the director and to the district mine inspector of the district in which the accident occurs, giving full details thereof upon forms furnished by the director.

§22A-2-68. Preservation of evidence following accident or disaster.

Following a mine accident resulting in the death of one or more persons and following any mine disaster, the evidence surrounding such occurrence shall not be disturbed after recovery of bodies or injured persons until an investigation by the office of miners' health, safety and training has been completed.

§22A-2-69. Fire in and about mine; notification of director and district mine inspector.

The operator or mine foreman, upon the discovery of fire in or about a mine, shall immediately notify the director and the district mine inspector in whose district the mine is located.

§22A-2-70. Shafts and slopes.

(a) When mine examiner to be employed; qualifications. During the sinking of a shaft or the driving of a slope to a coal bed or while engaged in underground construction work, or relating thereto, the operator shall assign a mine examiner to such project areas. Such mine examiner shall have a certificate of competency valid only for the type of work stipulated thereon and issued to him or her by the office of miners' health, safety and training after he or she has passed an examination given by the office of miners' health, safety and training. He or she shall, at the time he or she takes the examination, have a minimum of five years' experience in shaft sinking, slope driving and underground construction; moreover, he or she shall be able to detect methane with a flame safety lamp and have a thorough knowledge of the ventilation of shafts, slopes, and mines, and the machinery connected therewith, and finally, he or she shall be a person of good moral character with temperate habits.

(b) Mine examiner or certified person acting as such; duties generally; records open for inspection. In all shafts and slopes within three hours immediately preceding the beginning of a work shift and before any workmen in such shift, other than those who may be designated to make the examinations, enter the underground areas of such shafts or slopes, a certified foreman or mine examiner, designated by the operator of such shaft or slope to do so, shall make an examination of such areas. Each person designated to make such examinations shall make tests with a permissible flame safety lamp for accumulations of methane and oxygen deficiency, and examine sides of shafts and ribs and roof of all slopes. Should he or she find a condition which he or she considers dangerous to persons, he or she shall place a conspicuous danger sign at all entrances to such places. He or she shall record the results of his or her examination with ink or indelible pencil in a book prescribed by the director, kept at a place on the surface designated by mine management. All records as prescribed herein shall be open for inspection by interested persons.

(c) Approvals and permits. An approval shall be obtained from the office before work is started. A permit shall be obtained from the office (1) to stop fan when miners are in shafts or slopes; (2) to use electrical machinery in shafts or slopes; (3) to use electric lights in shafts or slopes; (4) to use welders, torches and like equipment in shafts or slopes; (5) to hoist more than four miners at one time in buckets or cars; (6) to shoot more than fifteen shots in one series.

(d) Records. The foreman in charge on each shift shall keep a daily report of conditions and practices. The foreman in charge on each shift shall read and countersign the reports of the previous shift. Unsatisfactory conditions and practices reported shall be repeated on daily reports until corrected. Hoists, buckets, cars, ropes and appliances thereto shall be examined by a qualified person before the start of each shift and a written record kept.

Deaths from accidents or previous injuries shall be reported immediately by wire to the office of the director and to the district mine inspector or the inspector-at-large. A written report of all injuries and deaths shall be mailed to the office of miners' health, safety and training and district mine inspector promptly. Immediate notice shall be given the office of the director, the district mine inspector and the inspector-at-large in the event of an ignition of gas, or serious accident to miners or equipment. All permits and approvals must be available for inspection by all interested persons.

(e) General. The foreman on shift shall have at least five years' experience in shafts or slopes. New employees shall be instructed in the dangers and rules incident to their work. Conspicuous bulletin boards and warning signs shall be maintained. Unauthorized persons shall not be permitted around shafts or slopes. First-aid material shall be maintained at the operation as required by section fifty-nine of this article. The scene of a fatal accident shall be left unchanged until an investigation is made by all interested persons. All employees and others around the operation shall wear hard-toe shoes and hard-top hats. Goggles or other eye protection shall be worn when cutting, welding or striking where particles may fly. Gears, belts and revolving parts of machinery shall be properly guarded. Hand tools shall be in good condition. Sides of shafts, ribs and roof of all slopes shall be closely observed for loose and dangerous conditions. Loose brows, ribs and top in slopes shall be taken down or supported; loose ribs in shafts shall be scaled. Miners shall be hoisted and lowered under power in shafts and slopes. All hoists must have two positive breaking devices. At least three wraps of rope shall remain on the hoist drum at all times. Wire ropes shall not be less than three-fourths inches in diameter, and of a design to prevent excessive spinning or turning when hoisting.

When heavy materials are hoisted, a large rope shall be used if necessary. A hoisting engineer shall be in constant attendance while men are in shaft. Head frames shall be constructed substantially. Noise from machinery shall not interfere with signals. The standard signal code, whistle or bell shall be used for hoisting:

One signal	Hoist
One signal	Stop
Two signals	Lower
Three signals	Man cage
One signal from hoisting engineer	Miners board cage

Hoist signals shall be posted in front of the hoisting engineer. The shaft opening shall be enclosed by a fence five feet high. Buckets shall not be loaded within six inches of the top rim. Buckets shall have a positive lock on the handle or bale to prevent bucket from crumpling while being hoisted. Positive coupling devices shall be used on buckets or cars (hooks with safety catches or threaded clevis). Emergency devices for escape shall be provided while shafts are under construction. Miners shall not ride on or work from rims of buckets. Buckets or cars shall not be lowered without a signal from working area. Only sober and competent engineers shall be permitted to operate hoists. No intoxicating liquors or intoxicated persons shall be permitted in or around any shaft, slope or machinery. Lattice type platforms shall be used.

(f) Explosives. Explosives and blasting caps being taken into or removed from the operation shall be transported and kept in approved non-conducting receptacles (unopened cartons or cases are permissible). Explosives shall not be primed until ready to be inserted into holes. Handling of explosives and loading of holes shall be under the strict supervision of a qualified person or shotfirer. No more explosives or caps than are required to shoot one round shall be taken into shafts. Adobe, mudcapped or unconfined shots shall not be fired. Holes shall be stemmed tightly and full into the mouth. Blasting caps shall be inserted in line with the explosive. Leg wires of blasting caps and buss wires shall be kept shunted until connected. Shooting cables shall be shunted at firing devices and before connecting to leg wires. Only

approved shooting devices shall be used. Shots shall be fired promptly after the round of holes are charged. Warnings shall be given before shots are fired by shouting "Fire" three times slowly after those notified have withdrawn. The blasting circuit shall be wired in series or parallel series. All shooting circuits shall be tested with a galvanometer by a qualified person before shooting. A careful examination for misfires shall be made after each shot. Persons shall not return to the face until smoke and dust have cleared away. The shooting cable shall be adequately insulated and have a substantial covering; be connected by the person firing the shot; and be kept away from power circuits. Misfires shall be removed by firing separate holes or by washing; shall not be drilled out; and shall be removed under supervision of a foreman or qualified person. Separate magazines for the storage of explosives and detonators shall be located not less than three hundred feet from openings or other structures. Magazines for the storage of explosives and detonators shall be separated at least fifty feet. Magazines shall be located behind barricades. The outside of magazines shall be constructed of incombustible material. Rubbish and combustible material shall not be permitted to accumulate around or in magazine. Warning signs, to be seen in all directions, shall be posted near magazines.

(g) Electrical. Power cables installed in slopes shall be placed in conduit away from the belt as far as possible. Surface transformers shall be elevated at least eight feet from the ground or enclosed by a fence six feet high, grounded if metal; shall be properly grounded; shall be installed so that they will not present a fire hazard; and shall be guarded by sufficient danger signs.

Electric equipment shall be in good condition, clean and orderly; shall be equipped with guards around moving parts; and shall be grounded with effective frame grounds on motors and control boxes.

All electric wires shall be installed and supported on insulators. All electric equipment shall be protected by dual element fuse or circuit breakers.

(h) Ventilation. Ventilating fans shall be offset from portal at least fifteen feet; shall be installed so that the ventilating current is not contaminated by dust, smoke or gases; shall be effectively frame grounded; and shall be provided with fire extinguishers.

All shafts and slopes shall be ventilated adequately and continuously with fresh air. Air tubing shall deliver not less than nine thousand feet per minute at the working area or as much more as the inspector may require.

(i) Gases. A foreman shall be in attendance at all times in shafts and slopes who has passed an examination given by the office as to his or her competency in the use of flame safety lamps.

An examination shall be made before and after shooting by the foreman on shift. The foreman shall have no superior in the performance of his or her duties. A lighted flame safety lamp or other approved detector shall be carried at all times by the foreman when in the working area and weekly gas analysis made. In all shafts and slopes within three hours immediately preceding the beginning of a work shift and before any workmen in such shift, other than those who may be designated to make the examinations, enter the underground areas of such shafts or slopes, a certified mine foreman or mine examiner designated by the operator of such shaft or slope to do so, shall make an examination of such area. Evidence of official examination shall be left at the face by marking date and initials.

Gases should be removed under the supervision of the foreman in charge. Smoking shall not be permitted inside of shafts or slopes.

(j) Drilling. Dust allaying or dust collecting devices shall be used while drilling.

(k) Lights to be used in shafts. Only approved electric cap lights shall be used in shafts. Other lights shall be of explosive-proof type. Lights shall be suspended in shafts by cable or chain other than the power conductor. In slopes, lights must be substantially installed. Power cables shall be of an approved type. Power cables shall not be taut from shaft collar to light. Power cables shall be in good condition and free of improper splices. Lights shall be suspended not less than twenty feet above where miners are working. Lights shall be removed from shaft and power cut off when shooting. In slopes, lights must be removed a safe distance when shots are fired. Lights shall not be replaced in shafts or slopes until examination has been made for gas by the mine examiner and found clear. Front of light shall be protected by a substantial metal type guard. Lights shall be protected from falling objects from above by a metal hood. The lighting circuit shall be properly fused. Electric lights shall not be used in gaseous atmospheres. A lighted flame safety lamp or approved detector shall be kept for use at the face while miners are at work.

§22A-2-71. Right of miner to refuse to operate unsafe equipment; procedure; discrimination.

No miner shall be required to operate unsafe equipment. On or before the first day of January, one thousand nine hundred eighty-one, the board of coal mine health and safety shall by rule or regulation establish a procedure for resolving disputes arising out of the refusal by a miner to operate such alleged unsafe equipment. No action shall be taken against a miner by an operator unless such miner is found to have acted in bad faith and without good cause by the director or his authorized representative.

§22A-2-71a. Right of miner to refuse to work in an unsafe area or unsafe manner.

Any miner has the right to refuse to work in an area or under conditions which he believes to be unsafe.

§22A-2-72. Long wall and short wall mining.

(a) The Legislature finds that new methods of extracting coal known as long wall or short wall mining are being used in this state. The board of coal mine health and safety shall investigate or cause to be investigated the technology, procedures and techniques used in such mining methods and shall promulgate by the first day of January, one thousand nine hundred eighty-one, and continuously update the same, rules governing long wall and short wall mining, which rules shall have as their paramount objective, the health and safety of the persons involved in such operations, and which said rules shall include, but not be limited to, the certification of personnel involved in such operation.

(b) The director may modify the application of any provision of this section to a mine if the director determines that an alternative method of achieving the result of such provision exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such provision, or that the application of such provision to such mine will result in a diminution of the health of, or safety to, the miners in such mine. The director shall give notice to the operator and the representative of miners in the affected mine, as appropriate, and shall cause such investigation to be made as he or she deems appropriate. Such investigation shall provide an opportunity for a hearing, at the request of such operator or representative or other interested party, to enable the operator and the representative of miners in such mine or other interested party to present information relating to the modification of such provision. The director shall issue a decision incorporating his or her findings of fact therein, and send a copy thereof to the operator and the representative of the miners, as appropriate. Any such hearing shall be of record.

§22A-2-73. Construction of shafts, slopes, surface facilities and the safety hazards attendant therewith; duties of board of coal mine health and safety to promulgate rules; time limits therefore.

The board of coal mine health and safety shall investigate or cause to be investigated the technology, procedures and techniques used in the construction of shafts, slopes, surface facilities, and the safety hazards, attendant therewith, and shall promulgate rules governing the construction of shafts and slopes; and shall promulgate by the first day of January, one thousand nine hundred eighty-one, rules governing the construction of surface facilities.

The board of coal mine health and safety shall continuously update such rules governing the construction of shafts, slopes and surface facilities, which rules shall have as their paramount concern, the health and safety of the persons involved in such operations, and such rules shall include, but not be limited to, the certification of all supervisors, the certification and training of hoist operators and shaft workers, the certification of blasters and approval of plans. The provisions of such rules may be enforced against operators and construction companies in accord with the provisions of article one of this chapter. For purposes of this chapter, a construction company is an operator.

§22A-2-74. Control of respirable dust.

Each operator shall maintain the concentration of respirable dust in the mine atmosphere during each shift to which miners in active workings of such mine are exposed below such level as the board may establish. The board may promulgate rules governing respirable dust, including, but not limited to, dust standards, sampling procedures, sampling devices, equipment and sample analysis by using the data gathered by the federal mine safety and health administration and, or the federal bureau of mines.

Any operator found to be in violation of such standards shall bring itself into compliance with such standards and rules of the board or the director may thereafter order such operator to discontinue such operation.

§22A-2-75. Coal operators -- Procedure before operating near oil and gas wells.

(a) Before a coal operator conducts underground mining operations within five hundred feet of any well, including the driving of an entry or passageway, or the removal of coal or other material, the coal operator shall file with the office of miners' health, safety and training and forward to the well operator by certified mail, return receipt requested, its mining maps and plans (which it is required to prepare, file and update to and with the regulatory authority) for the area within five hundred feet of the well, together with a notice, on a form furnished by the director, informing them that the mining maps and plans are being filed or mailed pursuant to the requirements of this section.

Once these mining maps and plans are filed with the office, the coal operator may proceed with its underground mining operations in the manner and as projected on such plans or maps, but shall not remove, without the consent of the director, any coal or other material or cut any passageway nearer than two hundred feet of any completed well or well that is being drilled. The coal operator shall, at least every six months while mining within the five hundred foot area, update its mining maps and plans and file the same with the director and the well operator.

(b) Application may be made at any time to the director by a coal operator for leave to conduct underground mining operations within two hundred feet of any well or to mine through any well, by petition, duly verified, showing the location of the well, the workings adjacent to the well and the mining operations contemplated within two hundred feet of the well or through such well, and praying the approval of the same by the director and naming the well operator as a respondent. The coal operator shall file such petition with the director and mail a true copy to the well operator by certified mail, return receipt requested.

The petition shall notify the well operator that it may answer the petition within five days after receipt, and that in default of an answer the director may approve the proposed operations as requested if it be shown by the petitioner or otherwise to the satisfaction of the director that such operations are in accordance with the law and with the provisions of this article. If the well operator files an answer which requests a hearing, one shall be held within ten days of such answer and the director shall fix a time and date and give both the coal operator and well operator five days' written notice of the same by certified mail, return receipt requested. At the hearing, the well operator and coal operator, as well as the director, shall be permitted to offer any competent and relevant evidence. Upon conclusion of the hearing, the director shall grant the request of the coal operator or refuse to grant the same, or make such other decision with respect to such proposed underground operation as in its judgment is just and reasonable under all circumstances and in accordance with law and the provisions of this article: Provided, That a grant by the director of a request to mine through a well shall require an acceptable test to be conducted by the coal operator establishing that such mining through can be done safely.

If a hearing is not requested by the well operator or if the well operator gives, in writing, its consent to the coal operator to mine within closer than two hundred feet of the specified well, the director shall grant the request of the coal

operator within five days after the petition's original five day answer period if the director determines that such operations are just, reasonable and in accordance with law and the provisions of this article.

The director shall docket and keep a record of all such proceedings. From any such final decision or order of the director, either the well operator or coal operator, or both, may, within ten days, appeal to the circuit court of the county in which the well subject to said petition is located. The procedure in the circuit court shall be substantially as provided in section four, article five, chapter twenty-nine-a of this code, with the director being named as a respondent. From any final order or decree of the circuit court, an appeal may be taken to the supreme court of appeals as heretofore provided.

A copy of the document or documents evidencing the action of the director with respect to such petition shall promptly be filed with the chief of the office of oil and gas of the division of environmental protection.

(c) Before a coal operator conducts surface or strip mining operations as defined in this chapter, within two hundred feet of any well, including the removal of coal and other material, the operator shall file with the director and furnish to the well operator by certified mail, return receipt requested, its mining maps and plans (which it is required to prepare, file and update to and with the regulatory authority) for the area within two hundred feet of the well, together with a notice, on a form furnished by the director, informing them that the mining maps and plans are being filed or mailed pursuant to the requirements of this section, and representing that the planned operations will not unreasonably interfere with access to or operation of the well and will not damage the well. In addition, the coal operator shall furnish the well operator with evidence that it has in force public liability insurance, with at least the minimum coverage required by article three, chapter twenty-two of this code, and the rules promulgated thereto and thereunder.

Once these mining maps and plans are filed with the director, the coal operator may proceed with its surface or strip mining operations in the manner and as projected on such plans or maps, so long as such surface mining operations do not unreasonably interfere with access to, or operation of, the well or do not damage the well.

(d) The filing of petitions and notices with the director as herein provided may be complied with by mailing such petition or notice to the director by certified mail, return receipt requested.

§22A-2-76. Reopening old or abandoned mines.

No person, without first giving to the director ten days' written notice thereof, shall reopen for any purposes any old or abandoned mine wherein water or mine seepage has collected or become impounded or exists in such manner or quantity that upon the opening of such mine, such water or seepage may drain into any stream or watercourse.

Such notice shall state clearly the name or names of the owner or owners of the mine proposed to be opened, its exact location, and the time of the proposed opening thereof.

Upon receipt of such notice, the director shall have his or her representative present at the mine at the time designated in the notice for such opening, who has full supervision of the work of opening such mine with full authority to direct the work in such manner as to him or her seems proper and necessary to prevent the flow of mine water or seepage from such mine in such manner or quantity as will kill or be harmful to the fish in any stream or watercourse into which such mine water seepage may flow directly or indirectly.

§22A-2-77. Monthly report by operator of mine; exception as to certain inactive mines.

On or before the end of each calendar month, the operator of each mine, regulated under the provisions of this chapter or article three or four, chapter twenty-two of this code, shall file with the director a report with respect thereto covering the next preceding calendar month which shall reflect the number of accidents which have occurred at each such mine, the number of persons employed, the days worked and the actual raw tonnage mined. Such report shall be made upon forms furnished by the director. Other provisions of this section to the contrary notwithstanding, no such report shall be required with respect to any mine on approved inactive status if no employees were present at such mine at any time during the next preceding calendar month.

§22A-2-78. Examinations to determine compliance with permits.

Whenever permits are issued by the office of miners' health, safety and training, frequent examinations shall be made by the mine inspector during the tenure of the permit to determine that the requirements and limitations of the permit are complied with.

§22A-2-79. Provisions of article severable.

The various provisions of this article shall be construed as separable and severable, and should any of the provisions, sentences, clauses, or parts thereof be construed or held unconstitutional or for any reason be invalid, the remaining provisions of this article shall not be thereby affected.

CHAPTER 22A ARTICLE 2A
USE OF DIESEL-POWERED EQUIPMENT IN UNDERGROUND COAL MINES
[Passed April 10, 1997; in effect from passage.]

Part 1. General Provisions.

§22A-2A-101. Use of diesel-powered equipment authorized.

Diesel-powered equipment for use in underground coal mines may only be approved, operated, and maintained in accordance with rules, requirements and standards established pursuant to this article. Diesel-powered equipment may not be used in underground coal mines until the West Virginia diesel equipment commission promulgates its initial rules, requirements and standards governing the operation of diesel equipment in underground coal mines: Provided, That the

diesel equipment commission may approve limited site-specific requests for experimental and testing use of diesel-powered equipment in underground coal mines and for the use of alternative diesel-related health and safety technologies and methods consistent with the provisions of section three hundred ten of this article.

§22A-2A-102. Control of diesel safety and health hazards.

The purpose of this article is to reduce or eliminate the inherent hazards of electric-powered equipment in underground coal mines while recognizing that the introduction of an internal combustion engine into that environment presents a different set of safety and health risks for miners. The provisions of this article are intended to provide an integrated approach to the control of diesel safety and health hazards in underground coal mines.

Part 2. Definitions.

§22A-2A-201. Applicability of definitions.

(a) For the purposes of this article, the words or phrases defined in this part 2 have the meanings ascribed to them. These definitions are applicable unless a different meaning clearly appears from the context.

(b) When used in this article, the words and phrases defined in section two, article one of this chapter have the meaning ascribed to them in that section. Those definitions are applicable to this article unless a different meaning clearly appears from the context in which the word or phrase is used in this article.

§22A-2A-202. Board defined. "Board" means the board of coal mine health and safety continued by section three, article six of this chapter.

§22A-2A-203. Certificate of approval defined. "Certificate of approval" means a formal document issued by MSHA stating that a complete assembly has met the requirements of part 36, title thirty of the code of federal regulations, 30 C.F.R. 36.1, et seq., for mobile diesel-powered transportation equipment and authorizing the use and attachment of an official approval plate so indicating.

§22A-2A-204. Commission defined. "Commission" means the West Virginia diesel equipment commission created under the provisions of section three hundred one of this article.

§22A-2A-205. Diesel fuel tank defined. "Diesel fuel tank" means a closed metal vessel specifically designed for the storage or transport of diesel fuel.

§22A-2A-206. Diesel fuel transportation unit defined. "Diesel fuel transportation unit" means a self-propelled or portable wheeled vehicle used to transport a diesel fuel tank.

§22A-2A-207. Diesel engine defined. "Diesel engine" means any compression ignition internal combustion engine using the basic diesel cycle where combustion results from the spraying of fuel into air heated by compression.

§22A-2A-208. Diesel power package defined. "Diesel power package" means a diesel engine with an intake system, exhaust system, and a safety shutdown system installed that meets the specific requirements for MSHA approval of diesel power packages intended for use in approved equipment in areas of underground coal mines where electric equipment is required to be permissible.

§22A-2A-209. Exhaust emission defined. "Exhaust emission" means any substance emitted to the atmosphere from the exhaust port of the combustion chamber of a diesel engine.

§22A-2A-210. Exhaust emissions control and conditioning system defined. "Exhaust emissions control and conditioning system" means a device or combination of devices that will collect and treat diesel exhaust emissions at the exhaust port of the engine, and will reduce the volume of, or eliminate emissions of, diesel particulate matter, carbon monoxide and oxides of nitrogen in accordance with the requirements and standards of the commission established in accordance with the provisions of section four hundred three of this article.

§22A-2A-211. MSHA defined. "MSHA" means the mine safety and health administration of the United States department of labor.

§22A-2A-212. Permanent underground diesel fuel storage facility defined. "Permanent underground diesel fuel storage facility" means a facility designed and constructed to remain at one location for the storage or dispensing of diesel fuel, which does not move as mining progresses.

§22A-2A-213. Safety can defined. "Safety can" means a metal container intended for storage, transport or dispensing of diesel fuel, with a nominal capacity of five gallons, listed or approved by a nationally recognized independent testing laboratory.

§22A-2A-214. Temporary underground diesel fuel storage area defined. "Temporary underground diesel fuel storage area" means an area of a mine provided for the short-term storage of diesel fuel in a fuel transportation unit, which moves as mining progresses.

Part 3. West Virginia Diesel Equipment Commission.

§22A-2A-301. Creation of the West Virginia diesel equipment commission.

The West Virginia diesel equipment commission, consisting of six members, is hereby created in the Office of Miners' Health, Safety and Training of the Bureau of Commerce.

§22A-2A-302. Members of the commission; qualifications and eligibility.

(a) Each member of the commission shall be a citizen of the United States and a resident of the state of West Virginia.

(b) No member of the Legislature, or person holding any elective or full-time appointive office in the federal, state, or local government shall be eligible to serve as a member of the commission.

§22A-2A-303. Appointment and terms of commission members. (a) The members of the commission shall be appointed to initial terms as follows:

(1) Two members shall serve for a term beginning on the first day of May, one thousand nine hundred ninety-seven, and ending on the thirtieth day of June, one thousand nine hundred ninety-nine;

(2) Two members shall serve for a term beginning on the first day of May, one thousand nine hundred ninety-seven, and ending on the thirtieth day of June, two thousand;

(3) Two members shall serve for a term beginning on the first day of May, one thousand nine hundred ninety-seven, and ending on the thirtieth day of June, two thousand one.

(b) Of the two members appointed under each of subdivisions (1), (2) and (3), of subsection (a) of this section, one shall be a person who can reasonably be expected to represent the viewpoint or interests of coal operators in this state and one shall be a person who can reasonably be expected to represent the viewpoint or interests of working miners in this state.

(c) Members serving on the commission on the effective date of the amendment of this section may continue to serve until the expiration of their terms. Thereafter, members shall be nominated and appointed in the manner provided in this section and section three hundred four of this article.

(d) After the initial appointments, all members shall be appointed for terms of four years. Members are eligible for reappointment.

§22A-2A-304. Nomination and appointment of members.

(a) Prior to the appointment of a person to the commission, the governor shall request the nomination of a candidate for the appointment. If the position is to be filled by a person who can reasonably be expected to represent the viewpoint or interests of underground coal operators in this state, the governor shall request the nomination from the major trade association representing underground coal operators in this state. If the position is to be filled by a person who can reasonably be expected to represent the viewpoint or interests of working miners in this state, the governor shall request the nomination from the highest ranking officer of the major employee organization representing coal miners in this state.

(b) The governor shall appoint a member to serve for the term for which the person was nominated, and until his or her successor has been nominated and appointed: Provided, that if a successor is not appointed within one hundred twenty days after the expiration of a member's term, a vacancy is deemed to exist. The governor may reject a nomination and decline to appoint a nominee only if the person does not have the qualifications, integrity and responsibility necessary to enable the person to perform his or her duties as a member of the commission.

(c) Appointments to fill vacancies on the commission shall be for the unexpired term of the member to be replaced.

§22A-2A-305. Removal of members.

When a member fails to appear at three consecutive meetings of the commission or at one half of the meetings held during a one-year period, any member of the commission may notify the member and the governor of such fact. Such member shall be removed by the governor unless good cause for absences is shown.

§22A-2A-306. Compensation of members; reimbursement for expenses.

Each member of the commission shall be paid the same compensation and expense reimbursement as is paid to members of the Legislature for their interim duties as recommended by the citizens legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. No reimbursement for expenses shall be made except upon an itemized account, properly certified by the members of the commission. All reimbursement for expenses shall be paid out of the state treasury upon a requisition on the state auditor.

§22A-2A-307. Quorum; majority vote required.

A quorum of the commission consists of not less than two of the members who represent the viewpoint or interests of coal operators and two of the members who represent the viewpoint or interests of working miners. A measure before the commission for its consideration is adopted on the affirmative vote of any four of the six members.

§22A-2A-308. Promulgation of initial rules by the commission.

(a) The West Virginia diesel equipment commission shall prepare and adopt the initial rules for the operation of diesel equipment in underground coal mines in this state. In preparing and adopting initial rules, the commission shall consider the highest achievable measures of protection for miners' health and safety through available technology, engineering controls and performance requirements and shall further consider the cost, availability, adaptability and suitability of any available technology, engineering controls and performance requirements as they relate to the use of diesel equipment in underground coal mines.

(b) In promulgating the initial rules pursuant to subsection (a) of this section, the commission shall follow the procedures set forth in article three, chapter twenty-nine-a of this code that are prescribed for an agency proposing a legislative rule, to the point where an agency would approve a rule for submission to the Legislature. At that point, the commission shall proceed to final adoption of the initial rules and file a notice of the final adoption in the state register and with the legislative rule-making review committee. Final adoption of the initial rules may be approved only upon a majority vote of all six members of the commission. All six members must be present when a vote is taken. Upon final adoption by the commission, the initial rules are thereby promulgated and have the effect of law without further action by the commission or the Legislature. The initial rules shall be published in the code of state rules and continue in effect until modified or superseded in accordance with the provisions of this article.

§22A-2A-309. Commission's authority to approve site-specific experimental testing prior to initial rules.

The commission is hereby authorized to approve limited site-specific requests for experimental and testing use of diesel-powered equipment in underground coal mines prior to promulgation of initial rules in accordance with subsections (b), (c), (d), (e), (f) and (g), section three hundred ten of this article. Final approval of a site-specific request may be approved only upon a majority vote of all six members of the commission. All six members must be present when a vote is taken.

§22A-2A-310. Duties of commission following promulgation of initial rules.

(a) After the promulgation of the initial rules, the commission shall have as its primary duties the implementation of this article and the evaluation and adoption of state of the art technology and methods, reflected in engines and engine components, emission control equipment and procedures, that when applied to diesel-powered underground mining machinery shall reasonably reduce or eliminate diesel exhaust emissions and enhance protections of the health and safety of miners. The technology and methods adopted by the commission shall have been demonstrated to be reliable. In making a decision to adopt new technology and methods, the commission shall consider the highest achievable measures of protection for miners' health and safety through available technology, engineering controls and performance requirements, and shall further consider the cost, availability, adaptability and suitability of any available technology, engineering controls and performance requirements as they relate to the use of diesel equipment in underground coal mines. Any state of the art technology or methods adopted by the commission shall not reduce or compromise the level of health and safety protection of miners.

(b) Upon application of a coal mine operator, the commission shall consider site-specific requests for the use of diesel equipment in underground coal mines and for the use of alternative diesel-related health and safety technologies and methods. The commission's action on applications submitted under this subsection shall be on a mine-by-mine basis. Upon receipt of a site-specific application, the commission shall conduct an investigation, which investigation shall include consultation with the mine operator and the authorized representatives of the miners at the mine. Authorized representatives of the miners shall include a mine health and safety committee elected by miners at the mine, a person or persons employed by an employee organization representing miners at the mine or a person or persons authorized as the representative or representatives of miners of the mine in accordance with MSHA regulations at 30 C.F.R. Pt. 40 (relating to representative of miners). Where there is no authorized representative of the miners, the commission shall consult with a reasonable number of miners at the mine. Upon completion of the investigation, the commission may approve the application for the site-specific request: Provided, that an application for a site-specific request under this subsection may be approved only upon a majority vote of all six members of the commission. All six members must be present when a vote is taken.

(1) Within one hundred eighty days of receipt of an application for use of alternative technologies or methods, the commission shall complete its investigation. The time period may be extended with the consent of the applicant.

(2) The commission shall have thirty days in which to render a final decision approving or rejecting the application.

(3) The commission members shall not approve an application made under this section if, at the conclusion of the investigation, the commission members have made a determination that the use of the alternative technology or method will reduce or compromise the level of health and safety protection of miners.

(4) The written approval of an application for the use of alternative technologies or methods shall include the results of the commission's investigation and describe the specific conditions of use for the alternative technology or method.

(5) The written decision to reject an application for the use of alternative technologies or methods shall include the results of the commission's investigation and shall outline in detail the basis for the rejection.

(c) The commission shall establish conditions for the use of diesel-powered equipment in shaft and slope construction operations at coal mines.

(d) In performing its functions, the commission shall have access to the services of the board of coal mine health and safety. The board shall make clerical support and assistance available to enable the commission to carry out its duties.

(e) Any action taken by the commission to either approve or reject the use of an alternative technology or method, or establish conditions under subsection (c) of this section, shall be final and binding and not subject to further review except where a decision by the commission may be deemed to be an abuse of discretion or contrary to law. If any party affected by a decision of the commission believes that the decision is an abuse of discretion or contrary to law, that party may file a petition for review with the circuit court of Kanawha County in accordance with the provisions of the administrative procedures act relating to judicial review of governmental determinations. The court, in finding that any decision made by the commission is an abuse of discretion or contrary to law, shall vacate and, if appropriate, remand the case.

(f) The powers and duties of the commission shall be limited to the matters regarding the use of diesel-powered equipment in underground coal mines.

(g) Appropriations for the funding of the commission and to effectuate the purposes of this article shall be made to a budget account hereby established for that purpose in the general revenue fund.

Part 4. Exhaust emission requirements for diesel power packages.

§22A-2A-401. General provisions relating to requirements for exhaust emissions.

This part 4 is intended to control the potential health hazards of diesel exhaust, by requiring that diesel-powered machines be equipped with clean-burning engines, that exhaust emissions control and conditioning systems may be

required on diesel engines as specified by the commission, that exhaust emissions be monitored and controlled and that standards be established for the allowable concentrations of exhaust emissions in a mine environment.

§22A-2A-402. Approval of diesel power package or diesel engine.

Every diesel power package or diesel engine used in underground coal mining shall be approved by the West Virginia diesel equipment commission when it complies with applicable requirements, standards, and procedures established by rules of the commission, and be certified or approved, as applicable, by MSHA and maintained in accordance with MSHA certification or approval.

§22A-2A-403. Exhaust emissions control and conditioning systems.

(a) All exhaust emissions control and conditioning systems and their component devices shall be approved by the West Virginia diesel equipment commission. Such approval requires compliance with applicable standards and procedures established by rules of the commission for the use of the system or device in reducing or eliminating diesel particulate matter, carbon monoxide and oxides of nitrogen.

The rules of the commission shall require all exhaust emissions control and conditioning systems to undergo an initial series of laboratory tests, using test equipment requirements and standard procedures approved by the commission for testing for gaseous and particulate emissions. The commission shall compile a list of acceptable third-party laboratories where testing is performed competently and reliable results are produced.

(b) Requirements and standards for exhaust emissions control and conditioning systems include, but are not limited to, the following:

- (1) A minimum standard, stated as an average percentage, for the reduction of diesel particulate matter emissions by a diesel particulate matter filter or other comparably effective emissions control device;
- (2) A minimum standard, stated in parts per million, for the reduction of emissions of undiluted carbon monoxide, using an oxidation catalyst or other gaseous emissions control device;
- (3) A minimum standard, stated in parts per million, for the reduction of emissions of oxides of nitrogen, using advanced control technology such as catalytic control technology or other comparably effective control methods;
- (4) Any additional requirements established by the rules of the commission or MSHA regulations relating to requirements for permissible mobile diesel-powered transportation equipment set forth in part 36, title thirty of the code of federal regulations, 30 C.F.R. 36.1, et seq.

§22A-2A-404. Emissions monitoring and control.

Rules of the commission shall establish procedures for monitoring and controlling emissions from diesel-powered equipment. Such procedures shall include, but not be limited to, monitoring and controlling activities to be performed by a qualified person.

§22A-2A-405. Exhaust gas monitoring and control.

(a) For monitoring and controlling exhaust gases, the rules of the commission shall establish the maximum allowable ambient concentration of exhaust gases in the mine atmosphere. Standards for exhaust gases, stated in parts per million, shall be established for carbon monoxide and oxides of nitrogen. The rules shall establish the location in the mine at which the concentration of these exhaust gases is to be measured, the frequency at which measurements are to be made, and requirements prescribing the sampling instruments to be used in the measurement of exhaust gases.

(b) Rules of the commission shall establish the concentration of exhaust gas, stated as a percentage of an exposure limit, that when present will require changes to be made in the use of diesel-powered equipment or the methods of mine ventilation, or will require other modifications in the mining process.

(c) Rules of the commission shall provide for the remedial action to be taken if the concentration of any of the gases listed in subsection (a) of this section exceeds the exposure limit.

(d) In addition to the other maintenance requirements required by this article, rules of the commission shall provide for service, maintenance and tests which are specific to an engine's fuel delivery system, timing or exhaust emissions control and conditioning system.

Part 5. Ventilation.

§22A-2A-501. Ventilation.

(a) Rules of the commission shall establish values to be maintained for the minimum quantities of ventilating air where diesel-powered equipment is operated. The purpose of these rules is to ensure that necessary minimum ventilating air quantity is provided where diesel-powered equipment is operated.

(b) Rules of the commission shall require that each specific model of diesel-powered equipment shall be approved before it is taken underground. The rules shall provide that in addition to requiring that each diesel engine have an assigned MSHA approval number securely attached to the engine with the information required by 30 C.F.R. 7.90 and 7.105, the approval plate shall also specify the minimum ventilating air quantity required by the commission for the specific piece of diesel-powered equipment. The rules shall provide that the minimum ventilating air quantity be determined based on the amount of air necessary at all times to maintain the exhaust emissions at levels not exceeding the exposure limits established by the commission pursuant to section four hundred six of this article.

(c) Rules of the commission shall require that the minimum quantities of air in any split where any individual unit of diesel-powered equipment is being operated shall be at least that specified on the approval plate for that equipment. Air quantity measurements to determine compliance with this requirement shall be made at the individual unit of diesel-powered equipment.

(d) Rules of the commission shall establish the minimum quantities of air required in any split when multiple units are operated. Air quantity measurements to determine compliance with this requirement shall be made at the most downwind unit of diesel-powered equipment that is being operated in that air split.

(e) Rules of the commission shall provide that minimum quantities of air in any split where any diesel-powered equipment is operated shall not be less than the minimum air quantities established pursuant to subsections (a) and (b) of this section and shall be specified in the mine diesel ventilation plan.

Part 6. Fuel.

§22A-2A-601. Specifications for fuel.

(a) The commission shall establish standards for fuel to be used in diesel-powered equipment in underground coal mines. A purpose of these standards is to require the use of low volatile fuels that will lower diesel engine gaseous and particulate emissions and will reduce equipment maintenance by limiting the amount of sulfur in the fuel. Another purpose of the standards for fuel is to reduce the risk of fire in underground mines by establishing a minimum flash point for the diesel fuel used.

(b) Rules of the commission shall require each coal mine using diesel equipment underground to establish a quality control plan for assuring that the diesel fuel used complies with the standards established pursuant to this section. The rules shall also establish a procedure under which each mine operator will provide evidence that the diesel fuel used in diesel-powered equipment underground meets the standards for fuel established by the commission.

§22A-2A-602. Fuel storage facilities.

(a) The commission shall establish requirements for the safe storage of diesel fuel underground so as to minimize the risks associated with fire hazards in areas where diesel fuel is stored.

(b) (1) Rules of the commission shall either provide:

(a) That all stationary underground diesel fuel tanks are prohibited; or

(b) That a stationary underground diesel fuel tank may only be authorized through a petitioning process that permits a stationary underground diesel fuel tank to be located in a permanent underground diesel fuel storage facility, on a site-specific basis. Stationary underground diesel fuel tanks may not be located in temporary underground diesel fuel storage areas.

(c) Rules of the commission shall govern the transportation and storage of diesel fuel in diesel fuel tanks and safety cans.

(d) Rules of the commission shall establish limits on the total amount of diesel fuel that may be stored in each permanent underground diesel fuel storage facility and in each temporary underground diesel fuel storage area.

§22A-2A-603. Dispensing of diesel fuel.

Rules of the commission governing the refueling of diesel-powered equipment shall, at a minimum, comply with the provisions of part 75 of the code of federal regulations dealing with the dispensing of diesel fuel, set forth in 30 C.F.R. 75.1905, effective the twenty-fifth day of April, one thousand nine hundred ninety seven.

§22A-2A-604. Location of fueling.

(a) Rules of the commission shall require that fueling of diesel-powered equipment is not to be conducted in the intake escapeways unless the mine design and entry configuration make it necessary. For those cases where fueling in the intake escapeways is necessary, the rules shall establish a procedure whereby the mine operator shall submit a plan for approval, outlining the special safety precautions that will be taken to insure the protection of miners. The plan shall specify a fixed location where fueling will be conducted in the intake escapeway and all other safety precautions that will be taken, which shall include an examination of the area for spillage or fire by a qualified person.

(b) Rules of the commission shall require that at least one person, specially trained in the cleanup and disposal of diesel fuel spills, shall be on duty at the mine when diesel-powered equipment or mobile fuel transportation equipment is being used or when any fueling of diesel-powered equipment is being conducted.

Part 7. Fire suppression.

§22A-2A-701. Fire suppression systems for diesel-powered equipment and fuel transportation units.

Rules of the commission governing fire suppression systems for diesel-powered equipment and fuel transportation units shall, at a minimum, comply with the provisions of part 75 of the code of federal regulations dealing with fire suppression systems for diesel-powered equipment and fuel transportation units, set forth in 30 C.F.R. 75.1911, effective the twenty-fifth day of April, one thousand nine hundred ninety-seven.

§22A-2A-702. Fire suppression for storage areas.

Rules of the commission governing fire suppression systems for permanent underground diesel fuel storage facilities shall, at a minimum, comply with the provisions of part 75 of the code of federal regulations dealing with fire suppression systems for permanent underground diesel fuel storage facilities, set forth in 30 C.F.R. 75.1912, effective the twenty-fifth day of April, one thousand nine hundred ninety-seven.

§22A-2A-703. Use of certain starting aids regulated or prohibited.

Rules of the commission shall regulate or prohibit the use of volatile or chemical starting aids.

§22A-2A-704. Fire and safety training.

(a) Rules of the commission shall provide for all underground employees at the mine to receive special instruction related to fighting fires involving diesel fuel. This training may be included in annual refresher training under MSHA regulations set forth in 30 C.F.R. Pt. 48 (relating to training and retraining of miners), or included in the fire drills required under MSHA regulations set forth in 30 C.F.R. 75.1101.23 (relating to program of instruction; location and use of fire fighting equipment; location of escapeways, exits, and routes of travel; evacuation procedures; fire drills).

(b) Rules of the commission shall provide for all miners to be trained in precautions for safe and healthful handling and disposal of diesel-powered equipment filters.

Part 8. Maintenance.

§22A-2A-801. Maintenance of diesel-powered equipment.

(a) Rules of the commission shall require diesel-powered equipment to be maintained in an approved and safe condition or removed from service. Failure of the mine operator to comply with the maintenance requirements established by the board may result in revocation of the commission's approval of the diesel-powered equipment. The commission shall establish procedures for appropriate notification to be given to the mine operator, requiring the submission, evaluation and implementation of a plan to achieve and maintain compliance.

(b) Rules of the commission shall provide that service and maintenance of diesel-powered equipment shall be performed according to a specified routine maintenance schedule, on-board performance and maintenance diagnostics readings, emissions test results, and component manufacturer's recommendations.

§22A-2A-802. Training and qualification of persons working on diesel-powered equipment.

(a) Rules of the commission shall require that all maintenance, repairs, examinations and tests on diesel-powered equipment shall be performed by a person who, at a minimum, is trained and qualified in accordance with the provisions of part 75 of the code of federal regulations dealing with the training and qualification of persons working on diesel powered equipment, as set forth in 30 C.F.R. 75.1915, effective the twenty-fifth day of April, one thousand nine hundred ninety-seven.

(b) Rules of the commission shall require that the training and qualification program and record made available for inspection pursuant to the provisions of 30 C.F.R. 75.1915(c) be made available to the commission or its authorized representative.

§22A-2A-803. Examination of equipment by operator.

Rules of the commission shall require that mobile diesel-powered equipment that is to be used during a shift be visually examined by the equipment operator before being placed in operation, and that equipment defects affecting safety be reported promptly to the mine operator. Rules of the commission shall specify the inspection procedures to be followed and the operating conditions under which the examination is to be made. Rules of the commission shall establish record-keeping requirements for such visual examinations.

§22A-2A-804. Scheduled maintenance.

Rules of the commission shall establish the intervals at which a qualified person will evaluate and interpret the results of tests and examinations, perform maintenance and make all necessary adjustments or repairs or remove the diesel-powered equipment from service. The commission shall establish record-keeping requirements for persons performing maintenance.

§22A-2A-805. On-board performance and maintenance diagnostics systems.

Rules of the commission shall require that on-board engine performance and maintenance diagnostics systems shall be capable of continuously monitoring and giving read-outs. The diagnostics system shall identify levels that exceed the engine or component manufacturer's recommendation, standards established by the commission or the applicable MSHA requirements.

§22A-2A-806. Diagnostic testing.

(a) The commission shall require periodic examination and testing of all diesel-powered equipment by a person trained and qualified as required by rules of the commission.

(b) Rules of the commission shall prescribe the scope of the examination and testing and the procedures to be followed, and the rules requiring testing of undiluted exhaust emissions may exceed the written standard operating procedures for such testing and evaluation required by part 75 of the code of federal regulations, set forth in 30 C.F.R. 75.1915(g).

§22A-2A-807. Records.

(a) Rules of the commission shall provide:

- (1) That a record be made of all tests, examinations and maintenance and repairs of diesel-powered equipment;
- (2) That the person performing the test, examination, maintenance or repair certify by date, time, engine hour reading, and signature that the test, examination, maintenance or repair was made;
- (3) That records of tests and examinations include the specific results of such tests and examinations;
- (4) That records of maintenance and repairs include a description of the work or service that was performed, and the results of any subsequently required emissions testing.

(b) Rules of the commission shall specify the persons who are required to countersign records of tests, examinations, maintenance and repairs.

(c) Rules of the commission shall establish procedures and time periods for the retention of records and their availability for inspection by the commission and by miners and their representatives.

Part 9. Training.

§22A-2A-901. Training and general requirements.

(a) Rules of the commission shall establish programs for training equipment operators and members of the mine health and safety committee. Training shall include, but not be limited to, the following:

- (1) Fundamentals of the operation of a diesel engine;
- (2) Federal and state regulations governing the use of diesel-powered equipment;

- (3) The mine operator's rules for safe operation;
- (4) Specific features of each piece of equipment; and
- (5) Problem recognition.

(b) Required training shall include equipment specific, hands-on orientation given in an area of the mine where the equipment will be operated. This orientation shall be specific to the type and make of the diesel machine and shall be presented in small groups.

(c) Rules of the commission shall establish a certification process for qualifying equipment operators to operate a specific type of diesel-powered equipment. An operator may be qualified to operate more than one type of equipment by completing additional equipment-specific training covering differences specific to each additional type of equipment.

(d) Rules of the commission shall require refresher training, separate from that required by MSHA regulations at 30 C.F.R. Pt. 48 (relating to the training and retraining of miners), and annual recertification.

CHAPTER 22A ARTICLE 3 UNDERGROUND CLAY MINE

§22A-3-1. Definition.

In this article the term "mine" includes the shafts, slopes, drifts or inclines connected with excavations penetrating clay seams or strata, which excavations are ventilated by one general air current or division thereof, and the surface structures or equipment connected therewith which contribute directly or indirectly to the underground mining of clay.

§22A-3-2. Clay mine foreman; when to be employed; qualifications; assistants.

In every underground clay mine where five or more persons are employed in a period of twenty-four hours, the operator shall employ a mine foreman who shall be a competent and practical person holding a certificate of competence for said position issued to him or her by the office of miners' health, safety and training after an examination by such office. In order to receive a certificate of competence qualifying a foreman in an underground clay mine, the applicant shall take an examination prescribed by the director of the office of miners' health, safety and training, be a citizen of this state, of good moral character and temperate habits, having had at least three years' experience in the underground working of clay mines.

§22A-3-3. Rules for protection of health and safety of employees.

The director of the office of miners' health, safety and training may from time to time promulgate reasonable rules for the protection of the health and safety of the persons working in or about underground clay mines, to the extent the same are not more onerous or restrictive than the laws of this state intended to safeguard the life and health of persons working in underground coal mines contained in article two of this chapter.

CHAPTER 22A ARTICLE 4 OPEN-PIT MINES, CEMENT MANUFACTURING PLANTS AND UNDERGROUND LIMESTONE AND SANDSTONE MINES

§22A-4-1. Definitions.

Unless the context in which used clearly requires a different meaning as used in this article:

- (a) "Open-pit mine" means an excavation worked from the surface and open to daylight.
- (b) "Underground mine" means subterranean workings for the purpose of obtaining a desired material or materials.
- (c) "Sand" means water worn sandstone fragments transported and deposited by water.
- (d) "Gravel" means an occurrence of water worn pebbles.
- (e) "Sandstone" means a compacted or cemented sediment composed chiefly of quartz grains.
- (f) "Limestone" means a sedimentary rock composed mostly of calcium carbonate.
- (g) "Clay" means a natural material of mostly small fragments of hydrous aluminum silicates and possessing plastic properties.
- (h) "Shale" means a laminated sedimentary rock composed chiefly of small particles of a clay grade.
- (i) "Iron ore" means a mineral or minerals, and gangue which when treated will yield iron at a profit.
- (j) "Manganese ore" means a metalliferous mineral which when treated will yield manganese at a profit.

§22A-4-2. Applicability of mining laws.

All provisions of the mining laws of this state intended for the protection of the health and safety of persons employed within or at any coal mine and for the protection of any coal mining property extend to all open-pit mines and any property used in connection therewith for the mining of underground limestone and sandstone mines, insofar as such laws are applicable thereto.

§22A-4-3. Rules.

The director of the office of miners' health, safety and training shall promulgate reasonable rules, in accordance with and confined to the provisions of chapter twenty-nine-a of this code, for the effective administration of this article.

§22A-4-4. Monthly report by operator.

The operator of such mine shall, on or before the end of each calendar month, file with the director of the office of miners' health, safety and training a report covering the preceding calendar month on forms furnished by the director.

Such reports shall state the number of accidents which have occurred, the number of persons employed, the days worked and the actual tonnage mined.

§22A-4-5. Inspectors.

The director of the office of miners' health, safety and training shall divide the state into not more than two mining districts and assign one inspector to each district. Such inspector shall be a citizen of West Virginia, in good health, of good character and reputation, temperate in habits, having a minimum of five years of practical experience in such mining operations and who at the time of appointment is not more than fifty-five years of age. To qualify for appointment as such an inspector, an eligible applicant shall submit to a written and oral examination by the mine inspectors' examining board and furnish such evidence of good health, character and other facts establishing eligibility as the board may require. If the board finds after investigation and examination that an applicant: (1) Is eligible for appointment and (2) has passed all written and oral examinations, with a grade of at least ninety percent, the board shall add such applicant's name and grade to the register of qualified eligible candidates and certify its action to the director of the office of miners' health, safety and training. No candidate's name shall remain in the register for more than three years without requalifying.

Such inspector shall have the same tenure accorded a mine inspector, as provided in subsection (e), section twelve, article one of this chapter and shall be paid not less than fifteen thousand dollars per year. Such inspector shall also receive reimbursement for traveling expenses at the rate of not less than fifteen cents for each mile actually traveled in the discharge of their duties in a privately owned vehicle. Such inspector shall also be reimbursed for any expense incurred in maintaining an office in his or her home, which office is used in the discharge of official duties: Provided, that such reimbursement shall not exceed two hundred forty dollars per annum.

§22A-4-6. Penalties.

Any person who fails or refuses to discharge any provision of this article, rule promulgated or order issued pursuant to the provisions of this article, is guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine of not less than one hundred nor more than one thousand dollars or by imprisonment not exceeding six months, or by both.

**CHAPTER 22A ARTICLE 5
BOARD OF APPEALS**

§22A-5-1. Board of appeals.

There is hereby continued a board of appeals, consisting of three members. Two members of the board shall be appointed by the governor, one person who by reason of previous training and experience may reasonably be said to represent the viewpoint of miners, and one person who by reason of previous training and experience may reasonably be said to represent the viewpoint of the operators. The third person, who is chair of the board and who must not have had any connection at any time with the coal industry or an organization representing miners, is selected by the two members appointed by the governor. The term of office of members of the board is five years.

The function and duties of the board is to hear appeals, make determinations on questions of miners' entitlements due to withdrawal orders and appeals from discharge or discrimination, and suspension of certification certificates.

The chair of the board has the power to administer oaths and subpoena witnesses and require production of any books, papers, records or other documents relevant or material to the appeal inquiry.

The chair shall subpoena any witness requested by a party to a hearing to testify or produce books, records or documents. Any witness responding to a subpoena so issued shall receive a daily witness fee to be paid out of the state treasury upon a requisition of the state auditor equivalent to the rate of pay under the wage agreement currently in effect plus all reasonable expenses for meals, lodging and travel at the rate applicable to state employees. Any full payments as hereinbefore specified shall be in full and exclusive payment for meals, lodging, actual travel and similar expenses and shall be made in lieu of any lost wages occasioned by such appearance in connection with any hearing conducted by the board.

Each member of the board shall be paid the same compensation and expense reimbursement as is paid to members of the Legislature for their interim duties as recommended by the citizens legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. No reimbursement for expenses shall be made except upon an itemized account, properly certified by such members of the board. All reimbursement for expenses shall be paid out of the state treasury upon a requisition upon the state auditor.

Board members, before performing any duty, shall take and subscribe to the oath required by section 5, article IV of the constitution of West Virginia.

§22A-5-2. Powers transferred to the board of appeals.

(a) There are hereby transferred to the board of appeals all functions of the director of the office of miners' health, safety and training relating to the review of orders and notices as set forth in section seventeen, article one of this chapter.

(b) There are hereby transferred to the board of appeals all functions of the director of the office of miners' health, safety and training relating to the review of penalty assessments as set forth in subdivision (3), subsection (a), section twenty-one, article one of this chapter .

(c) Judicial review of decisions by the board of appeals shall be available and conducted in the same fashion as set forth in section nineteen, article one of this chapter.

**CHAPTER 22A ARTICLE 6
BOARD OF COAL MINE HEALTH AND SAFETY**

§22A-6-1. Declaration of legislative findings and purpose.

(a) The Legislature hereby finds and declares that:

(1) The Legislature concurs with the congressional declaration made in the "Federal Coal Mine Health and Safety Act of 1969" that "the first priority and concern of all in the coal mining industry must be the health and safety of its most precious resource -- the miner";

(2) Coal mining is highly specialized, technical and complex and it requires frequent review, refinement and improvement of standards to protect the health and safety of miners;

(3) During each session of the Legislature, coal mine health and safety standards are proposed which require knowledge and comprehension of scientific and technical data related to coal mining;

(4) The formulation of appropriate rules and practices to improve health and safety and provide increased protection of miners can be accomplished more effectively by persons who have experience and competence in coal mining and coal mine health and safety.

(b) In view of the foregoing findings, it is the purpose of this article to:

(1) Continue the board of coal mine health and safety;

(2) Require such board to continue as standard rules the coal mine health and safety provisions of this code;

(3) Compel the board to review such standard rules and, when deemed appropriate to improve or enhance coal mine health and safety, to revise the same or develop and promulgate new rules dealing with coal mine health and safety; and

(4) Authorize such board to conduct such other activities as it deems necessary to implement the provisions of this chapter.

§22A-6-2. Definitions.

Unless the context in which a word or phrase appears clearly requires a different meaning, the words and phrases defined in section two, article one of this chapter have, when used in this article, the meaning therein assigned to them. For the purpose of this article "board" means the board of coal mine health and safety continued by section three of this article.

§22A-6-3. Board continued; membership; method of nomination and appointment; meetings; vacancies; quorum.

(a) The board of coal mine health and safety, heretofore established, is continued as provided by this article. The board consists of seven members who are residents of this state, and who are appointed as hereinafter specified in this section:

(1) The governor shall appoint, by and with the advice and consent of the Senate, three members to represent the viewpoint of those operators in this state. When such members are to be appointed, the governor shall request from the major trade association representing operators in this state a list of three nominees for each such position on the board. All such nominees shall be persons with special experience and competence in health and safety. There shall be submitted with such list a summary of the qualifications of each nominee. If the full lists of nominees are submitted in accordance with the provisions of this subdivision, the governor shall make the appointments from the persons so nominated. For purposes of this subdivision, the major trade association representing operators in this state is that association which represents operators accounting for over one half of the coal produced in mines in this state in the year prior to the year in which the appointment is to be made.

(2) The governor shall appoint, by and with the advice and consent of the Senate, three members who can reasonably be expected to represent the viewpoint of the working miners of this state. When members are to be appointed, the governor shall request from the major employee organization representing coal miners within this state a list of three nominees for each position on the board. The highest ranking official within the major employee organization representing coal miners within this state shall submit a list of three nominees for each such position on the board. The nominees shall have a background in health and safety. The governor shall make the appointments from the requested list of nominees.

(3) All appointments made by the governor under the provisions of subdivisions (1) and (2), of this subsection shall be with the advice and consent of the Senate.

(4) The seventh member of the board is the Director of the Office of Miner's Health, Safety and Training, or his or her designee, who serves as chair of the board as an ex officio nonvoting member, except that the Director may vote if there is a tie vote when the board is acting pursuant to subsection (e), section four of this article or subdivision (3), subsection (f), section seven of this article. The Director shall furnish to the board such secretarial, clerical, technical, research and other services as are necessary to the conduct of the business of the board, not otherwise furnished by the board.

(b) Members serving on the board on the effective date of this article may continue to serve until the expiration of their terms. Thereafter, members shall be nominated and appointed in the manner provided for in this section and shall serve for a term of three years. Members are eligible for reappointment.

(c) On or after the first day of January, two thousand two, the governor shall appoint, subject to the approval of a majority of the members of the board appointed under subdivisions (1) and (2), subsection (a) of this section, a health and safety administrator in accordance with the provisions of section six of this article, who shall certify all official records of the board. The health and safety administrator shall be a full-time officer of the board of coal mine health and safety with the duties provided for in section six of this article. The health and safety administrator shall have such education and experience as the governor deems necessary to properly investigate areas of concern to the board in the development of rules governing mine health and safety. The governor shall appoint as health and safety administrator a person who has

an independent and impartial viewpoint on issues involving mine safety. The health and safety administrator shall be a person who has not been during the two years immediately preceding appointment, and is not during his or her term, an officer, trustee, director, substantial shareholder, contractor, consultant or employee of any coal operator, or an employee or officer of an employee organization or a spouse of any such person. The health and safety administrator shall have the expertise to draft proposed rules and shall prepare such rules as are required by this code and on such other areas as will improve coal mine health and safety.

(d) The board shall meet at least once during each calendar month, or more often as may be necessary, and at other times upon the call of the chair, or upon the request of any three members of the board. Under the direction of the board, the health and safety administrator shall prepare an agenda for each board meeting giving priority to the promulgation of rules as may be required from time to time by this code, and as may be required to improve coal mine health and safety. The health and safety administrator shall provide each member of the board with notice of the meeting and the agenda as far in advance of the meeting as practical, but in any event, at least five days prior thereto. No meeting of the board shall be conducted unless said notice and agenda are given to the board members at least five days in advance, as provided herein, except in cases of emergency, as declared by the chair, in which event members shall be notified of the board meeting and the agenda in a manner to be determined by the chair: Provided, That upon agreement of a majority of the quorum present, any scheduled meeting may be ordered recessed to another day certain without further notice of additional agenda.

When proposed rules are to be finally adopted by the board, copies of such proposed rules shall be delivered to members not less than five days before the meeting at which such action is to be taken. If not so delivered, any final adoption or rejection of rules shall be considered on the second day of a meeting of the board held on two consecutive days, except that by the concurrence of at least four members of the board, the board may suspend this rule of procedure and proceed immediately to the consideration of final adoption or rejection of rules.

When a member fails to appear at three consecutive meetings of the board or at one half of the meetings held during a one-year period, the health and safety administrator shall notify the member and the governor of such fact. Such member shall be removed by the governor unless good cause for absences is shown.

(e) Whenever a vacancy on the board occurs, nominations and appointments shall be made in the manner prescribed in this section: Provided, That in the case of an appointment to fill a vacancy, nominations of three persons for each such vacancy shall be requested by and submitted to the governor within thirty days after the vacancy occurs by the major trade association or major employee organization, if any, which nominated the person whose seat on the board is vacant. The vacancy shall be filled by the governor within thirty days of his receipt of the list of nominations.

(f) A quorum of the board is five members which shall include the Director of the Office of Miner's Health, Safety and Training, or his or her designee, at least two members representing the viewpoint of operators and at least two members representing the viewpoint of the working miners, and the board may act officially by a majority of those members who are present, except that no vote of the board may be taken unless all seven members are present.

§22A-6-4. Board powers and duties.

(a) The board shall adopt as standard rules the "coal mine health and safety provisions of this chapter." Such standard rules and any other rules shall be adopted by the board without regard to the provisions of chapter twenty-nine-a of this code. The board of coal mine health and safety shall devote its time toward promulgating rules in those areas specifically directed by this chapter and those necessary to prevent fatal accidents and injuries.

(b) The board shall review such standard rules and, when deemed appropriate to improve or enhance coal mine health and safety, revise the same or develop and promulgate new rules dealing with coal mine health and safety.

(c) The board shall develop, promulgate and revise, as may be appropriate, rules as are necessary and proper to effectuate the purposes of article two of this chapter and to prevent the circumvention and evasion thereof, all without regard to the provisions of chapter twenty-nine-a of this code:

(1) Upon consideration of the latest available scientific data in the field, the technical feasibility of standards, and experience gained under this and other safety statutes, such rules may expand protections afforded by this chapter notwithstanding specific language therein, and such rules may deal with subject areas not covered by this chapter to the end of affording the maximum possible protection to the health and safety of miners.

(2) No rules promulgated by the board shall reduce or compromise the level of safety or protection afforded miners below the level of safety or protection afforded by this chapter.

(3) Any miner or representative of any miner, or any coal operator has the power to petition the circuit court of Kanawha County for a determination as to whether any rule promulgated or revised reduces the protection afforded miners below that provided by this chapter, or is otherwise contrary to law: Provided, That any rule properly promulgated by the board pursuant to the terms and conditions of this chapter creates a rebuttable presumption that said rule does not reduce the protection afforded miners below that provided by this chapter.

(4) The director shall cause proposed rules and a notice thereof to be posted as provided in section eighteen, article one of this chapter. The director shall deliver a copy of such proposed rules and accompanying notice to each operator affected. A copy of such proposed rules shall be provided to any individual by the director's request. The notice of proposed rules shall contain a summary in plain language explaining the effect of the proposed rules.

(5) The board shall afford interested persons a period of not less than thirty days after releasing proposed rules to submit written data or comments. The board may, upon the expiration of such period and after consideration of all relevant matters presented, promulgate such rules with such modifications as it may deem appropriate.

(6) On or before the last day of any period fixed for the submission of written data or comments under subdivision (5) of this section, any interested person may file with the board written objections to a proposed rule, stating the grounds therefore and requesting a public hearing on such objections. As soon as practicable after the period for filing such objections has expired, the board shall release a notice specifying the proposed rules to which objections have been filed and a hearing requested.

(7) Promptly after any such notice is released by the board under subdivision (6) of this section, the board shall issue notice of, and hold a public hearing for the purpose of receiving relevant evidence. Within sixty days after completion of the hearings, the board shall make findings of fact which shall be public, and may promulgate such rules with such modifications as it deems appropriate. In the event the board determines that a proposed rule should not be promulgated or should be modified, it shall within a reasonable time publish the reasons for its determination.

(8) All rules promulgated by the board shall be published in the state register and continue in effect until modified or superseded in accordance with the provisions of this chapter.

(d) To carry out its duties and responsibilities, the board is authorized to employ such personnel, including legal counsel, experts and consultants, as it deems necessary. In addition, the board, within the appropriations provided for by the Legislature, may conduct or contract for research and studies and is entitled to the use of the services, facilities and personnel of any agency, institution, school, college or university of this state.

(e) The director shall within sixty days of a coal mining fatality or fatalities provide the board with all available reports regarding such fatality or fatalities.

The board shall review all such reports, receive any additional information, and may, on its own initiative, ascertain the cause or causes of such coal mining fatality or fatalities. Within one hundred twenty days of such review of each such fatality, the board shall promulgate such rules as are necessary to prevent the recurrence of such fatality, unless a majority of the quorum present determines that no rules can assist in the prevention of the specific type of fatality. Likewise, the board shall annually, not later than the first day of July, review the major causes of coal mining injuries during the previous calendar year, reviewing the causes in detail, and shall promulgate such rules as may be necessary to prevent the recurrence of such injuries.

Further, the board shall, on or before the tenth day of January of each year, submit a report to the governor, president of the Senate and speaker of the House, which report shall include, but is not limited to:

(1) The number of fatalities during the previous calendar year, the apparent reason for each fatality as determined by the office of miners' health, safety and training and the action, if any, taken by the board to prevent such fatality;

(2) Any rules promulgated by the board during the last year;

(3) What rules the board intends to promulgate during the current calendar year;

(4) Any problem the board is having in its effort to promulgate rules to enhance health and safety in the mining industry;

(5) Recommendations, if any, for the enactment, repeal or amendment of any statute which would cause the enhancement of health and safety in the mining industry;

(6) Any other information the board deems appropriate;

(7) In addition to the report by the board, as herein contained, each individual member of said board has right to submit a separate report, setting forth any views contrary to the report of the board, and the separate report, if any, shall be appended to the report of the board and be considered a part thereof.

§22A-6-5. Preliminary procedures for promulgation of rules.

(a) Prior to the posting of proposed rules as provided for in subsection (c), section four of this article, the board shall observe the preliminary procedure for the development of rules set forth in this section:

(1) During a board meeting or at any time when the board is not meeting, any board member may suggest to the health and safety administrator, or such administrator on his or her own initiative may develop, subjects for investigation and possible regulation;

(2) Upon receipt of a suggestion for investigation, the health and safety administrator shall prepare a report, to be given at the next scheduled board meeting, of the technical evidence available which relates to such suggestion, the staff time required to develop the subject matter, the legal authority of the board to act on the subject matter, including a description of findings of fact and conclusions of law which will be necessary to support any proposed rules;

(3) The board shall by majority vote of those members who are present determine whether the health and safety administrator shall prepare a draft rule concerning the suggested subject matter;

(4) After reviewing the draft rule, the board shall determine whether the proposed rules should be posted and made available for comment as provided for in section four of this article;

(5) The board shall receive and consider those comments to the proposed rules as provided for in section four of this article;

(6) The board shall direct the health and safety administrator to prepare for the next scheduled board meeting findings of fact and conclusions of law for the proposed rules, which may incorporate comments received and technical evidence developed, and which are consistent with section four of this article;

(7) The board shall adopt or reject or modify the proposed findings of fact and conclusions of law; and

(8) The board shall make a final adoption or rejection of the rules.

(b) By the concurrence of at least four members of the board, the board may dispense with the procedure set out in (a) above or any other procedural rule established, except that the board shall in all instances when adopting rules prepare findings of fact and conclusions of law consistent with this section and section four of this article.

(c) Without undue delay, the board shall adopt an order of business for the conduct of meetings which will promote the orderly and efficient consideration of proposed rules in accordance with the provisions of this section.

§22A-6-6. Health and safety administrator; qualifications; duties; employees; compensation.

(a) The governor shall appoint the health and safety administrator of the board for a term of employment of one year. The health and safety administrator shall be entitled to have his or her contract of employment renewed on an annual basis except where such renewal is denied for cause: Provided, That the governor has the power at any time to remove the health and safety administrator for misfeasance, malfeasance or nonfeasance: Provided, however, That the board has the power to remove the health and safety administrator without cause upon the concurrence of five members of the board.

(b) The health and safety administrator shall work at the direction of the board, independently of the director of the office of miners' health, safety and training and has such authority and shall perform such duties as may be required or necessary to effectuate this article.

(c) In addition to the health and safety administrator, there shall be such other research employees hired by the health and safety administrator as the board determines to be necessary. The health and safety administrator shall provide supervision and direction to the other research employees of the board in the performance of their duties.

(d) The employees of the board shall be compensated at rates determined by the board. The salary of the health and safety administrator shall be fixed by the governor: Provided, that the salary of the health and safety administrator shall not be reduced during his or her annual term of employment or upon the renewal of his or her contract for an additional term. Such salary shall be fixed for any renewed term at least ninety days before the commencement thereof.

(e) Appropriations for the salaries of the health and safety administrator and any other employees of the board and for necessary office and operating expenses shall be made to a budget account hereby established for those purposes in the general revenue fund. Such account shall be separate from any accounts or appropriations for the office of miners' health, safety and training.

(f) The health and safety administrator shall review all coal mining fatalities and major causes of injuries as mandated by section four of this article. An analysis of such fatalities and major causes of injuries shall be prepared for consideration by the board within ninety days of the occurrence of the accident.

(g) At the direction of the board, the administrator shall also conduct an annual study of occupational health issues relating to employment in and around coal mines of this state and submit a report to the board with findings and proposals to address the issues raised in such study. The administrator is responsible for preparing the annual reports required by subsection (e), section four of this article and section nine of this article.

§22A-6-7. Coal mine safety and technical review committee; membership; method of nomination and appointment; meetings; quorum; powers and duties of the committee; powers and duties of the board of coal mine health and safety.

(a) There is hereby continued the state coal mine safety and technical review committee. The purposes of this committee are to:

- (1) Assist the board of coal mine health and safety in the development of technical data relating to mine safety issues, including related mining technology;
- (2) Provide suggestions and technical data to the board and propose rules with general mining industry application;
- (3) Accept and consider petitions submitted by individual mine operators or miners seeking site-specific rule making pertaining to individual mines and make recommendations to the board concerning such rule making; and
- (4) Provide a forum for the resolution of technical issues encountered by the board.

(b) The committee shall consist of two members who shall be residents of this state, and who shall be appointed as hereinafter specified in this section:

(1) The governor shall appoint one member to represent the viewpoint of the coal operators in this state from a list containing one or more nominees submitted by the major trade association representing coal operators in this state within thirty days of submission of such nominee or nominees.

2) The governor shall appoint one member to represent the viewpoint of the working miners of this state from a list containing one or more nominees submitted by the highest ranking official within the major employee organization representing coal mines within this state within thirty days of submission of the nominee or the nominees.

(3) The members appointed in accordance with the provisions of subdivisions (1) and (2) of this subsection shall be initially appointed to serve a term of three years. The members serving on the effective date of this article may continue to serve until their terms expire.

(4) The members appointed in accordance with the provisions of subdivisions (1) and (2) of this subsection may be, but are not required to be, members of the board of coal mine health and safety, and shall be compensated on a per diem basis in the same amount as provided in section ten of this article, plus all reasonable expenses.

(c) The committee shall meet at least once during each calendar month, or more often as may be necessary.

(d) A quorum of the committee shall require both members, and the committee may only act officially by a quorum.

(e) The committee may review any matter relative to mine safety and mining technology, and may pursue development and resolution of issues related thereto. The committee may make recommendations to the board for the promulgation of rules with general mining industry application. Upon receipt of a unanimous recommendation for rule making from the committee and only thereon, the board may adopt or reject such rule, without modification except as

approved by the committee: Provided, That any adopted rule shall not reduce or compromise the level of safety or protection below the level of safety or protection afforded by applicable statutes and rules. When so promulgated, such rules shall be effective, notwithstanding the provisions of applicable statutes.

(f) (1) Upon application of a coal mine operator, or on its own motion, the committee has the authority to accept requests for site-specific rule making on a mine-by-mine basis, and make unanimous recommendations to the board for site-specific rules thereon. The committee has authority to approve a request if it concludes that the request does not reduce or compromise the level of safety or protection afforded miners below the level of safety or protection afforded by any applicable statutes or rules. Upon receipt of a request for site-specific rule making, the committee may conduct an investigation of the conditions in the specific mine in question, which investigation shall include consultation with the mine operator and authorized representatives of the miners. Such authorized representatives of the miners shall include any person designated by the employees at the mine, persons employed by an employee organization representing one or more miners at the mine, or a person designated as a representative by one or more persons at the mine.

(2) If the committee determines to recommend a request made pursuant to subdivision (1) of this subsection, the committee shall provide the results of its investigation to the board of coal mine health and safety along with recommendations for the development of the site-specific rules applicable to the individual mine, which recommendations may include a written proposal containing draft rules.

(3) Within thirty days of receipt of the committee's recommendation, the board shall adopt or reject, without modification, except as approved by the committee, the committee's recommendation to promulgate site-specific rules applicable to an individual mine adopting such site-specific rules only if it determines that the application of the requested rule to such mine will not reduce or compromise the level of safety or protection afforded miners below that level of safety or protection afforded by any applicable statutes. When so promulgated, such rules shall be effective notwithstanding the provisions of applicable statutes.

(g) The board shall consider all rules proposed by the coal mine safety and technical review committee and adopt or reject, without modification, except as approved by the committee, such rules, dispensing with the preliminary procedures set forth in subdivisions (1) through (7), subsection (a), section five; and, in addition, with respect to site-specific rules also dispensing with the procedures set forth in subdivisions (4) through (8), subsection (c), section four of this article.

(h) In performing its functions, the committee has access to the services of the coal mine health and safety administrator appointed under section six of this article. The director shall make clerical support and assistance available in order that the committee can carry out its duties. Upon the request of both members of the committee, the health and safety administrator shall draft proposed rules and reports or make investigations.

(i) The powers and duties provided for in this section for the committee are not intended to replace or precondition the authority of the board of coal mine health and safety to act in accordance with sections one through six and eight through ten of this article.

(j) Appropriations for the funding of the committee and to effectuate this section shall be made to a budget account hereby established for that purpose in the general revenue fund. Such account shall be separate from any accounts or appropriations for the office of miners' health, safety and training.

§22A-6-8. Effect of rules.

The standard rules and any rules promulgated by the board have the same force and effect of law as if enacted by the Legislature as a part of article two of this chapter and any violation of any such rule is a violation of law or of a health or safety standard within the meaning of this chapter.

§22A-6-9. Reports.

Prior to each regular session of the Legislature, the board shall submit to the Legislature an annual report upon the subject matter of this article, the progress concerning the achievement of its purpose and any other relevant information, including any recommendations it deems appropriate.

§22A-6-10. Compensation and expenses of board members.

Each member of the board not otherwise employed by the state shall be paid the same compensation, and each member of the board shall be paid the expense reimbursement, as is paid to members of the Legislature for their interim duties as recommended by the citizens legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. In the event the expenses are paid by a third party, the member shall not be reimbursed by the state. The reimbursement shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by the office of miners' health, safety and training. No employer shall prohibit a member of the board from exercising leave of absence from his or her place of employment in order to attend a meeting of the board or a meeting of a subcommittee of the board, or to prepare for a meeting of the board, any contract of employment to the contrary notwithstanding.

CHAPTER 22A ARTICLE 7

BOARD OF MINER TRAINING, EDUCATION AND CERTIFICATION

§22A-7-1. Short title.

This article shall be cited as "The West Virginia Miner Training, Education and Certification Act."

§22A-7-2. Declaration of legislative findings and policy.

The Legislature hereby finds and declares that:

- (a) The continued prosperity of the coal industry is of primary importance to the state of West Virginia;
- (b) The highest priority and concern of this Legislature and all in the coal mining industry must be the health and safety of the industry's most valuable resource -- the miner;
- (c) A high priority must also be given to increasing the productivity and competitiveness of the mines in this state;
- (d) An inordinate number of miners, working on both the surface in surface mining and in and at underground mines, are injured during the first few months of their experience in a mine;
- (e) These injuries result in the loss of life and serious injury to miners and are an impediment to the future growth of West Virginia's coal industry;
- (f) Injuries can be avoided through proper miner training, education and certification;
- (g) Mining is a technical occupation with various specialties requiring individualized training and education; and
- (h) It is the general purpose of this article to:

- (1) Require adequate training, education and meaningful certification of all persons employed in coal mines;
- (2) Establish a board of miner training, education and certification and empower it to require certain training and education of all prospective miners and miners certified by the state;
- (3) Authorize a stipend for prospective miners enrolled in this state's miner training, education and certification program;
- (4) Direct the director of the office of miners' health, safety and training to apply and implement the standards set by the board of miner training, education and certification by establishing programs for miner and prospective miner education and training; and
- (5) Provide for a program of continuing miner education for all categories of certified miners.

§22A-7-3. Definitions.

Unless the context in which a word or phrase appears clearly requires a different meaning, the words defined in section two, article one of this chapter have when used in this article the meaning therein assigned to them. These words include, but are not limited to, the following: Office, director, mine inspector, operator, miner, shotfirer and certified electrician.

"Board" means the board of miner training, education and certification established by section four of this article.

"Mine" means any mine, including a "surface mine," as that term is defined in section three, article three, chapter twenty-two of this code, and in section two, article four of said chapter; and a "mine" as that term is defined in section two, article one of this chapter.

§22A-7-4. Board of miner training, education and certification continued; membership; method of appointment; terms.

(a) There is hereby continued a board of miner training, education and certification, which consists of seven members, who are selected in the following manner:

(1) One member shall be appointed by the governor to represent the viewpoint of surface mine operators in this state. When such member is to be appointed, the governor shall request from the major association representing surface coal operators in this state a list of three nominees to the board. The governor shall select from said nominees one person to serve on the board. For purposes of this subsection, the major association representing the surface coal operators in this state is that association, if any, which represents surface mine operators accounting for over one half of the coal produced in surface mines in this state in the year prior to that year in which the appointment is made.

(2) Two members shall be appointed by the governor to represent the interests of the underground operators of this state. When said members are to be appointed, the governor shall request from the major association representing the underground coal operators in this state a list of six nominees to the board. The governor shall select from said nominees two persons to serve on the board. For purposes of this subsection, the major association representing the underground operators in this state is that association, if any, which represents underground operators accounting for over one half of the coal produced in underground mines in this state in the year prior to that year in which the appointments are made.

(3) Three members shall be appointed by the governor who can reasonably be expected to represent the interests of the working miners in this state. If the major employee organization representing coal miners in this state is divided into administrative districts, the employee organization of each district shall, upon request by the governor, submit a list of three nominees for membership on the board. If such major employee organization is not so divided into administrative districts, such employee organization shall, upon request by the governor, submit a list of twelve nominees for membership on the board. The governor shall make such appointments from the persons so nominated: Provided, That in the event nominations are made by administrative districts, not more than one member shall be appointed from the nominees of any one district unless there are less than three such districts in this state.

(4) The seventh member of the board, who serves as chair, shall be the director of the office of miners' health, safety and training.

(5) All appointments made by the governor under this section shall be with the advice and consent of the Senate: Provided, that persons so appointed while the Senate of this state is not in session are permitted to serve up to one year in an acting capacity, or until the next session of the Legislature, whichever is less.

(b) The board shall be appointed by the governor. Members serving on the effective date of this article may continue on the board until their terms expire. Appointed members serve for a term of three years. The board shall meet at the call of the chair, at the call of the director, or upon the request of any two members of the board: Provided, that no meeting of the board for any purpose shall be conducted unless the board members are notified at least five days in

advance of a proposed meeting. In cases of an emergency, members may be notified of a board meeting by the most appropriate means of communication available.

(c) Whenever a vacancy on the board occurs, appointments shall be made in the manner prescribed in this section: Provided, that in the case of an appointment to fill a vacancy nominations shall be submitted to the governor within thirty days after the vacancy occurs. The vacancy shall be filled by the governor within thirty days of receipt of the list of nominations.

(d) Each appointed member of the board shall be paid the same compensation, and each member of the board shall be paid the expense reimbursement, as is paid to members of the Legislature for their interim duties as recommended by the citizens legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. Any such amounts shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such members of the board.

(e) A quorum of the board is four members. The board may act officially by a majority of those members who are present.

(f) The chair of the board shall be a nonvoting member: Provided that in cases of a tie, the chair shall cast the deciding vote on the issue or issues under consideration.

(g) The director of the office of miners' health, safety and training shall select a member of the office's staff to serve as the secretary to the board and the secretary shall be present or send an authorized representative to all meetings of the board.

§22A-7-5. Board powers and duties.

(a) The board shall establish criteria and standards for a program of education, training and examination to be required of all prospective miners and miners prior to their certification in any of the various miner specialties requiring certification, under this article or any other provision of this code. The specialties include, but are not limited to, underground miner, surface miner, apprentice, underground mine foreman-fire boss, assistant underground mine foreman-fire boss, shotfirer, mine electrician and belt examiner. Notwithstanding the provisions of this section the director may by rule further subdivide the classifications for certification.

(b) The board may require certification in other miner occupational specialties: *Provided*, that no new specialty may be created by the board unless certification in a new specialty is made desirable by action of the federal government requiring certification in a specialty not enumerated in this code.

(c) The board may establish criteria and standards for a program of pre-employment education and training to be required of miners working on the surface at underground mines who are not certified under the provisions of this article or any other provision of this code.

(d) The board shall set minimum standards for a program of continuing education and training of certified persons and other miners on an annual basis: *Provided*, that the standards shall be consistent with the provisions of section seven of this article. Prior to issuing the standards, the board shall conduct public hearings at which the parties who may be affected by its actions may be heard. The education and training shall be provided in a manner determined by the director to be sufficient to meet the standards established by the board.

(e) The board may, in conjunction with any state, local or federal agency or any other person or institution, provide for the payment of a stipend to prospective miners enrolled in one or more of the programs of miner education, training and certification provided for in this article or any other provision of this code.

(f) The board may also, from time to time, conduct any hearings and other oversight activities required to ensure full implementation of programs established by it.

(g) Nothing in this article empowers the board to revoke or suspend any certificate issued by the director of the Office of Miners' Health, Safety and Training.

(h) The board may, upon its own motion or whenever requested to do so by the director, consider two certificates issued by this state to be of equal value or consider training provided or required by federal agencies to be sufficient to meet training and education requirements set by it, the director, or by the provisions of this code.

§22A-7-6. Duties of the director and office.

The director shall be empowered to promulgate, pursuant to chapter twenty-nine-a of this code, such reasonable rules as are necessary to establish a program to implement the provisions of this article. Such program shall include, but not be limited to, implementation of a program of instruction in each of the miner occupational specialties and the conduct of examinations to test each applicant's knowledge and understanding of the training and instruction which he or she is required to have prior to the receipt of a certificate.

The director is authorized and directed to utilize state mine inspectors, mine safety instructors, the state mine foreman examiner, private and public institutions of education and such other persons as may be available in implementing the program of instruction and examinations.

The director may, at any time, make such recommendations or supply such information to the board as he or she may deem appropriate.

The director is authorized and directed to utilize such state and federal moneys and personnel as may be available to the office for educational and training purposes in the implementation of the provisions of this article.

§22A-7-7. Continuing education requirements for underground mine foreman-fire boss

(a) An existing underground mine foreman-fire boss certified pursuant to this article shall complete the continuing education requirements in this section within two years from the effective date of this section and every two years

thereafter. An underground mine foreman-fire boss certified pursuant to this article on or after the effective date of this section shall complete the continuing education requirements in this section within two years of their certification and every two years thereafter. The continuing education requirements of this section may not be satisfied by the completion of other training requirements mandated by the provisions of this chapter.

(b) In order to receive continuing education credit pursuant to this section, a mine foreman-fire boss shall satisfactorily complete a mine foreman-fire boss continuing education course approved by the board and taught by a qualified instructor approved by the director. The mine foreman-fire boss shall not suffer a loss in pay while attending a continuing education course. The mine foreman-fire boss shall submit documentation to the office certified by the instructor that indicates the required continuing education has been completed prior to the deadlines set forth in this subsection: *Provided*, that a mine foreman-fire boss may submit documentation of continuing education completed in another state for approval and acceptance by the board.

(c) The mine foreman-fire boss shall complete at least eight hours of continuing education every two years.

(d) The content of the continuing education course shall include but not be limited to:

- (1) selected provisions of this chapter and 30 U.S.C. § 801, *et seq.*;
- (2) selected provisions of the West Virginia and federal underground coal mine health and safety rules and regulations;
- (3) the responsibilities of a mine foreman-fire boss;
- (4) selected policies and memoranda of the Office of Miners' Health, Safety and Training, the Board of Coal Mine Health and Safety, and the Board of Miner Training, Education and Certification;
- (5) a review of fatality and accident trends in underground coal mines; and
- (6) other subjects as determined by the Board of Miner Training, Education and Certification.

(e) The board may approve alternative training programs tailored to specific mines.

(f) Failure to complete the requirements of this section shall result in suspension of a mine foreman-fire boss certification pending completion of the continuing education requirements. During the pendency of the suspension, the individual may not perform statutory duties assigned to a mine foreman-fire boss under West Virginia law. The office shall send notice of any suspension to the last address the certified mine foreman-fire boss reported to the director. If the requirements are not met within two years of the suspension date, the director may file a petition with the board of appeals pursuant to the procedures set forth in section thirty-one, article one of this chapter and, upon determining that the requirements have not been met, the board of appeals may revoke the mine foreman-fire boss' certification, which shall not be renewed except upon successful completion of the examination prescribed by law for mine foremen-fire bosses or upon completion of other training requirements established by the board: *Provided*, that an individual having his or her mine foreman-fire boss certification suspended pursuant to this section who also holds a valid mine foreman-fire boss certification from another state may have the suspension lifted by completing training requirements established by the board.

(g) The office shall make a program of instruction that meets the requirements for continuing education set forth in this section regularly available in regions of the state, based on demand, for individuals possessing mine foreman-fire boss certifications who are not serving in a mine foreman-fire boss capacity: *Provided*, that the office may collect a fee from program participants to offset the cost of the program.

(h) The office shall make available to operators and other interested parties a list of individuals whose mine foreman-fire boss certification is in suspension or has been revoked pursuant to this section.

CHAPTER 22A ARTICLE 8

CERTIFICATION OF UNDERGROUND AND SURFACE COAL MINERS

§22A-8-1. Certificate of competency and qualification or permit of apprenticeship required of all surface and underground miners.

Except as hereinafter provided, no person shall work or be employed for the purpose of performing normal duties as a surface or underground miner in any mine in this state unless the person holds at the time he or she performs such duties a certificate of competency and qualification or a permit of apprenticeship issued under the provisions of this article.

§22A-8-2. Definitions.

For purposes of this article the term "surface miner" means a person employed at a "surface mine," as that term is defined in section three, article three, chapter twenty-two of this code, and in section two, article four of said chapter.

For purposes of this article, the term "underground miner" means an underground worker in a bituminous coal mine, except as hereinafter provided.

For purposes of this article, the term "board of miner training, education and certification" means that board established in article seven of this chapter.

§22A-8-3. Permit of apprenticeship-underground miner.

A permit of apprenticeship-underground miner shall be issued by the director to any person who has demonstrated by examination a knowledge of the subjects and skills pertaining to employment in underground mines, including, but not limited to, general safety, first aid, miner and operator rights and responsibilities, general principles of electricity, general mining hazards, roof control, ventilation, mine health and sanitation, mine mapping, state and federal mining laws and regulations and such other subjects as may be required by the board of miner training, education and certification: *Provided*, That each applicant for said permit shall complete a program of education and training of at least eighty hours, which shall be determined by the board of miner training, education and certification and provided for and

implemented by the director: Provided, however, That if a sufficient number of qualified applicants having successfully completed the state training program provided by the office of miners' health, safety and training are not available, the operator may request approval from the director to conduct the operator's own pre-employment training program so long as such training adequately covers the minimum criteria determined by the board and such trainees shall be eligible for the same certification as provided for trainees undergoing training provided by the state.

§22A-8-4. Permit of apprenticeship-surface miner.

A permit of apprenticeship-surface miner shall be issued by the director to any person who has demonstrated by examination a knowledge of the subjects and skills pertaining to employment in the surface mining industry, including, but not limited to, general safety, first aid, miner and operator rights and responsibilities, general principles of electricity, health and sanitation, heavy equipment safety, high walls and spoil banks, haulage, welding safety, tippie safety, state and federal mining laws and regulations and such other subjects as may be required by the board of miner training, education and certification: Provided, That each applicant for said permit shall complete a program of education and training of at least forty hours, which program shall be determined by the board of miner training, education and certification and provided for and implemented by the director: Provided, however, That if a sufficient number of qualified applicants having successfully completed the state training provided by the office of miners' health, safety and training are not available, the operator may request approval from the director to conduct the operator's own reemployment training program so long as such training adequately covers the minimum criteria determined by the board and such trainees shall be eligible for the same certification as provided for trainees undergoing training provided by the state.

§22A-8-5. Supervision of apprentices.

Each holder of a permit of apprenticeship shall be known as an apprentice. Any miner holding a certificate of competency and qualification may have one person working with him or her, and under his or her supervision and direction, as an apprentice, for the purpose of learning and being instructed in the duties and calling of mining. Any mine foreman or fire boss or assistant mine foreman or fire boss may have three persons working with him or her under his or her supervision and direction, as apprentices, for the purpose of learning and being instructed in the duties and calling of mining: Provided, That a mine foreman, assistant mine foreman or fire boss supervising apprentices in an area where no coal is being produced or which is outby the working section may have as many as five apprentices under his or her supervision and direction, as apprentices, for the purpose of learning and being instructed in the duties and calling of mining or where the operator is using a production section under program for training of apprentice miners, approved by the board of miner training, education and certification.

Every apprentice working at a surface mine shall be at all times under the supervision and control of at least one person who holds a certificate of competency and qualification.

In all cases, it is the duty of every mine operator who employs apprentices to ensure that such persons are effectively supervised and to instruct such persons in safe mining practices. Each apprentice shall wear a red hat which identifies the apprentice as such while employed at or near a mine. No person shall be employed as an apprentice for a period in excess of eight months, except that in the event of illness or injury, time extensions shall be permitted as established by the director of the office of miners' health, safety and training.

§22A-8-6. Certificate of competency and qualification -- Underground or surface miner.

A certificate of competency and qualification as an underground miner or as surface miner shall be issued by the director to any person who has at least six months' total experience as an apprentice and demonstrated his or her competence as a miner by successful completion of an examination given by the director or his or her representative in a manner and place to be determined by the board of miner training, education and certification: Provided, That all examinations shall be conducted in the English language and shall be of a practical nature, so as to determine the competency and qualifications of the applicant to engage in the mining of coal with reasonable safety to the applicant and fellow employees: Provided, however, That notice of the time and place of such examination shall be given to management at the mine, to the local union thereat if there is a local union, and notice shall also be posted at the place or places in the vicinity of the mine where notices to employees are ordinarily posted. Examinations shall also be held at such times and places, and after such notice, as the board finds necessary to enable all applicants for certificates to have an opportunity to qualify for certification.

§22A-8-7. Refusal to issue certificate; appeal.

If the director or the director's representative finds that an applicant is not qualified and competent, the director shall so notify the applicant not more than ten days after the date of examination.

Any applicant aggrieved by an action of the director in failing or refusing to issue a certificate of qualification and competency may, within ten days' notice of the action complained of, appeal to the director who shall promptly give the applicant a hearing and either affirm the action or take such action as should have been taken.

§22A-8-8. Limitations of article.

All persons possessing certificates of qualification heretofore issued by the department of mines of this state, or by the division of mines and minerals, or hereafter by the office of miners' health, safety and training entitling them to act as mine foreman-fire bosses, or assistant mine foreman-fire bosses, are eligible to engage at any time as miners in the mines of this state. Supervisory and technically trained employees of the operator, whose work contributes only indirectly to mine operations, are not required to possess a miners' certificate.

Notwithstanding the provisions of this article, every person working as a surface miner in this state on or before the first day of July, one thousand nine hundred seventy-four, shall, upon application to the director, be issued a certificate of competency and qualification.

§22A-8-9. Violations; penalties.

Any person who knowingly works in or at a mine without a certificate issued under the provision of this article, any person who knowingly employs an uncertified miner to work in or at a coal mine in this state, or, any operator who fails to insure the supervision of miners holding a certificate of apprenticeship as provided for in section five of this article, is guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars nor more than five hundred dollars.

**CHAPTER 22A ARTICLE 9
MINE INSPECTORS' EXAMINING BOARD**

§22A-9-1. Mine inspectors' examining board.

The mine inspectors' examining board is continued. It consists of five members who shall be appointed by the governor, by and with the advice and consent of the Senate. Members so appointed may be removed only for the same causes and in like manner as elective state officers. One of the members of the board shall be a representative of the public, who shall be the director or a former director of the school of mines at West Virginia University. Two members of the board shall be persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of coal mine operators and two members shall be persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of coal mine workers.

The director of the office of miners' health, safety and training is an ex officio member of the board and shall serve as secretary of the board, without additional compensation; but the director has no right to vote with respect to any matter before the board.

The members of the board, except the public representative, shall be appointed for overlapping terms of eight years, except that the original appointments shall be for terms of two, four, six and eight years, respectively. Any member whose term expires may be reappointed by the governor. Members serving on the effective date of this article may continue to serve until their terms expire.

Each member of the board shall be paid the same compensation, and each member of the board shall be paid the expense reimbursement, as is paid to members of the Legislature for their interim duties as recommended by the citizen's legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. Any such amounts shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such members of the board.

The public member is chair of the board. Members of the board, before performing any duty, shall take and subscribe to the oath required by section 5, article IV of the constitution of West Virginia.

The mine inspectors' examining board shall meet at such times and places as shall be designated by the chair. It is the duty of the chair to call a meeting of the board on the written request of three members or the director of the office of miners' health, safety and training. Notice of each meeting shall be given in writing to each member by the secretary at least five days in advance of the meeting. Three members is a quorum for the transaction of business.

In addition to other duties expressly set forth elsewhere in this article, the board shall:

- (1) Establish, and from time to time revise, forms of application for employment as mine inspectors and forms for written examinations to test the qualifications of candidates for that position;
- (2) Adopt and promulgate reasonable rules relating to the examination, qualification and certification of candidates for appointment as mine inspectors, and hearing for removal of inspectors, required to be held by section twelve, article one of this chapter. All of such rules shall be printed and a copy thereof furnished by the secretary of the board to any person upon request;
- (3) Conduct, after public notice of the time and place thereof, examinations of candidates for appointment as mine inspector. By unanimous agreement of all members of the board, one or more members of the board or an employee of the office of miners' health, safety and training may be designated to give a candidate the written portion of the examination;
- (4) Prepare and certify to the director of the office of miners' health, safety and training a register of qualified eligible candidates for appointment as mine inspectors. The register shall list all qualified eligible candidates in the order of their grades, the candidate with the highest grade appearing at the top of the list. After each meeting of the board held to examine such candidates, and at least annually, the board shall prepare and submit to the director of the office of miners' health, safety and training a revised and corrected register of qualified eligible candidates for appointment as mine inspector, deleting from such revised register all persons (a) who are no longer residents of West Virginia, (b) who have allowed a calendar year to expire without, in writing, indicating their continued availability for such appointment, (c) who have been passed over for appointment for three years, (d) who have become ineligible for appointment since the board originally certified that such person was qualified and eligible for appointment as mine inspector, or (e) who, in the judgment of at least four members of the board, should be removed from the register for good cause;
- (5) Cause the secretary of the board to keep and preserve the written examination papers, manuscripts, grading sheets, and other papers of all applicants for appointment as mine inspector for such period of time as may be established by the

board. Specimens of the examinations given, together with the correct solution of each question, shall be preserved permanently by the secretary of the board;

(6) Issue a letter or written notice of qualification to each successful eligible candidate;

(7) Hear and determine proceedings for the removal of mine inspectors in accordance with the provisions of this article;

(8) Hear and determine appeals of mine inspectors from suspension orders made by the director pursuant to the provisions of section four, article one of this chapter: Provided, That an aggrieved inspector, in order to appeal from any order of suspension, shall file such appeal in writing with the mine inspectors' examining board not later than ten days after receipt of notice of suspension. On such appeal the board shall affirm the act of the director unless it be satisfied from a clear preponderance of the evidence that the director has acted arbitrarily;

(9) Make an annual report to the governor and the director concerning the administration of mine inspection personnel in the state service, making such recommendations as the board considers to be in the public interest.

CHAPTER 22A ARTICLE 10 EMERGENCY MEDICAL PERSONNEL

§22A-10-1. Emergency personnel in coal mines.

(a) Emergency medical service personnel shall be employed on each shift at every mine that: (1) Employs more than ten employees and (2) more than eight persons are present on the shift and shall be employed at their regular duties at a central location, or when more than one such person is required pursuant to subsection (b) at locations convenient for quick response to emergencies; and further, shall have available to them at all times such equipment as shall be prescribed by the Director of the Office of Miners' Health, Safety and Training, in consultation with the commissioner of the bureau of public health.

(b) After the effective date of this article, emergency medical service personnel means any person certified by the commissioner of the bureau of public health, or authorities recognized and approved by the commissioner, to provide emergency medical services authorized in section eight, article four-c, chapter sixteen of this code and/or including emergency medical technician-mining. At least one emergency medical service personnel shall be employed at a mine for every fifty employees or any part thereof who are engaged at any time, in the extraction, production, or preparation of coal.

(c) A training course designed specifically for certification of emergency medical technician-mining shall be developed at the earliest practicable time by the commissioner of the bureau of public health in consultation with the board of miner training, education and certification. The training course for initial certification as an emergency medical technician-mining shall not be less than sixty hours, which shall include, but is not limited to, mast trouser application, basic life support skills and emergency room observation or other equivalent practical exposure to emergencies as prescribed by the commissioner of the bureau of public health.

(d) The maintenance of a valid emergency medical technician-mining certificate may be accomplished without taking a three year re-certification examination: Provided, That such emergency medical technician-mining personnel completes an eight hour annual retraining and testing program prescribed by the commissioner of the bureau of public health in consultation with the board of miner training, education and certification.

§22A-10-2. First-aid training of coal mine employees.

Each coal mine operator shall provide every new employee within six months of the date of employment with the opportunity for first-aid training as prescribed by the director of the office of miners' health, safety and training unless such employee has previously received such training. Each coal mine employee shall be required to take refresher first-aid training of not less than five hours within each twenty-four months of employment. The employee shall be paid regular wages, or overtime pay if applicable, for all periods of first-aid training.

CHAPTER 22A ARTICLE 11 MINE SAFETY TECHNOLOGY

§22A-11-1. Legislative findings, purposes and intent.

The Legislature finds and declares:

(1) that the first priority and concern of all persons in the coal mining industry must be the health and safety of its most precious resource – the miner;

(2) that in furtherance of this priority, the provisions of article two of this chapter are designed to protect the health and safety of this state's coal miners by requiring certain minimum standards for, among other things, certain health and safety technology used by each underground miner;

(3) that the proper implementation of this technology in West Virginia's underground mines would benefit from the specialized oversight of persons with experience and competence in coal mining, coal mine health and safety and the expanding role of technology; and

(4) that, in furtherance of provisions of this section, it is the intent of the Legislature to create a permanent task force which, on a continuous basis, shall evaluate and study issues relating to the commercial availability and functional and operational capability of existing and emerging technologies in coal mine health and safety, as well as issues relating to the implementation, compliance and enforcement of regulatory requirements governing the technologies.

§22A-11-2. Mine Safety Technology Task Force continued; membership; method of nomination and appointment.

(a) The Mine Safety Technology Task Force, created and existing under the authority of the director pursuant to the provisions of section six, article one of this chapter, is continued as provided by this article.

(b) The task force shall consist of nine members who are appointed as specified in this section:

(1) The Governor shall appoint, by and with the advice and consent of the Senate, three members to represent the viewpoint of operators in this state. When these members are to be appointed, the Governor shall request from the major trade association representing operators in this state a list of three nominees for each position on the task force. All nominees shall be persons with special experience and competence in coal mine health and safety. There shall be submitted with the list, a summary of the qualifications of each nominee. For purposes of this subdivision, the major trade association representing operators in this state is that association which represents operators accounting for over one half of the coal produced in mines in this state in the year prior to the year in which the appointment is made.

(2) The Governor shall appoint, by and with the advice and consent of the Senate, three members who can reasonably be expected to represent the viewpoint of the working miners of this state. When members are to be appointed, the Governor shall request from the major employee organization representing coal miners within this state a list of three nominees for each position on the task force. The highest ranking official within the major employee organization representing coal miners within this state shall submit a list of major employee organization representing coal miners within this state shall submit a list of three nominees for each position on the board. The nominees shall have a background in coal mine health and safety.

(3) The Governor shall appoint, by and with the advice and consent of the Senate, one certified mine safety professional from the College of Engineering and Mineral Resources at West Virginia University.

(4) The Governor shall appoint, by and with the advice and consent of the Senate, one attorney with experience in issues relating to coal mine health and safety.

(5) The ninth member of the task force is the director, or his or her designee, who shall serve as chair of the task force. The director shall furnish to the task force any secretarial, clerical, technical, research and other services that are necessary to the conduct of the business of the task force.

(c) Each appointed member of the task force shall serve at the will and pleasure of the Governor.

(d) Whenever a vacancy on the task force occurs, nominations and appointments shall be made in the manner prescribed in this section: *Provided*, that in the case of an appointment to fill a vacancy, nominations of three persons for each vacancy shall be required by and submitted to the Governor within thirty days after the vacancy occurs by the major trade association or major employee organization, if any, which nominated the person whose seat on the task force is vacant.

(e) Each member of the task force shall be paid the expense reimbursement, as is paid to members of the Legislature for their interim duties as recommended by the citizen's legislative compensation commission and authorized by law for each day or portion thereof engaged in the discharge of official duties. In the event the expenses are paid by a third party, the member shall not be reimbursed by the state. The reimbursement shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by the Office of Miners' Health, Safety and Training. An employer shall not prohibit a member of the task force from exercising leave of absence from his or her place of employment in order to attend a meeting of the task force or a meeting of a subcommittee of the task force, or to prepare for a meeting of the task force, any contract of employment to the contrary notwithstanding.

§22A-11-3. Task force powers and duties.

(a) The task force shall provide technical and other assistance to the office related to the implementation of the new technological requirements set forth in the provisions of section fifty-five, article two of this chapter, as amended and reenacted during the regular session of the Legislature in the year two thousand six, and requirements for other mine safety technologies.

(b) The task force, working in conjunction with the director, shall continue to study issues regarding the commercial availability, the functional and operational capability and the implementation, compliance and enforcement of the following protective equipment:

- (1) self-contained self-rescue devices, as provided in subsection (f), section fifty-five, article two of this chapter;
- (2) wireless emergency communication devices, as provided in subsection (g), section fifty-five, article two of this chapter;
- (3) wireless emergency tracking devices, as provided in subsection (h), section fifty-five, article two of this chapter; and
- (4) any other protective equipment required by this chapter or rules promulgated in accordance with the law that the director determines would benefit from the expertise of the task force.

(c) The task force shall on a continuous basis study, monitor and evaluate:

- (1) the potential for enhancing coal mine health and safety through the application of existing technologies and techniques;
- (2) opportunities for improving the integration of technologies and procedures to increase the performance and survivability of coal mine health and safety systems;
- (3) emerging technological advances in coal mine health and safety; and
- (4) market forces impacting the development of new technologies, including issues regarding the costs of research and development, regulatory certification and incentives designed to stimulate the marketplace.

(d) On or before the first day of July of each year, the task force shall submit a report to the Governor and the Board of Coal Mine Health and Safety that shall include, but not be limited to:

- (1) a comprehensive overview of issues regarding the implementation of the new technological requirements set forth in the provisions of section fifty-five, article two of this chapter, or rules promulgated in accordance with law;
- (2) a summary of any emerging technological advances that would improve coal mine health and safety;
- (3) recommendations, if any, for the enactment, repeal or amendment of any statute which would enhance technological advancement in coal mine health and safety; and
- (4) any other information the task force considers appropriate.

(e) In performing its duties, the task force shall, where possible, consult with, among others, mine engineering and mine safety experts, radio communication and telemetry experts and relevant state and federal regulatory personnel.

§22A-11-4. Approval of devices.

Prior to approving any protective equipment or device that has been evaluated by the task force pursuant to the provisions of subsection (b), section three of this article, the director shall consult with the task force and review any applicable written reports issued by the task force and the findings set forth in the reports and shall consider the findings in making any approval determination.

**CHAPTER 24 ARTICLE 6
PUBLIC SERVICE COMMISSION
LOCAL EMERGENCY TELEPHONE SYSTEM**

§24-6-14. Notification of mining accidents.

Each county answering point that receives a call reporting an accident in or about any mine shall immediately route the call to the Mine and Industrial Accident Emergency Operations Center created pursuant to section two, article five-a, chapter fifteen of this code.

**CHAPTER 61
CRIMES AND THEIR PUNISHMENT**

§61-3-12. Entry of building other than dwelling; entry of railroad, traction or motorcar, steamboat or other vessel; penalties; counts in indictment.

If any person shall, at any time, break and enter, or shall enter without breaking, any office, shop, underground coal mine, storehouse, warehouse, banking house, or any house or building, other than a dwelling house or outhouse adjoining thereto or occupied therewith, or any railroad or traction car, propelled by steam, electricity or otherwise, or any steamboat or other boat or vessel, within the jurisdiction of any county in this state, with intent to commit a felony or any larceny, he or she shall be deemed guilty of a felony, and, upon conviction, shall be confined in a state correctional facility not less than one, nor more than ten years. And if any person shall, at any time, break and enter, or shall enter without breaking, any automobile, motorcar or bus, with like intent, within the jurisdiction of any county in this state, he shall be guilty of a misdemeanor, and, upon conviction, shall be confined in jail not less than two, nor more than twelve months, and be fined not exceeding one hundred dollars.

An indictment for burglary may contain one or more counts for breaking and entering, or for entering without breaking, the house or building mentioned in the count for burglary under the provisions of this and the preceding section.

§61-3-29. Damage or destruction of railroad or public utility company property, or real or personal property used for producing, generating, transmitting, distributing, treating or collecting electricity, natural gas, coal, water, wastewater, storm water, telecommunications or cable service; penalties; restitution.

(a) Any person who knowingly and willfully damages or destroys any real or personal property owned by a railroad company, or public utility company, or any real or personal property used for producing, generating, transmitting, distributing, treating or collecting electricity, natural gas, coal, water, wastewater, storm water, telecommunications or cable service, is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than two thousand dollars, or confined in jail not more than one year, or both.

(b) Any person who knowingly and willfully: (1) damages or destroys any real or personal property owned by a railroad company, or public utility company, or any real or personal property used for producing, generating, transmitting, distributing, treating or collecting electricity, natural gas, coal, water, wastewater, storm water, telecommunications or cable service; and, (2) causes serious bodily injury to another is guilty of a felony and, upon conviction thereof, shall be fined not less than five thousand dollars nor more than fifty thousand dollars, or confined in a state correctional facility not less than one nor more than five years, or both.

(c) Nothing in this section may be construed to limit or restrict the ability of an entity referred to in subsection (a) or (b) of this section or a property owner or other person who has been damaged or injured as a result of a violation of this section from seeking recovery for damages arising from violation of this section.

TITLE 36 SERIES 1
BOARD OF COAL MINE HEALTH AND SAFETY
APPROVALS AND PERMITS, EXPLOSIVES AND VENTILATION FOR THE CONSTRUCTION OF
SHAFT AND/OR SLOPE OPERATIONS

§36-1-1. General.

1.1. Scope. This regulation amends Title 36, Series 1, Section 17.1 by requiring a device to detect improper spooling of the cable on hoists used to raise and lower persons during shaft and slope construction.

1.2. Authority. W. Va. Code 22-6-4.

1.3. Filing Date. July 31, 1992.

1.4. Effective Date. July 31, 1992.

1.5. Definitions. The term "Director" shall mean the Director of the Office of Miners Health, Safety and Training. All other terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1A, Section 1 of the West Virginia Code.

§36-1-2. Surface Distributed Reclamation Bond.

2.1. After the effective date of these rules and regulations, no shaft and/or slope shall be opened unless a surface disturbed reclamation bond in the amount of five hundred dollars (\$500.00) per acre is submitted by the coal mine operator to the Office of Miners Health, Safety and Training for the removal of unused surface structures, the sealing of abandoned shafts and slopes, and the reclamation of any land disturbed that does not result in an operational shaft and/or slope, the above mentioned bond shall go into a separate fund and must be submitted separately, when application is made for the issuance of a shaft and/or slope permit approval.

§36-1-3. No Shaft and/or Slope To Be Opened Without Prior Approval of the Director of the Office of Miners' Health Safety and Training.

3.1. An application for the sinking of a shaft and/or slope shall be filed by the coal mine operator for approval to the Director. All revisions to such approved application shall be resubmitted for approval to the Director. A shaft and/or slope permit application filed for approval with the Director shall include the following:

- (1) The name and address of the coal company and permit number, if such shaft and/or slope is an additional opening.
- (2) A surface topographic map revealing the geographic location of the shaft and/or slope operation.
- (3) A certified engineer's map revealing the locations of underground mining, oil, and/or gas wells and construction projects within five hundred (500) feet of the shaft and/or slope.
- (4) A certified engineer's map showing the profile of the shaft and/or slope.
- (5) A description of the construction work and methods to be used in the construction of the slope and/or shaft, including a detailed description of how water rings will be constructed.
- (6) The elevation, depth, and dimensions of the shaft and/or slope.
- (7) The location and elevation of the coal bed.
- (8) All hoisting and ventilation equipment will meet MSHA standards.
- (9) The approved methane detectors to be used and/or other equipment needed to make proper methane examinations (such as probes or pumps). Also, a description of how, where, and when these examinations will be conducted and the maintenance and calibration of detectors which will be in accordance with manufacturer's recommendations. A shaft and slope examiner can be certified by MHST to qualify other employees to make required methane examinations.
- (10) The company's comprehensive mine safety plan will detail specific training subject matter to be covered and established time frames of the training sessions. Also training will be conducted with examiners as the shaft and slope work approach coal bed seams that have a history of liberating methane.
- (11) Provide a list of all certified persons responsible for making all mandatory examinations and inspections (not limited to blasting, pre-shift, electrical, gas testing, etc.

§36-1-4. Information To Be Filed By Company Performing Construction Work; Notices, Orders, and Decisions Received By Company Agent; Principal Officer in Charge; Permits To Be Obtained By Company Performing Construction Work.

4.1. Prior to beginning work in a shaft and/or slope, the company performing such construction work shall file with the Director, the name and address of the company performing the shaft and/or slope construction work.

4.2. Prior to beginning work in the shaft and/or slope after the permit approval has been obtained by the coal mine operator, the company performing such construction in a shaft and/or slope shall file with the Director, the name and address of the person who controls or operates the shaft and/or slope. Any revisions in such names and address shall be promptly filed with the Director. Each operator of a shaft and/or slope shall designate a responsible official at such shaft and/or slope as the principal officer in charge of health and safety at such shaft and/or slope and such official shall receive a copy of any notice, order, or decision issued under these rules and regulations affecting such shaft and/or slope. In any case where the shaft and/or slope is subject to the control of any person not directly involved in the daily operations of the shaft and/or slope there shall be filed with the Director the name and address of such person and the name and address of a principal official of such person who shall have overall responsibility for the conduct of an effective health and safety program at any shaft and/or slope subject to the control of such person and such official shall receive a copy of any notice, order, or decisions issued affecting any such shaft and/or slope. The mere designation of a health and safety

official under these rules and regulations shall not be construed as making such official subject to any penalty under the West Virginia Code.

4.3. The following permit approvals shall be obtained from the Director by the company performing construction work in a shaft and/or slope before such work is started:

- (1) Stop the ventilation fan.
- (2) Stop the ventilating fan when men are in shafts and/or slopes.
- (3) Use electrical machinery in shafts and/or slopes.
- (4) Use electrical lights in shaft and/or slopes.
- (5) Multiple shoot coal or rock in a shaft and/or slope.
- (6) Use or store any non-permissible explosives or non-permissible blasting devices at a shaft and/or slope.
- (7) Hoist more than four (4) men at one time in buckets or cars in a shaft and/or slope.
- (8) Use welder, torches, and like equipment in a shaft and/or slope.

§36-1-5. Posting of Permit Approvals.

5.1. At each shaft and/or slope there shall be maintained an office with a conspicuous sign designating it as the office of the shaft and/or slope, and a bulletin board at such office, in such office, in such manner that permit approvals required by these rules and regulations to be posted on the bulletin board shall be posted thereon, and be easily visible to all persons desiring to read them.

§36-1-6. Roof and Rib Control Programs and Plans.

6.1 (1) Each operator shall undertake to carry out on a continuing basis, a program to improve the roof control system of each shaft and/or slope and the means and measures to accomplish such system. A roof control plan and revisions thereof suitable to the roof conditions and mining systems of each shaft and/or slope and approved by the Director shall be adopted and set out in printed form before new operations are started. The safety committee of the miners of each shaft and/or slope where such committee exists shall be afforded opportunity to review and submit comments and recommendations to the Director and operator concerning the development, modification or revision of such roof control plan. The plan shall show the type of support and spacing approved by the Director. Such plan shall be reviewed periodically, at least every six (6) months by the Director, taking into consideration all falls of roof or rib inadequacy of support of ribs. A copy of the plan shall be furnished to the Director or his authorized representative and shall be available to the miners and their representatives.

(2) The operator, in accordance with approved plan shall provide as the Director may prescribe, an ample supply of suitable materials of proper size with which to secure the roof thereof all working places in a safe manner.

§36-1-7. Use of Authorized Explosives; Storage or Use of Underground Explosives.

7.1. It shall be unlawful to have, use, or store any permissible explosives or non-permissible blasting devices at any shaft and/or slope on the premises of the shaft and/or slope operation, without a permit of approval from the Director.

§36-1-8. Use of Magazines for Explosives.

8.1. Separate surface magazines at least fifty (50) feet apart shall be provided for storage of explosives and detonators.

8.2. Surface magazines shall be provided with doors constructed of at least one-fourth inch steel plate lined with two thicknesses of wood or equivalent, properly screened ventilators and with no openings except for entrances and ventilation and shall be kept locked securely when unattended.

8.3. The area for a distance of at least twenty-five (25) feet in all directions shall be kept free of materials of a combustible nature.

8.4. Suitable warning signs shall be erected, so located that a bullet passing directly through the face of the sign will not strike the magazine.

8.5. The location of magazines shall not be less than three hundred (300) feet from any shaft and/or slope opening, occupied building or open roads, unless barricaded in a manner approved by the Director.

8.6. If magazines are illuminated electrically, the lamps shall be of vapor type, properly installed and wired.

8.7. Smoking and open lights shall be prohibited within twenty-five (25) feet of any surface magazine.

8.8. Surface magazines shall be located away from power lines, fuel storage areas and other possible sources of fire.

8.9. Surface magazines shall be electrically bonded and grounded if constructed of metal.

§36-1-9. Transportation of Explosives.

9.1. Individual containers used to carry permissible explosives or detonators shall be constructed of substantial non-conductive materials kept closed and maintained in good condition.

9.2. Any container used for transporting or storage of explosives shall be properly identified or marked.

9.3. Explosives and detonators shall be transported in the following manner: original and unopened cases, or in suitable individual containers.

9.4. If a large quantity of explosives and/or detonators are transported to a blasting site, than are needed, such explosives and/or detonators shall be returned immediately to the surface magazines, prior to blasting operations being performed.

§36-1-10. Vehicles Used to Transport Explosives.

10.1. Vehicles used to transport explosives shall have substantially constructed bodies, no sparking metals exposed in the cargo space, and shall be equipped with suitable sides and tail gates. Explosives shall not be piled higher than the side and end.

10.2. Vehicles containing explosives and/or detonators shall be maintained in good condition and shall be operated at a safe operating speed.

10.3. Vehicles containing explosives or detonators shall be posted with placard warning signs. Placards shall be located on all four (4) sides of the motor vehicle. The placards shall contain letters four (4) inch minimum height, using 3/4 inch stroke.

10.4. Other materials or supplies shall not be placed on or in a cargo space of a vehicle containing explosives or detonators.

10.5. Explosives or detonators shall be transported in separate vehicles unless separated by four (4) inches of hardwood or the equivalent.

10.6. Explosives or detonators shall be transported promptly without undue delay in transit.

10.7. Only necessary persons shall ride on or in vehicles containing explosives or detonators.

10.8. When vehicles containing explosives or detonators are parked, the brakes shall be set, the motor power shut off and the wheels blocked.

10.9. Vehicles containing explosives or detonators shall not be taken to a repair garage for any purpose.

10.10. Smoking and open lights shall be prohibited on vehicles transporting explosives or detonators.

§36-1-11. Explosives Handling, and Use.

11.1. Damages or deteriorated explosives or detonators shall be destroyed by a representative from a powder company.

11.2. Light and power circuits shall be disconnected and removed from affected blasting area before charging and blasting.

11.3. No shots shall be fired until such place has been properly examined by an examiner-foreman and no shots shall be fired in any place where methane gas in excess of one percent (1%) is detected with a permissible flame safety or other approved methane gas detector.

11.4. Blasting practices.

(1) All persons shall be removed from the shaft prior to blasting.

(2) All persons in a slope shall be given ample warning before shots are fired. Care shall be taken to determine that all persons are in the clear before shots are fired.

11.5. Blasting areas in shaft and/or slopes shall be covered with mats or other suitable material when the excavation is too shallow to retain blasted material.

11.6. Where it is impractical to prepare primers in the blasting areas, primers may be prepared on the surface and carried into the shafts in a specially constructed, insulated, covered container.

11.7. No other development works shall be performed in a shaft or at the face of a slope where drill holes are being charged until after all shots have been fired.

11.8. Explosives shall be kept separate from detonator until charging is started.

11.9. Holes shall not be drilled where there is danger of intersecting a charged or misfired hole.

11.10. Only wooden or other non-sparking implements shall be used to punch holes in explosive cartridge.

11.11. Tamping poles shall be blunt and squared at one end and made of wood, non-sparking material, or of special approved plastic.

11.12. Electric detonators shall be kept shunted until they are being connected to the blasting line or wired into a blasting round.

11.13. Wired rounds shall be kept shunted until they are being connected to the blasting line.

11.14. Completely wired rounds shall be tested with a blasting galvanometer before connections are made to the blasting line.

11.15. Permanent blasting lines shall be properly supported, insulated and kept in good repair.

11.16. Electric detonators of different brands shall not be used in the same round.

11.17. A capped primer shall be prepared so that the detonator is contained securely and is completely embedded within the explosives cartridge.

11.18. No tamping shall be done directly on a capped primer.

11.19. Shots shall be fired promptly after charging. Mudcaps (adobes) of any other confined shot shall not be permitted in any shaft and/or slope.

11.20. Drill holes shall be stemmed from the charge of the collar of the hole unless more effective permissible stemming material or methods are approved by the Director.

11.21. Explosives shall not be removed from their original wrapper, except as possibly required under 4.1 of these regulations.

11.22. An independent circuit unless otherwise approved by the Director shall be provided for electric blasting. The circuit shall be well insulated and protected from sources of active or stray electrical currents.

11.23. Electrical currents for firing shots shall be adequate to insure detonation of an entire round.

11.24. Shooting cables shall be connected to the leg wires by the person firing the shot.

11.25. After blasting, all wires in the broken rock shall be carefully traced and a search made for unexploded explosives.

11.26. Shooting shall not be performed where a danger exists from the shooting cables crossing high voltage power lines above the shaft, after shots are fired.

11.27. When electrical detonators are used, charging shall be suspended and men withdrawn to a safe location upon the approach of an electrical storm.

§36-1-12. Misfires of Explosives.

12.1. When electric blasting caps have been used, men shall not return to misfired holes for at least fifteen (15) minutes.

12.2. Misfires shall be reported to the Examiner-Foreman and shall be disposed of safely before any work is performed in the blasting area.

12.3. After a misfire, the blasting cable shall be disconnected from the source of power and the battery ends short-circuited before electric connections are examined.

12.4. When a charge has misfired, the misfire shall be removed by:

- (1) Firing separate holes at least two (2) feet away from the parallel to the misfired charge.
- (2) Washing the stemming and the charge from the borehole with water.
- (3) Inserting and firing a new primer after the stemming has been washed out.

12.5. The handling of a misfired shot shall be under the direct supervision of an Examiner-Foreman.

12.6. Requirements for the use of sheathed explosive units for the construction of shaft and/or slope mines.

(1) Notwithstanding subsection four (4) of these rules and regulations, sheathed explosives that are approved by the U.S. Bureau of Mines shall be permitted for use in West Virginia coal mines, provided however that they are used in accordance with subsection 12.6.1 - 12.6.8 as stated.

(2) Sheathed explosive units shall be primed and placed in a position for firing and detonated by a certified shot firer designated by mine management. To primp a sheathed explosive unit, the entire detonator shall be inserted into the detonator well of the unit and be held securely in place.

(3) Separate instantaneous detonators shall be used to fire each sheathed explosive unit.

(4) Use of transportation of handling and storage of sheathed explosives shall be in accordance with the manufacturer's specifications and applicable to State and Federal Law.

(5) Sheathed explosives units shall not be primed until immediately before units are placed where they are to be fired. A sheathed explosive unit shall not be primed if it is damaged or deteriorated.

(6) No more than three sheathed explosive units shall be fired at one time.

(7) No sheathed explosive unit shall be fired in contact with another sheathed explosive unit.

(8) Certified shot firers and all persons responsible for the use, transportation and handling of sheathed blasting explosives shall be trained in the care and use of sheathed explosives.

§36-1-13. Examination - Records - Ventilation - Shaft and/or Slopes.

13.1. All shafts and/or slopes shall be ventilated by mechanical ventilation equipment during development. Such equipment shall be examined before each shift and the quantity of air in the shaft and/or slope measured daily by a certified person and the results of such examination and tests recorded in a book approved by the Director.

§36-1-14. Ventilation - Working Area.

14.1. While men are employed in a shaft and/or slope, all shafts and/or slopes shall be ventilated adequately and continuously with fresh air. Air tubing shall deliver not less than nine thousand (9,000) feet per minute at the working area or as much as necessary to remove noxious gases.

§36-1-15. Ventilation - Fans.

15.1. Ventilation fans shall be:

- (1) Installed on the surface.
- (2) Installed in fireproof housing and connected to the shaft and/or slope opening with fireproof air ducts.
- (3) Designed to permit the reversal of the air current and located in an area which will prevent a recirculation of air from the shaft and/or slope or air contamination from any other source.
- (4) Equipped with an automatic signal device designed to give an alarm in the event the fan slows or stops which can be seen or heard by any person on duty in the vicinity of the fan, except where fans are constantly attended.
- (5) Offset not less than fifteen (15) feet from the shaft and/or slope.

§36-1-16. Ventilation - Methods - Maintenance - Evacuation - Quality - Quantity.

16.1. Ventilating tubing shall be constructed to permit ventilation be either exhausting or blowing methods and when metal air ducts are used, they shall be grounded effectively to remove static and other electrical currents.

16.2. Ducts shall extend as close to the bottom as necessary to ventilate properly.

16.3. A certified person, designated by the operator, shall be assigned to maintain each ventilating system.

16.4. Unless a permit has been obtained from the Office of Miners Health, Safety and Training, the fan shall be operated continuously when men are below the surface of a shaft and/or slope. Any accidental stoppage or reduction in air-flow shall be corrected promptly; however, where repairs cannot be made immediately, development work below the surface shall be stopped and all the men who are not needed to make necessary repairs shall be removed to the surface. If ventilation is not restored in fifteen (15) minutes all underground employees shall be removed from the shaft and/or

slope and the underground employees shall not return until ventilation is restored and the shaft and/or slope is examined by a certified person holding a certificate to make a pre-shift examination.

16.5. No Superintendent-Examiner-Foreman shall permit any person to work where he is unable to maintain the quantity and quality of the air required. Provided, that such provisions shall not prohibit the employment of men to make place of employment safe.

16.6. All active underground working places in a shaft and/or slope shall be ventilated by a current of air obtaining not less than nineteen (19) and five tenths (5/10ths) percent oxygen and no harmful quantities of other noxious or poisonous gases.

§36-1-17. Device to Detect Overlapping on Hoists.

7.1. Hoists used to raise and lower persons shall be equipped with an overlap device to detect improper spooling of the cable.

TITLE 36 SERIES 2

EMERGENCY COMMUNICATIONS REQUIREMENTS FOR SHAFT AND/OR SLOPE OPERATIONS AND ARRANGEMENTS FOR EMERGENCY MEDICAL ASSISTANCE AND TRANSPORTING FOR INJURED PERSONS; REPORTING REQUIREMENTS; POSTING REQUIREMENTS AT SHAFT AND/OR SLOPE OPERATIONS

§36-2-1. General.

1.1 Scope. Rules and regulations governing emergency communications requirements for shaft and/or slope operations and arrangements for emergency medical assistance and transporting for injured persons; reporting requirements; posting requirements at shaft and/or slope operations.

1.2 Authority. W. Va. Code 22-6A-4;22-6

1.3 Filing Date. December 18, 1978

1.4 Effective Date. July 1, 1979

§36-2-2. Emergency Communications Requirements.

2.1. Each operator of a shaft and/or slope shall establish and maintain a communication system from the shaft and/or slope to the nearest point of medical assistance for use in an emergency.

2.2. The emergency communications system required to be maintained under section 2.1. of these regulations may be established by telephone or radio transmission or by any other means or prompt approved communications to any facility (for example, the local sheriff, the state police or local hospital) which has available the means of communication with the person or persons providing emergency medical assistance or transportation in accordance with the provisions of section 2.1. of these regulations.

2.3. Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by mobile transmitters. The following precautions are recommendations of the Institute of the Makers of Explosives publication No. 20, March 1971, shall be complied with. (See Table 36-2A found at the end of this regulation.)

§36-2-3. Arrangements for Emergency Medical Assistance and Transportation for Injured Persons; Reporting Requirements; Posting Requirements.

3.1. While employees are on duty each operator of a shaft and/or slope shall have made arrangements with a licensed physician, medical service, medical clinic, or hospital to provide emergency medical assistance for any person injured at any shaft and/or slope.

3.2. While employees are on duty each operator shall have made arrangements with an ambulance service, or otherwise provided for emergency transportation for any person injured at the shaft and/or slope.

3.3. After the effective date of these rules and regulations, each operator shall report to the Director of the Department of Energy the name, title and address of the physician, medical service, medical clinic, hospital, or ambulance service with whom arrangements have been made or otherwise provided, in accordance with the provisions of sections 3.1. and 3.2. of these rules and regulations.

3.4. Each operator shall, within ten (10) days after any change of the arrangements required to be reported under the section 3.3. of these rules and regulations, report such changes to the Director of the Department of Energy. If such changes involve a substitution of persons, the operator shall provide the name, title, and address of such persons together with the name and addresses of the medical service, medical clinic, hospital, or ambulance service.

3.5. Each operator shall immediately after making arrangements required under the provisions of section 3.1. and 3.2. of these rules and regulations, or immediately after any changes of such agreement, post at appropriate places at the shaft and/or slope the name, titles, and addresses, and telephone numbers of all persons or services correctly available under such arrangements to provide medical assistance and transportation at the shaft and/or slope.

§36-2-4. Effective Date of Rules and Regulations.

4.1 These rules and regulations will become effective six (6) months after they are filed in the Office of the Secretary of State.

TITLE 36 SERIES 3
THE CERTIFICATION AND STATUTORY DUTIES OF SHAFT AND/OR SLOPE
SUPERINTENDENT-EXAMINER-FOREMAN AND EXAMINER-FOREMAN

§36-3-1. General.

1.1 Scope. Rules and regulations governing the certification and statutory duties of shaft and/or slope superintendent-examiner-foreman and examiner-foreman.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. May 4, 1978

1.4 Effective Date. September 4, 1978

§36-3-2. When Superintendent-Examiner-Foreman And/Or Examiner-Foreman Required.

2.1. After the effective date of these rules and regulations, all duties hereto performed by persons as superintendent, shaft and/or slope examiner or foreman shall be performed by persons certified as superintendent-examiner-foreman or examiner-foreman.

2.2. After the effective date of these rules and regulations, each person previously certified as examiner by Chapter 22A, Article 2, Section 70 of the Code will be issued certificates as superintendent-examiner-foreman.

2.3. After the effective date of these rules and regulations every certificate heretofore issued to a Superintendent shall be deemed to be equal value to a certificate issued hereafter to a shaft and/or slope examiner-foreman.

§36-3-3. Employment Of Agent.

3.1. At each shaft and/or slope construction operation, the operator shall employ a shaft and/or slope superintendent, who shall be the agent in charge of the shaft and/or slope operation.

3.2. A certified person shall be in attendance at all times at each shaft and/or slope who has passed an examination given by the Department of Mines.

§36-3-4. Superintendent-Shaft And/Or Slope Certification.

4.1. Each applicant for certification as a shaft and/or slope superintendent shall, at the time he is issued a certificate:

(1) Have had at least five (5) years experience in the underground workings, ventilation and drainage of a shaft and/or slope, or other related experience approved by the director of the Department of Energy which shall include at least twenty-four (24) months experience in the working place of a shaft and/or slope or be a graduate of the school of mines of an accredited mining engineering technology, electrical, mechanical or civil engineering technology, electrical mechanical or civil engineering and have had at least four (4) years practical experience in the construction of shafts and/or slopes or other related experience approved by the director of the Department of Mines which shall include at least twenty-four (24) months experience in the working place of shafts and/or slopes.

(2) Have demonstrated his knowledge of dangerous mine gases and their detection, mine safety, first-aid, safety appliances, state mining laws and regulations by completing an examination as may be required of him by the director of the Department of Mines.

§36-3-5. Duties - Shaft And/Or Slope Superintendent.

5.1. The superintendent shall, each day, read carefully and countersign with ink or indelible pencil all reports entered in the record book of the shaft and/or slope examiner.

5.2. The superintendent shall provide and maintain at all shaft and/or slope operations lights of stationary character, sufficient to illuminate the surface landing area and all surrounding objects distinctly.

5.3. The superintendent or other certified person shall give prompt attention to the removal of all dangers reported to him by his examiner-foreman or any other person working in a shaft and/or slope, and in case it is impracticable to remove the danger at once, he shall see that such area is properly dangered off.

5.4. It shall be the duty of the superintendent of every shaft and/or slope operation in this state to see that all persons employed be furnished a copy of the rules and regulations promulgated by the coal mine health and safety board.

5.5. The superintendent shall see that a new company employee, regardless of previous experience, receive instructions in a particular danger incident in such shaft and/or slope work and be furnished a copy of the rules and regulations promulgated by the coal mine health and safety board. Each such new employee shall be adequately familiarized with the approved roof control plan, ventilation plan and ventilating controls and hoisting procedures, location of first-aid equipment and procedures established for contacting medical assistance, check-in check-out system, communications, fire protection and evacuation. He shall be given a complete tour and explanation of the entire construction operation.

5.6. It shall be the duty of the superintendent to provide a danger signal (a separate signal for each shift) red in color at a conspicuous location on the surface near each shaft and/or slope opening.

5.7. The superintendent or other certified examiner-foreman designated by him shall, at least weekly, search all persons, entering or about to enter a shaft and/or slope, to prevent such person from taking or carrying therein any hallucinating drugs, matches, pipes, cigars, cigarettes, or any device for making lights or fire not authorized or approved. The superintendent or other certified examiner-foreman designated by him shall, at least weekly, search all shaft and/or slope surface employees for hallucinating drugs and alcoholic beverages. Such person being searched may be required to reveal the contents within their clothing and material belongings. Results of weekly searches shall be recorded in ink or indelible pencil in the shaft and/or slope examiner record book prescribed by the Director of the Department of Energy.

5.8. The superintendent shall at least monthly examine stored first-aid supplies and first-aid equipment. Should he find an inadequate supply to comply with the provisions of these rules and regulations, immediate action shall be taken to provide such first-aid equipment as required.

5.9. The superintendent or other certified person shall not permit unauthorized persons around shafts and/or slopes.

5.10. The superintendent shall provide a check-in and check-out system which shall consist of a check board or time clock record, in the place that will not be affected in the event of an explosion.

5.11. The superintendent of the shaft and/or slope and in his absence, the examiner-foreman in charge of the shaft and/or slope, shall give immediate notice to a representative of the Department of Energy and a representative of the miners, the particulars of any accident.

5.12. Whenever any accident occurs in or about any shaft and/or slope to any employee or person connected with the operation resulting in personal injury or death, the superintendent shall, within seventy-two (72) hours, report the same in writing to the Department of Energy giving full details thereof upon forms furnished by the Department of Energy.

5.13. Following an accident in a shaft and/or slope resulting in the serious injury or death of one (1) or more persons and following any disaster in a shaft and/or slope, the evidence surrounding such occurrence shall not be disturbed after recovery of bodies or injured persons until an investigation by the Department of Energy has been completed.

§36-3-6. Duty Of Operator; Duty Of Superintendent To Notify Operator When Unable To Comply With Rules And Regulations.

6.1. Every operator of a shaft and/or slope shall furnish all supplies necessary for the superintendent to comply with requirements of these rules and regulations.

6.2. The superintendent shall notify, in writing, the operator of the shaft and/or slope, and the Director of the Department of Energy, of his inability to comply with any of the requirements of the rules and regulations.

§36-3-7. When Examiner-Foreman May Be Designated.

7.1. At any shaft and/or slope in which the operation is so extensive that the duties devolving upon the superintendent-examiner-foreman cannot be discharged by one (1) man, one (1) or more examiner-foreman may be designated and such person shall act under the instruction of the superintendent-examiner-foreman.

7.2. Any person holding a superintendent, examiner or foreman certificate issued by any other state may act in the capacity of superintendent-examiner or foreman in any shaft and/or slope in this state until the next regular examination is held by the Department of Energy, but not to exceed a maximum of ninety (90) days.

§36-3-8. Examiner-Foreman Certification.

8.1. At every shaft and/or slope the operator shall employ at least one (1) person certified as a shaft and/or slope examiner-foreman. Each applicant for certification as a shaft and/or slope examiner-foreman at the time he is issued a certificate shall: (1) Have had at least three (3) years experience in the workings, ventilation and drainage of a shaft and/or slope, twenty-four (24) months experience in the working place of a shaft and/or slope or be a graduate of an accredited mining engineering school with a bachelors degree in mining engineering technology, electrical, mechanical or civil engineering and have had at least two (2) years practical experience in a shaft and/or slope or other related construction work approved by the Director of the Department of Energy, which shall include at least eighteen (18) months experience in the working place of a shaft and/or slope. (2) Have demonstrated his knowledge of dangerous mine gases and their detection, mine safety, first-aid, safety appliances, state mining laws and regulations by completing and examination as may be required of him by the Director of the Department of Energy.

§36-3-9. Duties Shaft And/Or Slope Foreman.

9.1. The foreman shall before the beginning of any shift upon which he will perform supervisory duties, review carefully and countersign all books and records reflecting the conditions and the areas under his supervision which the operator is required to keep under these rules and regulations.

9.2. The foreman shall keep a careful watch over the ventilating apparatus, pumps and drainage.

9.3. The foreman shall not permit any person to work where he is unable to maintain the quality and quantity of air current as heretofore required: Provided, That such provisions shall not prohibit the employment of men to make the place of employment safe.

9.4. A superintendent-examiner-foreman or examiner-foreman shall be in attendance at all times at each shaft and/or slope operation.

9.5. The foreman shall carry a lighted permissible flame safety lamp and approved methane gas detector at all times when in a shaft and/or slope.

9.6. It shall be the duty of the foreman to immediately remove any accumulations of explosives or noxious gases after its discovery.

9.7. The foreman shall direct and see that the entrance or entrances to all dangerous places are properly dangered off; he shall give prompt attention to the removal of all dangers, and in case it is impracticable to remove the danger at once, he shall notify all persons whose safety is menaced thereby to remain away from the area where the dangerous condition exists.

9.8. It shall be the duty of the foreman to examine all working places under his supervision for hazards at least once every two (2) hours during each working shift, or more often if necessary for safety. Such examination shall include test for methane gas and oxygen deficiency, examinations of roof, face and ribs in working places of shafts and/or slopes.

9.9. An examination for methane and other hazardous conditions shall be made before and after shooting by the foreman.

9.10. Evidence of the foreman's examinations shall be left on an approved device at the working place by marking the date, time and his initials.

9.11. The foreman on each shift shall record conditions and practices in a book prescribed by the director of the Department of Mines. Unsatisfactory conditions or practices reported and action taken shall be continuously repeated on the daily report until corrected.

9.12. It shall be the duty of the foreman to examine the surface area surrounding each shaft and/or slope for hazards four (4) hours after the beginning of the work shift, or more often if necessary for safety.

9.13. The foreman shall examine and test daily the signaling systems used for communications in shafts and/or slopes.

§36-3-10. Duties - Shaft And/Or Slope Examiner.

10.1. It shall be the duty of the shaft and/or slope examiner, acting as such, to prepare the danger signal (a separate signal for each shift) with red color at the shaft and/or slope entrances prior to his making his pre-shift examination.

10.2. It shall be the duty of the shaft and/or slope examiner to examine each shaft and/or slope within ninety (90) minutes prior to the beginning of each shift and before any worker on such shift enters the shaft and/or slope.

10.3. In making a pre-shift examination the shaft and/or slope examiner shall examine each working place with a permissible flame safety lamp for oxygen deficiency, and each working place with an approved permissible methane detector for methane gas, examine sides of shafts and ribs and roof of all slopes.

10.4. Should the shaft and/or slope examiner find an accumulation of methane gas in excess of one (1) percent or a condition he considers dangerous to persons, he shall place a conspicuous danger sign at all entrances to such place or places. If a danger sign is posted by the shaft and/or slope examiner only persons authorized by the shaft and/or slope examiner, operator or agent shall enter such places for the purpose of eliminating the dangerous condition.

10.5. The shaft and/or slope examiner shall place his initials, date and time within twenty-five (25) feet of the places he examines.

10.6. When the shaft and/or slope examiner finds the shaft and/or slope safe he shall indicate so by changing the danger sign, red in color, to a safe sign, green in color, indicating the shaft and/or slope safe, the employees going on shift may enter such shaft and/or slope.

10.7. The shaft and/or slope examiner shall record the results of his pre-shift examination with ink or indelible pencil in a book prescribed by the director of the Department of Energy, kept for such purpose at a place on the surface of the shaft and/or slope designated by the shaft and/or slope operator.

10.8. All records as prescribed herein, shall be open for inspection by interested persons and such employees working at such shaft and/or slope operation.

10.9. Except for those persons already on assigned duty only the shaft and/or slope operator or agent shall be permitted beyond the danger signal, while red in color, until the shaft and/or slope has been examined by the shaft and/or slope examiner.

10.10. No person shall enter such shaft for any purpose at the beginning of work upon each shift therein until such signal has been changed to green in color by the examiner, as provided by these rules and regulations, except under his direction another designated shaft worker shall ride with such examiner and remain in the bucket, to relay signals to the hoist operator in case of an emergency, during his initial pre-shift examination each day: Provided, That when men are regularly working on a shift and workers are inside such shaft another shaft worker is not required to accompany him.

§36-3-11. Shaft And/Or Slope Examiner To Have No Superior Officers.

11.1. In the performance of the duties devolving upon a shaft and/or slope examiner, acting as such, they shall have no superior officers, but all employees working inside of such shaft and/or slope shall be subordinate to them in their particular work.

§36-3-12. Authority Of Examiner To Perform Other Duties.

12.1. Any person who holds a certificate issued by the Department of Energy certifying his competency to act as a shaft and/or slope examiner may perform the duties as a foreman and any other duties statutory or otherwise, for which he is qualified, in the same shaft and/or slope and on the same day or shift.

§36-3-13. Definitions.

Unless the context in which used clearly requires a different meaning, the following definitions shall apply to these rules and regulations:

13.1 Mine. The term "Mine" includes the shafts, slopes, drifts or inclines connected with, or intended in the future to be connected with, excavations penetrating coal seams or strata, which excavations are ventilated by one (1) general air current or divisions thereof, and connected by one (1) general system of mine haulage over which coal may be

delivered to one (1) or more points outside the mine, and the surface structures or equipment connected or associated therewith which contribute directly or indirectly to the mining preparation or handling of coal, or construction thereof.

13.2 Shaft. The term "Shaft" shall mean a vertical opening through the strata that is or may be used for the purpose of ventilation, drainage, and the hoisting and transportation of men and material, in connection with the mining of coal.

13.3 Slope. The term "Slope" shall mean a plane or incline roadway, usually driven to a coal seam from the surface and used for the same purposes as a shaft.

13.4 Drift. The term "Drift" shall mean a horizontal or approximately horizontal opening through any natural strata or in a coal seam and used for the same purposes as a shaft.

13.5 Department. The term "Department" shall mean the State Department of Energy provided for in section 2 of Chapter 22A, Article 1A-1 of the Code.

13.6 Director of the Department of Energy. The term "Director of the Department of Energy" shall mean the Director of the Department of Energy provided for in section 3 of Chapter 22A, Article 1A-1, of the Code, and is synonymous with the term "Chief of the Department of Mines."

13.7 Mine inspector. The term "Mine Inspector" shall mean a state mine inspector provided for in Section 7 of Chapter 22A Article 1A-1 of the Code.

13.8 Board of appeals. The term "Board of Appeals" shall mean as provided for in section 31 of chapter 22A, article 1A-1, of the Code.

13.9 Mine inspectors' examining board. The term "Mine Inspectors' Examining Board" shall mean the mine inspectors' examining board provided for in section 12 of chapter 22, article 1 of the Code.

13.10 Excavations and workings. The term "Excavations and Workings" shall mean any or all parts of a mine excavated or being excavated, including shaft, slopes, drifts, tunnels, entries, rooms and working places, either abandoned or in use.

13.11 Active workings. The term "Active Workings" shall mean all places in a shaft and/or slope that are ventilated and inspected regularly.

13.12 Working Place. The term "Working Place" shall mean the area of a shaft and/or slope in by the surface collar.

13.13 Working face. The term "Working Face" shall mean any place in a shaft and/or slope in which work of extracting material from its natural deposit in the earth is being performed.

13.14 Attendance. The term "Attendance" shall mean a distance not to exceed the radius of four hundred (400) feet from the collar of a shaft and/or slope and within sight or sound.

13.15 Working unit. The term "Working Unit" shall mean an area of a shaft and/or slope in which natural deposits are mined with a set of production equipment; a conventional mining unit by a single loading machine; or continuous mining unit by a single continuous machine.

13.16 Return air. The term "Return Air" shall mean a volume of air that has passed through and ventilated the working face in a shaft and/or slope.

13.17 Imminent danger. The term "Imminent Danger" means the existence of any condition or practice in a shaft and/or slope, where all the potentials are present, that could constitute, or cause a serious injury to any person before corrections can be made, or while the corrections are being made.

13.18 Accident. The term "Accident" shall mean any explosion, ignition, fire, or inundation, or injury to, or death of any person in a shaft and/or slope.

13.19 Interested persons. The term "Interested Persons" shall include the operator, members of any mine safety committee at the mine affected and other duly authorized representative of the mine workers and department of mines.

13.20 Agent. The term "Agent" means the person charged with the responsibility for the operation of all or a part of a shaft and/or slope or the supervision of the miners in a shaft and/or slope.

13.21 Operator. The term "Operator" shall mean any firm, corporation, partnership or individual engaged in the construction of shafts and/or slopes and the associated facilities thereof.

13.22 Superintendent. The term "Superintendent" shall mean the certified person whom the operator shall place in charge of a shaft and/or slope or associated facilities thereof.

13.23 Shaft-slope miner. The term "Shaft and/or Slope Miner" shall mean any individual working in a shaft and/or slope or associated facilities thereof.

13.24 Supervisor. The term "Supervisor" shall mean a superintendent-examiner-foreman or examiner-foreman designated by the superintendent to supervise work or employees and who is acting pursuant to such specific designation and instructions.

13.25 Certified person. The term "Certified Person," when used to designate the kind of person to whom the performance of a duty in connection with the operation of a shaft and/or slope shall be assigned, shall mean a person who is qualified under the provisions of these rules and regulations to perform such duty.

13.26 Certified electrician. The term "Certified Electrician" shall mean any person who is qualified as a mine electrician and who has passed an examination given by the department of mines, or 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 non-coal mine, in the mine equipment manufacturing industry, or in any other industry

using or manufacturing similar equipment, and has satisfactorily completed an electrical training program approved by the Department of Energy.

13.27 Approved. The term "Approved" shall mean in strict compliance with the 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.

13.28 Permissible. The term "Permissible" shall mean any equipment, device or explosive that has been approved as permissible by the United States Bureau of Mines and meets all requirements, restrictions, exceptions, limitations and conditions attached to such classification by the bureau.

13.29 Armored cable. The term "Armored Cable" shall mean a fabricated assembly of insulated conductors and a flexible metallic covering.

13.30 Borehole cable. The term "Borehole Cable" shall mean a cable designed for vertical suspension in a borehole or shaft and used for power circuits in the mine.

13.31 Cable. The term "Cable" shall mean a standard conductor (single conductor cable) or a combination of conductors insulated from one another (multiple conductor cable).

13.32 Flame-resistant cable, portable. The term "Flame-Resistant Cable, Portable" shall mean a portable flame-resistant cable that has passed the flame tests of the federal bureau of mines.

13.33 Portable (trailing) cable. The term "Portable (Trailing) Cable" shall mean a flexible cable or cord used for connecting mobile, portable or stationary equipment to an external source of electric energy where permanent mine wiring is prohibited or is impracticable.

13.34 Branch circuit. The term "Branch Circuit" shall mean any circuit, alternating current or direct current, connected to and leading from the main power lines.

13.35 Circuit breaker. The term "Circuit Breaker" shall mean a device for interrupting a circuit between separable contacts under normal or abnormal conditions.

13.36 Zig-zag transformer (grounding transformer). The term "Zig-Zag Transformer (Grounding Transformer)" shall mean a transformer intended primarily to provide a neutral point for grounding purposes.

13.37 Neutral point. The term "Neutral Point" shall mean the connection point of transformer or generator windings from which the voltage to ground is nominally zero (0), and is the point generally used for system groundings in wye-connected A.C. power system.

13.38 Neutral (derived). The term "Neutral (Derived)" shall mean a neutral point or connection established by the addition of a "Zig-Zag" or grounding transformer to a normally underground power system.

13.39 Effectively Grounded. The term "Effectively Grounded" is an expression which means grounded through a grounding connection of sufficiently low impedance (inherent or intentionally added or both) so that fault grounds which may occur cannot build up voltages in excess of limits established for apparatus, circuits or systems so grounded.

13.40 Grounded (earthed). The term "Grounded (Earthed)" shall mean that the system, circuit, or apparatus referred to is provided with a ground.

13.41 Ground or grounding conductor (mining). The term "Ground or Grounding Conductor (Mining)," also referred to as a safety ground conductor, safety ground, and frame ground, shall mean a metallic conductor used to connect the metal frame or enclosure of any equipment, device or wiring system to an effective grounding medium.

13.42 Delta connected. The term "Delta Connected" shall mean a power system in which the windings or transformers or A.C. generators are connected to form a triangular phase relationship, and with phase conductors connected to each point of the triangle.

13.43 Wye-connected. The term "Wye-Connected" shall mean a power system connection in which one (1) end of each phase windings or transformers or A.C. generators are connected together to form a neutral point, and a neutral conductor may or may not be connected to the neutral point, and the neutral point may or may not be grounded.

13.44 High voltage. The term "High Voltage" shall mean voltages of more than one thousand (1000) volts.

13.45 Medium voltage. The term "Medium Voltage" shall mean voltages from six hundred sixty-one (661) to one thousand (1000) volts.

13.46 Low voltage. The term "Low Voltage" shall mean up to and including six hundred sixty (660) volts.

13.47 Lightning arrester. The term "Lightning Arrester" shall mean a protective device for limiting surge voltage on equipment by discharging or by passing surge current to ground and is capable of repeating these functions as specified.

13.48 Power center or distribution center. The term "Power Center or Distribution Center" shall mean a combined transformer or distribution unit, complete within a metal enclosure from which one (1) or more low-voltage power circuits are taken.

13.49 Deadman control. The term "Deadman Control" shall mean a hand-or-foot operated device which must be moved to a certain position before the hoist will function and when released will stop the hoist independent of the overspeed or overwind controls.

13.50 Indicator. The term "Indicator" shall mean a dial or column with a hand or pointer attached which is operated by a chain or gear drive from the drum shaft which shows the position of the bucket in the shaft.

TITLE 36 SERIES 4
THE MOVEMENT OF MINING EQUIPMENT WITHIN COAL MINES

Note: The current regulation which became effective July 19, 1979 is included here. Parts of this regulation cannot be enforced as a result of Civil Action No. CA-79-2723 in the Circuit Court of Kanawha County. Use the court order that is included at the end of this series to determine proper enforcement of this regulation.

§36-4-1. General.

- 1.1 Scope. These rules and regulations are applicable to govern the movement of mining equipment in underground coal mines, with the exception of ordinary sectional movements, as defined in Section 2(c).
- 1.2 Authority. W. Va. Code 22-6-4
- 1.3 Filing Date. June 19, 1979
- 1.4 Effective Date. July 19, 1979

§36-4-2. Definitions.

2.1. The term "transport" shall mean (a) equipment that is pulled by either a self-propelled battery powered or track mounted vehicle, or (b) equipment that has been loaded on a flat car, skid or other similar equipment and is pulled or carried from one location to another.

2.2 The term "trammed" shall mean equipment energized with A.C. or D.C. electrical power which is moved from one location to another by a person manually operating such equipment.

2.3 The term "Ordinary Sectional Movement" shall mean the movement of self-propelled face equipment freely across and in the immediate area of a section. This includes the movement of battery powered equipment to and from the established section supply station and the movement of equipment powered by a trailing cable to the entire length of the trailing cable while attached to a distribution box or fuse nip. The movement of such equipment within twenty-four (24) inches of adequately guarded energized trolley or feeder wires at the established section supply station and access roadways to the section supply station are included. All other movements of equipment in entries where energized trolley or feeder wires are present or within twelve (12) inches of energized high voltage cables located outby the section transformer are excluded.

2.4 The term "top of locomotive" shall mean the flat surface which covers the entire length of the locomotives; with the exception of locomotives equipped with cable reels, whereas the top of the cable reel will be designated as the top of the locomotive.

§36-4-3. Track Mounted Equipment That May Continue To Operate Normally.

3.1 Track mounted equipment such as locomotive, mine cars, rock dust tank cars, compressors and other equipment designed to operate on track haulageways that create no greater than ordinary risk of fire while being operated may continue operating normally.

§36-4-4. Specific Types Of Equipment And Related Types Of Equipment That Cannot Be Moved With Persons Inby On The Same Ventilation Air Current.

4.1. Continuous miners, loading machines, cutting machines, shuttle cars, self-propelled coal drills, crusher feeders and equipment that exceed the height, width, or length of the locomotive or mine car normally used shall not be transported in track haulage entries where energized D.C. powered trolley or feeder wires are present with any person inby while in the same ventilating air current passing over such equipment being transported, except those persons actively engaged in the transporting of such equipment listed above.

Prior to starting and during the transporting of such aforementioned equipment the following listed procedures shall apply and necessary equipment shall be provided:

(a) Equipment listed above being transported on flat cars, skids, or other similar equipment shall be cleaned of accumulated combustible materials, properly secured to transporting vehicle and effectively insulated on the top side next to the trolley or feeder wire.

(b) Prior to any equipment being transported, a positive ground shall be established and continuously maintained between such machine and ground system.

(c) Heads and/or booms of all equipment being transported shall have all hydraulic pressure released and heads and/or booms shall be secured.

(d) When necessary, equipment assemblies shall be removed to provide required clearance.

(e) Adequate size locomotives shall be used while transporting mining equipment.

(f) (1). Within eight (8) hours prior to such equipment being transported the entire length of the travel route, where such equipment is to be transported, shall be examined by a certified foreman or fireboss.

(2). Within three (3) hours after such equipment has been transported the entire length of the travel route, where such equipment has been transported shall be examined by a certified foreman or fireboss.

(3). Such examinations in paragraph A and B above shall be recorded by such foreman in a book kept for that purpose.

(g) Prior to an equipment move, a visual examination shall be made by a certified electrician of all circuit breakers that will be utilized along the route of travel. Necessary settings of all such circuit breakers to be utilized, shall be made by a certified electrician.

(h) A minimum of twelve (12) inches of radius clearance shall be provided between such equipment being transported and high voltage cables and insulated D.C. power cables unless high voltage power cable and/or insulated D.C. power cables are de-energized or adequately protected.

(i) An operative means of communications shall be maintained between the move crew transporting such equipment, and the dispatcher, if one is employed, or a designated qualified person on the surface.

(j) An experienced machine operator of the type of equipment being moved shall be provided to move such equipment if it becomes necessary to energize the equipment during the move.

(k) Except as provided in paragraph twelve (12) below, a qualified person shall be located where electrical power can be immediately de-energized while the equipment is being transported.

(l) Should it be necessary for any person to be located in by the equipment being moved to control the electrical power, such person shall be provided with a gas mask or equivalent and has been trained in its use, also the above mentioned person shall have a readily available vehicle, operative communications, and immediate access to an isolated intake air escapeway before such person goes in by such equipment to control the power, he shall have been familiarized as to the escapeways in the area he may be located in at the time. If an isolated intake air escapeway is not provided in the area where a person must be in by the equipment being transported, then the person shall be given ample time to establish the power and return to the outby side of the equipment being moved, before such equipment proceeds any further.

(m) When a locomotive is operating on the boom end of the equipment being transported or where there are other conditions that may present a hazard to the locomotive operator because of being in close proximity to the equipment being moved, a flat car, mine car, or similar equipment shall be provided between the locomotive and moving equipment.

(n) No person shall be assigned to an equipment move crew that does not possess a miners certificate as an underground miner.

(o) A light and equipment move notification instructions shall be located at all portals where men enter the mine. Except for emergency moves, written instructions as to the date, time, and destination of each equipment move shall be posted twenty-four (24) hours prior to such equipment, move in the vicinity of the equipment move light in a specific location at the mine where all persons may read. Such aforementioned written instructions shall be signed by a certified foreman. Immediately prior to the equipment moves, including emergency equipment moves, the conspicuous light shall be turned on and off by a certified foreman and such light shall remain on for the duration of the equipment move. Should an unintentional delay occur, such as fan outage, work stoppage, etc., while such intended equipment move is posted, another twenty-four (24) hour notification period is not required, provided, all persons who may be affected by such equipment move shall be notified.

(p) The following fire protection equipment and tools shall be provided with each equipment move:

(1) 3-20 lb. fire extinguishers and 250 lbs. rock dust or 4-20 lb. fire extinguishers (such extinguishers shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(2) 1 ball peen hammer.

(3) 1 mine axe.

(4) 1 wire bell wrench.

(5) 1 set of come-a-longs with sufficient clamps to perform trolley wire maintenance.

(6) 2-12 inch adjustable wrenches.

(7) Adequate supply of trolley wire splices and bells.

(8) A lifting jack and/or lifting jacks sufficient in size to lift such equipment being transported.

(9) One (1) hack saw.

(10) Assortment of wood blocks.

(11) One (1) pair insulated wire cutters.

(12) One (1) pair of wireman's gloves

(13) One (1) sledge hammer.

(14) 1-10 unit first aid kit.

§36-4-5. Transporting Mining Equipment In Track Haulage Entries With Battery Powered Locomotives.

5.1. Mining equipment may be transported in track haulage entries with track mounted battery powered locomotives while persons are in by such equipment being transported in the same ventilating air current passing over such equipment, provided:

(a) When trolley and feeder wires are present, a certified electrician shall be designated to de-energize such trolley and feeder wire in the area where such equipment is to be moved. De-energizing devices in the trolley and feeder wire system shall be open, locked out with an approved device and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices, and restores the electrical power to the trolley and feeder wires after the equipment move has passed through that specific area. Mining equipment and supplies that do not exceed the height, width, or length of a mine car or locomotive will be moved under the requirements of Section 7 and Section 8 of these regulations.

(b) (1) Within three (3) hours prior of such equipment move, the entire length of the equipment travel route shall be examined by a certified foreman or fireboss.

(2) Within three (3) hours after such equipment has been transported the entire length of the travel route, where such equipment has been transported shall be examined by a certified foreman or fireboss.

(3) Such examination shall be recorded by such foreman in a book kept for that purpose.

(4) Prior to energizing trolley and/or feeder wires in the area where such equipment has been moved, an examination of the area shall be made by a certified foreman and all hazardous conditions found during his examination shall be corrected.

(c) A readily available vehicle, capable of transporting an injured persons shall be provided on the out by side of the equipment being moved.

(d) Operative means of communications shall be maintained between the equipment move crew and (1) a dispatcher, if one is employed, or (2) a designated qualified person on the surface and (3) the section and/or sections inby the moving equipment that are in the ventilating air current passing over such equipment.

(e) Such equipment being moved shall be cleaned of accumulated combustible materials and properly secured.

(f) Battery locomotives used to transport such equipment shall be cleaned of accumulated combustible materials. Battery tops shall be cleaned prior to equipment moves.

(g) Battery terminals shall be insulated between the top of the battery and battery cover to prevent accidental short-circuiting.

(h) Batteries shall be examined for proper voltage prior to equipment moves.

(i) Heads and/or booms of all equipment being transported shall have all hydraulic pressure released and heads and/or booms shall be tightly secured.

(j) When necessary, equipment assemblies shall be removed to provide required clearance.

(k) Adequate size locomotives shall be used to transport mining equipment.

(l) A minimum of twelve (12) inches of radius clearance shall be maintained between the equipment being moved, and the energized high voltage cable and energized insulated D.C. feeder wire paralleling the entry along the route of travel. In areas where the aforementioned twelve (12) inches of radius clearance cannot be maintained, the high voltage cable and D.C. feeder cable shall be adequately guarded, however, if six (6) inches of clearance cannot be maintained between the equipment being moved and the high voltage cables and D.C. insulated feeder wire, they shall be de-energized, and suitably tagged and locked out by a certified electrician: Provided, however, where it becomes necessary for equipment to pass under any high voltage cable and/or insulated D.C. feeder wire, where the required clearance cannot be maintained, the aforementioned high voltage cables and/or insulated D.C. feeder wires shall be either channeled above the level of the roof line, or de-energized.

(m) When a locomotive is operating on the boom end of the equipment being moved or where there are other conditions that may present a hazard to the locomotive operator because of being in close proximity to the equipment being moved, a flat car, mine car or like equipment of sufficient length shall be provided between the locomotive and moving equipment.

(n) An experienced machine operator of the type of equipment being moved shall be provided to move such equipment if it becomes necessary to energize the equipment during the move.

(o) No person shall be assigned to an equipment move crew that does not possess a miners certificate as an underground miner.

(p) Prior to the shift such equipment is scheduled to be moved the date, time, route of travel, and destination of equipment moves shall be posted on the mine bulletin board and a representative of the miners at that mine shall be notified at the time of posting.

(q) When such equipment move is made where de-energized trolley and/or feeder wires are present, the following tools and equipment shall be provided:

(1) 3-20 lb. fire extinguishers and 250 lbs of rock dust or 4-20 lb. fire extinguishers (such fire extinguishers shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(2) 1 ball peen hammer.

(3) 1 mine axe.

(4) 2-12 inch adjustable wrenches.

(5) A lifting jack and/or lifting jacks sufficient in size to lift such equipment being moved.

(6) Assortment of wood blocks.

(7) 1-10 unit first aid kit.

(8) 1 wire bell wrench.

(9) Adequate supply of trolley wires, splices and bells.

(10) Hacksaw

(11) 1 pair insulated wire cutters.

(12) 1 sledge hammer.

(13) 1 set of come-a-longs with sufficient clamps for trolley wire maintenance.

Items h, i, j, k, l, and m, do not apply if trolley or feeder wire is not present in the entry where equipment is transported.

§36-4-6. Track Equipment, Such As Track Cleaners, And Requirements.

6.1 Track equipment, such as track cleaners, track drills and cutting machines, that do not create any greater than ordinary risk of fire may operate normally, provided:

(a) No less than twelve (12) inches of radius clearance is maintained between trolley or feeder wires while such aforementioned equipment is being transported or trammed.

(b) Within eight (8) hours prior to such equipment move trolley wire crossovers and switches located on the equipment travel route shall be examined for proper clearance by a certified foreman or fireboss and the following necessary safety precautions implemented.

(1) (a) When such aforementioned equipment passes under energized trolley or feeder wires of high voltage cables at crossovers and switches and 12 inches of radius clearance cannot be provided such trolley or feeder wires, or high voltage cables shall be adequately guarded to prevent accidental contact.

(b) However, where it becomes necessary for the equipment to pass under bare trolley or feeder wire and six (6) inches of clearance cannot be maintained the wire may be either de-energized and locked out with an approved device and tagged out by a certified electrician or remain energized and all people inby on the same ventilating current of air brought outby the move area.

(2) Where it becomes necessary for the equipment to pass under high voltage cables and/or insulated D.C. feeder wires and the six (6) inches of required clearance cannot be maintained, the aforementioned high voltage cables and/or insulated D.C. feeder wires shall either be channeled above the level of the roof line, or de-energizing by locking out and tagging out by a certified electrician.

(c) Booms on the track cleaners shall be insulated on the trolley and feeder wire side and a means installed on the track cleaner to prevent the boom from moving from side to side.

(d) Operative means of communication shall be maintained between the operating, transporting or tramming crew and the dispatcher, if one is employed, or a designated qualified person on the surface.

When any of the above criteria cannot be complied with, no person, except such persons directly involved with the above equipment, shall be permitted to be inby such equipment on the same ventilating split of air.

6.2. Track mounted roof bolting machines, that do not create any greater than ordinary risk of fire, may be transported or trammed normally; provided:

(a) No less than twelve (12) inches of radius clearance is maintained between trolley or feeder wires while such aforementioned equipment is being transported or trammed.

(b) Within eight (8) hours prior to such equipment move trolley wire crossovers and switches located on the equipment travel route shall be examined for proper clearance by a certified foreman or fireboss and the following necessary safety precautions implemented.

(1) A) When such aforementioned equipment passes under energized trolley or feeder wires or high voltage cables at crossover and switches and twelve (12) inches or radius clearance cannot be provided such trolley or feeder wires, or high voltage cables shall be adequately guarded to prevent accidental contact.

B) However, where it becomes necessary for the equipment to pass under bare trolley or feeder wires and six (6) inches of clearance cannot be maintained the wire may be either de-energized and locked out with an approved device and tagged out by a certified electrician or remain energized and all people inby on the same ventilating current of air brought outby the move area.

(2) Where it becomes necessary for the equipment to pass under high voltage cables and/or insulated D.C. feeder wires and the six (6) inches of required clearance cannot be maintained, the aforementioned high voltage cables and/or insulated D.C. feeder wires shall either be channeled above the level of the roof line, or de-energized by locking out and tagging out by a certified electrician.

(c) Operative means of communications shall be maintained between the operating, transporting or tramming crew and the designated qualified dispatcher, if one is employed, or a designated person on the surface.

(d) While roof bolting operations are being performed and energized trolley and/or feeder wires are present, such trolley and/or feeder wires shall be adequately guarded to prevent accidental contact.

When any of the above criteria cannot be complied with, no person except such persons directly involved with the above moving equipment shall be permitted to be inby such equipment while on the same ventilating split of air.

6.3. Prior to operating, transporting or tramming of track mounted equipment listed under 6.1. and 6.2. the following fire protection and tools shall be provided:

(a) 2-20 lb. fire extinguishers (such fire extinguisher shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(b) A lifting jack and/or lifting jacks sufficient in size to lift such equipment being trammed.

(c) 1 mine axe.

(d) 1 wire bell wrench.

(e) Adequate supply of trolley wire splices and bells.

(f) 1 hack saw.

(g) Assortment of wood blocks.

(h) 1 pair insulated wire cutters.

(i) 1 pair of wireman's gloves.

(j) 1 sledge hammer.

(k) Trolley wire insulating material.

(l) 2 adjustable wrenches.

(m) 1 set of come-a-longs with sufficient clamps to perform trolley wire maintenance.

(n) 1-10 unit first aid kit.

§36-4-7. Mining Equipment And Disassembled Mining Machine Parts That May Be Transported With Certain Requirements.

7.1. Mining equipment or disassembled parts of mining equipment may be transported at any time in mine cars, provided such equipment or disassembled parts of mining equipment does not protrude above the height of such mine car.

7.2. Mining equipment or disassembled parts of mining equipment may be transported at any time on flat cars, supply cars, or skids provided:

1. Such equipment is tightly secured.
2. Such equipment being transported does not exceed the height, width and length of the mine car or top of the locomotive normally used in the specific area of such mine. If it is necessary for such equipment to pass under the trolley wire, feeder wire or high voltage cables in the specific location on the haulage road, such D.C. power and high voltage cables shall be de-energized or adequately protected to prevent accidental contact with trolley wire, feeder wire and high voltage cables.

§36-4-8. Transporting Mining Supplies.

8.1. Mining supplies may be transported in mine cars, provided: such supplies being transported do not protrude above the height of the mine car being used to transport supplies.

8.2. Mining supplies may be transported on flat cars, supply cars, or skids provided:

- (a) Such supplies being transported are tightly secured.
- (b) Such supplies do not exceed the height, width, or length of the mine car or top of the locomotive used in the specific area of such coal mine or twelve (12) inches of radius clearance is continuously provided between such supplies being transported and the trolley wire, feeder wire and all high voltage cables.

8.3. Pipe, mine haulage rails, structural steel and other similarly related equipment shall be excluded from the length requirements while being transported.

§36-4-9. Trammig of A.C. Electrical Equipment.

9.1. Electrical A.C. equipment may be trammed in entries with persons inby on the same ventilating split of air provided:

- (a) The equipment shall be cleaned of accumulated combustible materials.
- (b) When necessary, equipment assemblies shall be removed to provide necessary clearance.
- (c) Prior to the movement of equipment the following examinations shall be made and recorded in a book, for that purpose, by a certified electrician.
 - (1) Ground system and monitoring system.
 - (2) Instantaneous trip setting.
 - (3) Undervoltage protection.
 - (4) Ground phase relay.
 - (5) Equipment electrical switches.
- (d) (1) Within eight (8) hours prior to such equipment being transported the entire length of the travel route, where such equipment is to be transported, shall be examined by a certified foreman or fireboss.
 - (2) Within three (3) hours after such equipment has been transported the entire length of the travel route where such equipment has been transported shall be examined by a certified foreman or fireboss.
 - (3) Such examinations shall be recorded by such foreman in a book kept for that purpose.
- (e) When energized trolley and feeder wires are present, a certified electrician shall be designated to de-energize such trolley and feeder wire in the area where such equipment is to be moved. De-energizing devices in the trolley and feeder wire system shall be opened, locked out with an approved device and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices, and restores the electrical power to the trolley and feeder wires after the equipment move has passed through that specific area. Prior to energizing trolley and/or feeder wires in the area where such equipment has been moved, an examination of the area shall be made by a certified foreman and all hazardous conditions found during his examination shall be corrected.
- (f) A qualified person shall be located where electrical power on such equipment can be immediately de-energized in case of an emergency.
- (g) A minimum of twelve (12) inches of radius clearance shall be maintained between the equipment being moved and the energized high voltage cable and energized insulated D.C. feeder wire paralleling the entry along the route of travel. In areas where twelve (12) inches of radius clearance cannot be maintained the high voltage cable and D.C. feeder cable shall be adequately guarded, however, if six (6) inches of clearance cannot be maintained between the equipment being moved and the high voltage cables and D.C. insulated feeder wire, the high voltage cables or D.C. insulated feeder wire shall be de-energized, and suitably tagged and locked out by a certified electrician: Provided, however, where it becomes necessary for equipment to pass under high voltage cables and/or insulated D.C. feeder wire where the required clearance cannot be maintained the aforementioned high voltage cable and/or insulated D.C. feeder wire shall be channeled above the level of the roof line or de-energized.
- (h) The assigned crew trammig such equipment shall work under the direct supervision of a certified foreman and such crew shall be thoroughly familiarized with the procedures that will be followed to move such equipment.

(i) No person shall be assigned to a move crew that does not possess a miner's certificate as an underground coal miner as prescribed by the West Virginia Mine Laws.

(j) A designated qualified person shall tram the machine being moved.

(k) Operative means of communications shall be maintained between the equipment move crew and (1) a dispatcher, if one (1) is employed, or (2) a designated qualified person on the surface and (3) the section and/or sections inby the moving equipment that are in the ventilating air current passing over such equipment.

(l) All persons located inby such equipment being trammed shall have immediate access to an isolated intake air escapeway. All persons located inby the equipment being trammed shall be notified of the move and be instructed as to the location of the isolated intake air escapeway prior to the equipment move.

(m) A vehicle capable of transporting an injured person shall be readily available on the outby side of such move.

(n) The following fire protection equipment and tools shall be provided with each equipment move:

(1) One (1) twenty (20) pound fire extinguishers and two hundred fifty (250) pounds rock dust or four (4)-ten (10) pound fire extinguishers (such fire extinguishers shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(2) One (1) ball peen hammer.

(3) One (1) mine axe.

(4) Two (2) twelve (12) inch adjustable wrenches.

(5) A lifting jack and/or lifting jacks, sufficient in size to lift such equipment being trammed.

(6) Assortment of wood blocks.

(7) One (1) hack saw.

(8) One (1) sledge hammer.

(9) One (1) pair wireman's gloves.

(10) One (1) ten (10) unit first aid kit.

(11) One (1) set of come-a-longs with sufficient clamps to perform trolley wire maintenance.

(12) One (1) wire bell wrench.

(13) Adequate supply of trolley wire splices and bells.

(14) One (1) pair insulated wire cutters.

Items k, l, m, and n, do not apply if trolley wire is not present in the entry.

§36-4-10. Trammig of D.C. Electrical Equipment.

10.1. Electrical D.C. equipment may be trammed in entries with persons inby on the same ventilating split of air provided: (a) Prior to the shift such equipment is scheduled to be moved, the date, time, route of travel, and destination of the equipment move shall be posted on the mine bulletin board and a representative of the miners at that mine shall be notified.

(b) (1) Within eight (8) hours prior to such equipment being transported the entire length of the travel route, where such equipment is to be transported, shall be examined by a certified foreman or fireboss.

(2) Within three (3) hours after such equipment has been transported the entire length of the travel route where such equipment has been transported shall be examined by a certified foreman or fireboss.

(3) Such examinations shall be recorded by such foreman in a book kept for that purpose.

(c) When necessary, equipment assemblies shall be removed to provide necessary clearance.

(d) The equipment being trammed shall be cleaned of accumulated combustible materials.

(e) Prior to moving the equipment, all trailing cables shall be examined by removing the cable from the reel. All temporary splices in the cable shall be eliminated, and strain clamps and mounting brackets shall be checked for proper installation. During the movement of the equipment, the trailing cable shall remain off of the reel and the reel shall be sufficiently blocked to prevent rewinding. An external strain clamp shall be installed to protect the cable junction point at the cable reel from cable strain.

(f) The trailing cable shall be protected by a combination dual element fuse and circuit breaker. The size of the fuse and instantaneous trip setting of the circuit breaker shall be determined from Tables 36-4A, 36-4B and 36-4C found at the end of this regulation.

If the equipment will not start or run at the above recommended settings, the setting may be increased to a level necessary to eliminate the problem provided the maximum allowable setting as indicated in Tables 36-4A and 36-4B are not exceeded.

(g) Prior to moving the equipment, a certified electrician shall:

(1) Examine the instantaneous trip setting on circuit breakers.

(2) The fuse size

(3) The grounding system

(4) All electrical switches.

Any defects found during the examinations shall be corrected prior to moving the equipment. The results of the above required examinations shall be recorded in a book provided for that purpose.

(h) The assigned crew trammig such equipment shall work under the direct supervision of a certified foreman and such crew shall be thoroughly familiarized with the procedures that will be followed to move such equipment.

(i) A designated qualified person shall tram the machine being moved.

(j) No person shall be assigned to a move crew that does not possess a miners certificate as an underground coal miner as prescribed by the West Virginia Mine Laws.

(k) A qualified person shall be located where electrical power on such equipment can be immediately de-energized in case of an emergency.

(l) Only one (1) piece of equipment receiving D.C. power through a trailing cable may be trammed on one (1) ventilating split of air at a time.

(m) A vehicle capable of transporting injured persons shall be readily available.

(n) Operative means of communications shall be maintained between the equipment move crew and one (1) a dispatcher, if one (1) is employed, or (2) a designated qualified person on the surface and (3) the section and/or sections inby the moving equipment that are in the ventilating air current passing over such equipment.

(o) All persons located inby such equipment being trammed shall have immediate access to an isolated intake escapeway. All persons located inby the equipment being trammed shall be instructed as to the location of the isolated intake air escapeway prior to the movement of such equipment.

(p) A minimum of twelve (12) inches of radius clearance shall be maintained between the equipment being moved and the energized high voltage cable and energized insulated D.C. feeder wire paralleling the entry along the route of travel. In areas where twelve (12) inches of radius clearance cannot be maintained the high voltage cable and D.C. feeder cable shall be adequately guarded, however, if six (6) inches of clearance cannot be maintained between the equipment being moved and the high voltage cables and D.C. insulated feeder wire, the high voltage cables or D.C. insulated feeder wire shall be de-energized, and suitably tagged and locked out by a certified electrician. Provided, however, where it becomes necessary for equipment to pass under high voltage cables and/or insulated D.C. feeder wire where the required clearance cannot be maintained the aforementioned high voltage cable and/or insulated D.C. feeder wire shall be channeled above the level of the roof line or de-energized.

(q) When trolley and feeder wires are present, a certified electrician shall be designated to de-energize such trolley and feeder wire in the area where such equipment is to be moved. De-energizing devices in the trolley and feeder wire system shall be opened, locked out with an approved device and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices, and restores the electrical power to the trolley and feeder wires after the equipment move has passed through that specific area. Prior to energizing trolley and/or feeder wires in the area where such equipment has been moved, an examination of the area shall be made by a certified foreman and all hazardous conditions found during his examination shall be corrected.

(r) The following fire protection equipment and tools shall be provided with each equipment move:

(1) One (1) twenty (20) pound fire extinguishers and two hundred fifty (250) pounds rock dust or four (4) twenty (20) pound fire extinguishers (such extinguishers shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(2) One (1) ball peen hammer.

(3) One (1) mine axe.

(4) Two (2) twelve (12) inch adjustable wrenches.

(5) A lifting jack and/or lifting jacks, sufficient in size to lift such equipment being trammed.

(6) One (1) hack saw.

(7) Assortment of wood blocks.

(8) One (1) sledge hammer.

(9) One (1) pair wireman's gloves.

(10) One (1) ten (10) unit first aid kit.

(11) One (1) set of come-a-longs with sufficient clamps to perform trolley wire maintenance.

(12) One (1) wire bell wrench.

(13) Adequate supply of trolley wire splices and bells.

(14) One (1) pair insulated wire cutters.

Items 11, 12, 13 and 14, do not apply if trolley wire is not present.

§36-4-11. Movement Of Disassembled Parts Of Mining Equipment and Equipment In Off-Track Entries With Battery Powered Equipment.

11.1. Disassembled parts of mining equipment and mining equipment may be transported by battery powered equipment in off track entries while persons are inby such equipment on the same ventilating air current, provided twelve (12) inches of radius clearance is provided from insulated energized D.C. trolley feeder wires energized high voltage cables. If exposed uninsulated energized power wires are present in the immediate area where the battery equipment is moving the equipment or disassembled parts, no person, except those involved in the move, shall be permitted inby in the same ventilating air current.

When moving equipment of disassembled parts of mining equipment with men inby on the same ventilating air current the following procedures shall be followed:

(a) A minimum of twelve (12) inches of radius clearance shall be maintained between the equipment being moved and the energized high voltage cable and energized, insulated D.C. feeder wire paralleling the entry along the route of travel. In areas where the aforementioned twelve (12) inches of radius clearance cannot be maintained the high voltage cable and D.C. feeder cable shall be adequately guarded, however, if six (6) inches of clearance cannot be maintained between the equipment being moved and the high voltage cables and D.C. insulated feeder wire and the high voltage

cables or D.C. insulated wire shall be de-energized, and suitably tagged and locked out with an approved device by a certified electrician: Provided, however, where it becomes necessary for equipment to pass under high voltage cables and/or insulated D.C. feeder wire, where the required clearance cannot be maintained, the aforementioned high voltage cables and/or insulated D.C. feeder wire shall either be channeled above the level of the roof line or de-energized. When energized trolley and feeder wires are present, a certified electrician shall be designated to de-energize such trolley and feeder wire in the area where such equipment is to be moved. De-energizing devices in the trolley and feeder wire system shall be opened, locked out with an approved device and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices, and restores the electrical power to the trolley and feeder wires after the equipment move has passed through that specific area. Prior to energizing trolley and/or feeder wires in the area where such equipment has been moved, an examination of the area shall be made by a certified foreman and all hazardous conditions found during his examination shall be corrected.

(b) No person shall be assigned to an equipment move crew that does not possess a miners certificate as an underground miner.

(c) The equipment move, and the move crew shall be under the direct supervision of a certified foreman.

(d) Operative means of communication shall be maintained between the equipment move crew and the dispatcher, if one is employed, or a designated qualified person on the surface.

(e) Prior to the shift such equipment is scheduled to be moved, the date, time, route of travel, and destination of equipment moves shall be posted on the mine bulletin board and a representative of the miners at that mine shall be notified at the time of posting.

(f) Within eight (8) hours prior to moving mining equipment the battery powered, off track equipment used in the equipment move shall be examined by a certified electrician, and such examination shall be recorded in a book kept for such purposes.

(g) (1) Within eight (8) hours prior to such equipment being transported the entire length of the travel route, where such equipment is to be transported, shall be examined by a certified foreman or fireboss.

(2) Within three (3) hours after such equipment has been transported the entire length of the travel route, where such equipment has been transported shall be examined by a certified foreman or fireboss.

(3) Such examinations shall be recorded by such foreman in a book kept for that purpose.

(h) Equipment being moved shall be cleaned of combustible materials, and assemblies shall be removed if required for clearance.

(i) An emergency vehicle capable of transporting an injured person shall be readily available.

(j) The following equipment shall be provided during equipment moves:

(1) 1-20 lb. fire extinguishers and 250 lbs. rock dust or 4-20 lb. fire extinguishers (such extinguishers shall be placed where they are readily accessible and on the outby side of the equipment being moved).

(2) One (1) ball peen hammer.

(3) One (1) mine axe.

(4) two (2)-twelve (12) inch adjustable wrenches.

(5) A lifting jack and/or lifting jacks, sufficient in size to lift such equipment being trammed.

(6) One (1) hack saw.

(7) Assortment of wood blocks.

(8) One (1) sledge hammer.

(9) One (1) pair wireman's gloves.

(10) 1-10 unit first aid kit.

(11) One (1) set of come-a-longs with sufficient clamps to perform trolley wire maintenance.

(12) One (1) wire bell wrench.

(13) Adequate supply of trolley wire splices and bells.

(14) One (1) pair insulated wire cutters.

Items 11, 12, 13 and 14, do not apply if trolley or feeder wire is not present in the entry where equipment is transported.

§36-4-12. Construction Work And Requirements.

12.1. Construction work using various types of mining machines, including machines powered by battery will be permitted to be operated with men inby on the same air current providing the following provisions are followed:

(a) Such mining equipment shall not operate where any bare exposed energized trolley or feeder wires are present.

(b) When trolley and feeder wires are present, a certified electrician shall be designated to de-energize such trolley and feeder wire in the area where such equipment is operating. De-energizing devices in the D.C. trolley and feeder wire system shall be opened, locked out with an approved device and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices and restores the electrical power to the trolley and feeder wires in a specific area when the work has ceased or been completed.

(c) A distance of twelve (12) inches minimum clearance shall be maintained between the machine being operated and any energized high voltage cables and insulated D.C. feeder cable.

(d) Operative communications shall be provided at the construction site while persons are working in the construction area.

(e) Two (2) twenty (20) lb. fire extinguishers and two hundred and forty (240) lbs. of rock dust (such extinguishers shall be placed where they are readily accessible on the outby side) and one 10-unit first aid kit shall be provided at the construction site.

§36-4-13. Rehabilitation Work And Requirements.

13.1. Where rehabilitation work is being performed with person inby on the same ventilating split of air such as, cleaning of haulage roads, roof bolting, the cleaning of falls, the installation of structural materials and other related assignments similar to the aforementioned, and the use of face equipment is necessary to perform such work, the following procedures shall be followed:

(a) A minimum of twelve (12) inches of radius clearance shall be maintained between the equipment being operated and the energized high voltage cable and energized insulated D.C. feeder wire paralleling the entry. In areas where twelve (12) inches of radius clearance cannot be maintained, the high voltage cable and D.C. insulated feeder cable shall be adequately guarded, however, if six (6) inches of clearance cannot be maintained between the equipment being moved and high voltage cables or insulated D.C. feeder wire, the high voltage cables or insulated D.C. feeder wire shall be de-energized, and suitably tagged and locked out with an approved device by a certified electrician: Provided, however, where it becomes necessary for equipment to pass under high voltage cables and/or insulated D.C. feeder wire, where the required clearance cannot be maintained, the aforementioned high voltage cables and/or insulated D.C. feeder wire shall either be channeled above the level of the roof line or de-energized.

(b) Operative communications shall be provided at the rehabilitation site while work is being performed.

(c) When trolley and feeder wires are present, a certified electrician shall be designated to de-energized such trolley and feeder wire in the area where such equipment is to be moved. De-energizing devices in the trolley and feeder wire system shall be opened, locked out and suitably tagged by a designated certified electrician. A designated certified electrician shall be the person who removes the danger tags, locking devices, and restores the electrical power to the trolley and feeder wires after the equipment has completed working within a specific area.

(d) Three (3)-twenty-(20) lb. fire extinguishers and two hundred-forty (240) lbs. rock dust and one (1)-ten (10) unit first-aid kit shall be provided at the rehabilitation site.

TABLE 36-4 A

LIST OF MAXIMUM CIRCUIT-BREAKER INSTANTANEOUS TRIP SETTINGS TO PROTECT A GIVEN LENGTH OF CABLE FOR 300-VOLT SYSTEM

Cable length(ft.)	300	400	500	600	700	800	900	1000	Maximum Allowable Settings
Cable Size (A.W.G.)									
4	650	500	450	400	**	**	**	**	650
2	950	750	650	550	500	**	**	**	950
1	1100	900	750	650	600	500	**	**	1100
1/0	1300	1050	900	800	750	650	**	**	1300
2/0	1500	1250	1100	950	850	750	**	**	1500
3/0	1750	1450	1250	1100	1000	900	850	**	1750
4/0	1950	1650	1500	1300	1200	1100	1000	900	1950

TABLE 36-4 B

LIST OF MAXIMUM CIRCUIT-BREAKER INSTANTANEOUS TRIP SETTINGS TO PROTECT A GIVEN LENGTH OF CABLE FOR 600-VOLT SYSTEM

Cable Length(ft.)	300	400	500	600	700	800	900	1000	Maximum Allowable Settings
Cable Size (A.W.G.)									
4	1000	850	750	650	**	**	**	**	1000
2	1200	1100	1000	900	800	**	**	**	1200
1	1250	1150	1100	1000	950	850	**	**	1250
1/0	1350	1250	1150	1100	1050	950	**	**	1350
2/0	1400	1300	1250	1200	1150	1100	1050	**	1400
3/0	1450	1350	1300	1250	1200	1150	1100	**	1450
4/0	1500	1400	1350	1300	1300	1250	1200	1150	1500

**TABLE 36-4 C
SHORT CIRCUIT PROTECTION; DUAL ELEMENT FUSES; CURRENT RATINGS; MAXIMUM VALUES**

Conductor Size (A.W.G. or M.C.M.)	Single Conductor Cable		Two Conductor Cable	
	Ampacity Rating	Max. Fuse Rating	Ampacity	Max. Fuse
14			15	15
12			20	20
10			25	25
8	60	60	50	50
6	85	90	65	70
4	110	110	90	90
3	130	150	105	110
2	150	150	120	125
1	170	175	140	150
1/0	200	200	170	175
2/0	235	250	195	200
3/0	275	300	225	225
4/0	315	350	260	300
250	350	350	285	300
300	395	400	310	350
350	445	450	335	350
400	480	500	360	400
450	515	600	385	400
500	545	600	415	450

Civil Action No. CA-79-2723

Plaintiffs:

District 17, United Mine Workers of America, and Charles L. Gibson

Defendant:

Walter N. Miller, Director of the West Virginia Department of Mines

ORDER

On the 15th day of August, 1979 came the parties, by counsel, at which time the defendant requested a clarification of the order entered in this cause on the 19th day of July, 1979, and thereupon:

It is hereby ORDERED that your defendant Miller is temporarily enjoined from enforcing said "Rules and Regulations Governing the Movement of Mining Equipment within Coal Mines in the State of West Virginia" to the extent that such regulations permit the movement of major pieces of heavy mining equipment with men inby the equipment in the ventilating split that is passing over such equipment, to-wit, Section 4- applying the prohibition only to "transporting" and only "where energized D.C. powered trolley or feeder wires are present"; Sections 5.1, 9.1, 10.1, 12.1, and 13.1 to the extent that they involve transporting or tramping such equipment with men inby; Sections 6.1 and 6.2 only to the extent that such equipment is not designed by the manufacturer to operate on track; Section 7.1 only to the extent that such equipment exceeds the length or width of the mine car; and Section 11.1 only to the extent that such equipment in said Section exceeds the length, width, or cargo carrying capacity of the unit being used to transport such equipment. And further, that W. Va. Code 22-2-6 is to be enforced consistent herewith until further Order of this Court. Construction work and rehabilitation work are not prohibited except to the extent that such would involve the movement of major pieces of heavy mining equipment into the precise area where such work is to be performed, with men inby.

To all of which the defendant by counsel objects and excepts.

Upon good cause shown, this ORDER is granted without bond. It is further ORDERED that this ORDER be served immediately by deputy sheriff of Kanawha County:

Judge Robert Smith
August 15, 1979

Counsel for plaintiff: Daniel Hedges

Counsel for Defendant: Marianne Kapinos

TITLE 36 SERIES 5
TELEPHONE SERVICE OR COMMUNICATION FACILITIES

§36-5-1. General.

1.1 Scope. This legislative rule establishes requirements for the location and maintenance of telephone service or communication facilities in underground mines.

1.2 Authority. W. Va. Code 22-2A-4

1.3 Filing Date. July 18, 1985

1.4 Effective Date. July 18, 1985

§36-5-2. Telephone Service Or Communication Facilities.

2.1. Telephone service or equivalent two-way communication facilities shall be provided in all mines at least one of which shall be in service at all times as follows:

2.2. A telephone or equivalent two-way communication facility shall be located on the surface within five (500) hundred feet of all main portals, and shall be installed either in a building or in a boxlike structure designed to protect the facilities from damage by inclement weather. At least one of these communication facilities shall be located within five (500) hundred feet of at least one main portal where a responsible person is always on duty when men are underground so such person can hear the facility and respond immediately in event of an emergency. "Two-way communication facility" shall mean a system maintained to allow voice contact to come in and out of the working section at all times.

2.3. Telephone or equivalent two-way communication facilities provided on each working section shall be equipped with an audible or visual device and shall be located not more than five (500) hundred feet outby the last open crosscut and not more than eight (800) hundred feet from the farthest point of penetration of the working places on such section.

(1) The incoming communication signal shall activate an audible alarm, distinguishable from the surrounding noise level, or a visual alarm that can be seen by a miner employed on the working section. Such alarm signal, whether audible or visual, indicating an incoming telephone call shall be continuously activated until a response is received. However, such signal may be deactivated if communicated is no longer desired.

(2) If a communication system other than telephones is used and its operation depends entirely upon power from the mine electric system, means shall be provided to permit continued communication in the event the mine electric power fails or is cut off: Provided, that where trolley phones and telephones are both used, an alternate source of power for the trolley phone system is not required.

(3) Telephones or equivalent two-way communication facilities shall be maintained in good operating condition at all times. In the event of any failure in the system that results in loss of communication, repairs shall be started immediately, and the system restored to operating condition as soon as possible.

If after a reasonable time the failed system is not restored to an operating condition, all persons shall be removed from the working section, unless a trolley radio phone or its equivalent as specified in the next paragraph, is used. As used herein, a reasonable time shall be defined as such time as is required to promptly examine, after discovery of the loss of communication, the section communications line to the section branch line, and if the cause of the failure is determined during this examination, to immediately correct the same.

If trolley radio phone or its equivalent is available, it may be utilized for communications in the event of a failure in the system that results in the loss of communications provided that such trolley radio phone or its equivalent shall be located not more than eight (800) feet from the farthest penetration of working places on a working section with a person continually stationed with the trolley radio phone and provided further that efforts are being made to restore the communication system to an operating condition.

(4) Where required by the director, trucks used for haulage of coal, men or supplies by an operator shall be equipped with two-way communication instruments.

2.4. On or after the first day of January, one thousand nine hundred seventy-eight (1978), unless the director for good cause grants a waiver, all such telephones or equivalent two-way communications shall be connected to regular telephonic and other means of communication available in the community so that in the event of an emergency, emergency medical attendants or other personnel can communicate from within the mine directly to health care facilities.

Such telephonic and other means of communication available in the community shall be the primary source of communication from the mine to health care facilities. The director, at any time, upon application from the operator, may grant a waiver providing for a back-up system of communication that may be used in the event of a malfunction in the primary communication system, in order to maintain communication from the mine to health care facilities.

In the event the primary system of outside communications, and if applicable, the back-up system of communication malfunction, so that there is no communication from the mine to the health care facilities, all employees shall be removed from the underground, unless the director of the Department of Energy, for cause, grants a waiver.

2.5. Telephone lines and cables shall be carried on insulators installed on the opposite side of trolley wires and at least twelve (12) inches from all other insulated power wires other than those classified as Class two (2) or Class three (3) circuits by the National Electric Code, and where such telephone lines or cables cross power or trolley wires, they shall be insulated adequately.

Lightning arresters shall be provided at the points where telephone circuits enter the mine.

**TITLE 36 SERIES 6
LONGWALL MINING**

§36-6-1. General

1.1 Scope. Rules and Regulations Governing Longwall Mining Within the State of West Virginia.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. April 28, 1994

1.4 Effective Date. June 1, 1994

1.5 Other Law Applicable. All provisions of the Mining Law of this State, specifically Chapter 22 A, Article 2 A of the Code are applicable to longwall mining, except to the extent that these regulations cover the specific requirement.

§36-6-2. Effective Law and Regulation.

2.1. These regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22A, Article 1A of the West Virginia Code relative to enforcement are applicable to the enforcement of these regulations.

§36-6-3. Definitions.

3.1 Department. The term "Department" shall mean the Office of Miners' Health, Safety and Training provided for in Section 2, Article 1 A, Chapter 22A of the West Virginia Code.

3.2 Approved. The term "Approved" shall mean 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.

3.3 Accessible Travel Route. "Accessible Travel Route" means an unobstructed passageway not less than twenty-four (24) inches wide with reflective material at twenty-five (25) foot intervals.

3.4 Retreat Longwall Working Face. The term "Retreat Longwall Working Face" shall mean a working place in a coal mine in which work of extracting coal from its natural deposit in the earth is performed during a mining cycle by a longwall mining system.

3.5 Retreat Longwall Working Section. The term "Retreat Longwall Working Section" shall mean all areas from and including the section transformer to and including the longwall working face.

3.6 Caving Line. The term "Caving Line" shall mean the line on the roof formed by the rear most projection of the roof support canopies once the longwall section has started retreating.

§36-6-4. Plans for Longwall Mining; Approval by Office of Miners' Health, Safety and Training.

4.1. After the effective date of these rules and regulations, no longwall mining shall be started in any coal mine until required plans for longwall mining have been filed and approved by the Office of Miners' Health, Safety and Training, which approval shall not be unreasonably withheld. All revisions to such approved plans shall be resubmitted for approval to the Office of Miners' Health, Safety and Training.

Longwall mining plans submitted for approval to the Office of Miners' Health, Safety and Training shall include the following:

(a) Company Name

(b) Mine Name

(c) Mine Location

(d) Mine Address

(e) Telephone Number (Mine)

(f) Name, title and telephone number of person submitting plan.

(g) Mine D Number

(h) Longwall Mining Roof Control Plan (All approved roof control plans for longwall mining sections shall include a plan indicating the roof support to be used and the working procedures to be followed when a cavity is encountered over chocks.)

(i) Longwall shields and chocks shall be lowered and/or depressurized by the use of a hydraulic pump, and shall not be lowered and depressurized manually. Methods for lowering and depressurizing such as, but not limited to, removing hoses or releasing yield valves are prohibited. Longwall shields and chocks shall not be lowered or depressurized by any other means unless approved by the Director if it is determined that safety is not diminished.

(j) Ventilation Plan, which shall include the complete section and face ventilation controls and bleeder systems.

(k) Methane and Dust Control Plan.

4.2. After approval of submitted plans has been obtained from the Office of Miners' Health, Safety and Training as required in Section 4.1. and 4.2 of these rules and regulations, additional approvals for new longwall sections will not be necessary; providing required plans initially approved and/or revised are complied with.

4.3. In coal mines where retreat longwall mining section operations are in progress prior to the effective date of these rules and regulations, no new longwall mining sections shall be started until required plans for longwall mining have been filed and approved by the Office of Miners' Health, Safety and Training, which approval shall not be unreasonably withheld.

§36-6-5. Chock and/or Shield Recovery Plan from Longwall Face; Approval by Office of Miners' Health, Safety and Training.

5.1. The operator shall develop a plan for recovery of chocks and/or shields or other longwall roof support. Such recovery shall not be initiated until such recovery plan is approved by the Office of Miners' Health, Safety and Training,

which approval shall not be unreasonably withheld. All revisions to such approved plan shall be resubmitted for approval to the Office of Miners' Health, Safety and Training.

§36-6-6. Communications; Longwall Working Face; Longwall Working Section.

6.1. Two-way communication facilities, approved by the Director of the Office of Miners' Health, Safety and Training, shall be provided at the headgate, tailgate and across each longwall section face. During the production of coal longwall section face communication facilities shall be a separate system from the mine communication facilities. Longwall section face communication facilities shall be located at a point not more than one-hundred (100) feet apart across the longwall section face.

6.2. Two-way communication facilities shall be provided on each longwall working section. During production of coal the headgate operator, or other designated person, shall be continuously available with the longwall section communication and longwall face communication facilities.

§36-6-7. Electrical De-energizing Devices; Longwall Section Face Conveyor.

7.1. After the effective date of these rules and regulations, all new installed longwall section face conveyors shall be provided with lock-out type de-energizing devices to de-energize the electrical power on the longwall section face conveyor: Such de-energizing devices shall be provided at intervals of not more than fifty (50) feet when the height of the coal seam is below forty-eight (48) inches and at intervals of not more than one-hundred (100) feet when the height of the coal seam is above forty-eight (48) inches.

Twelve (12) months after the effective date of these rules and regulations all longwall mining sections that were in operation prior to the effective date of these rules and regulations shall be provided with lock-out type de-energizing devices on face conveyors as required in the aforementioned paragraph.

7.2. The headgate operator on the longwall section face shall be provided with emergency de-energizing devices to de-energize immediately the longwall mining face equipment.

7.3. (1) At the beginning of each coal producing shift all emergency de-energizing devices shall be checked for proper functioning. If an emergency de-energizing device is found malfunctioning, mining operations shall not begin until all de-energizing device is repaired.

(2) If during a coal producing shift a de-energizing device malfunctions, a designated person shall be stationed at the next de-energizing device until such time the malfunctioning de-energizing device is functioning properly.

(3) At no time shall more than one de-energizing device be malfunctioning while mining operations are in progress.

7.4. Longwall section face conveyor electrical circuits shall be designed so the face conveyor will not start at any other location until the lockout device is disengaged at the point of initial interruption.

7.5. All shearer and plow motors used on a longwall section face shall be designed so that the cutting bits on the shearer or plow cannot begin operating when electrical power is initially applied.

7.6. No person shall perform work on the panline or on the face side of the panline unless such equipment is de-energized and locked out.

§36-6-8. Methane Examinations; Monitor, Face Area.

8.1. The Director or his representative shall require an approved methane monitor to be installed at the headgate on a longwall working section. The censoring unit indicating the atmospheric conditions on the above methane monitor shall be installed at a location in by the rib line on the return side of the longwall face.

The methane monitor shall be kept operative and properly maintained and tested weekly.

Such methane monitor shall give warning automatically when the concentration of methane reaches a maximum percentage of not more than 1.0 volume percentum of methane.

The operator of any mine which longwall mining is performed shall establish and adopt a definite maintenance program designed to keep such methane monitors operative and a written description of such program shall be available for inspection. At least once each month the methane monitors shall be checked for operating accuracy with a known methane air mixture and shall be calibrated as necessary. A record of calibration tests shall be kept in a book on the surface.

If the methane monitor on a longwall mining section malfunctions the operator shall have such monitor repaired within twelve (12) hours, however, during that period of time the methane monitor is inoperative, the electric equipment shall not be operated for a longer period than ten minutes without an examination for methane gas, the two hour examination as required in Section 8.2 of these rules and regulations shall be conducted on one hour intervals and air reading on the intake side of the longwall face shall be collected on one hour intervals.

If for extraordinary reasons parts are unavailable to correct the malfunction on the methane monitor, within twelve hours, the operator shall notify the Office of Miners' Health, Safety and Training who will evaluate the circumstances.

If a malfunction to the methane monitor occurs on a longwall working section, the supervisor on such shift shall indicate in his on shift examination report, in the fire boss report books, the date and time such methane monitor malfunctioned.

8.2. It shall be the duty of the certified person designated by the mine foreman to supervise a longwall section, to examine the longwall face for hazards at least once every two (2) hours during each coal producing shift or more often if necessary for safety. Such examination shall include test for methane gas and oxygen deficiency. Such methane and oxygen deficiency examinations shall be made in at least one hundred foot intervals, between the headgate and tailgate. The initials, date, and time shall be recorded at the test locations.

Should one percent or more of methane gas be detected, the electrical equipment shall be immediately de-energized and the electrical power circuit then disconnected from the power supply until the place is pronounced safe by a certified person.

§36-6-9. Safety Provisions - Longwall Section Face Conveyor.

9.1. No person shall cross the longwall section face conveyor while such is in operation, unless a crossover is provided for a person to cross the face conveyor safely.

9.2. Prior to starting a longwall section face conveyor, telephone pager communications or other effective warning signal shall be sounded to alert all persons across the longwall section working face.

9.3. No person shall ride the longwall section face conveyor; however, a plan may be submitted to the Director of the Office of Miners' Health, Safety and Training for approval for the removal of injured persons on the longwall section face conveyor, provided it is necessary to transport such injured person on a stretcher or backboard.

9.4. All new face roof support units shall be equipped with adjacent unit controls unless units have a wide single canopy over each unit that protects the workman from falling material when operating unit controls from within the support of shield unit being removed.

9.5. After the effective date of these rules and regulations, all new installed face roof support units shall be equipped with an outlet to facilitate measurement of the interior prop pressure.

After the effective date of these rules and regulations, all new installed face roof support units shall be equipped with an outlet to facilitate measurement of the yield pressure.

9.6. Yield valves of face roof support units shall be calibrated at least annually within fifteen (15) percent of the yield pressure specified in the approved roof control plan. A legible record of such calibrations of each valve shall be kept on the surface of the mine for at least eighteen (18) months and be available for inspection by interested persons.

§36-6-10. Cutting and Welding; Longwall Mining Section.

10.1. Prior to cutting and welding being performed on a longwall section face methane gas examinations shall be made by a certified mine foreman-fire boss or assistant mine foreman-fire boss. Cutting and welding may only be performed when methane gas is less than one percent. A certified person as defined above shall be continuously present during all cutting and welding operations.

10.2. Prior to cutting or welding on a longwall section face panline, such open bottom type panlines shall be jacked up, blocked and/or properly secured off the bottom a distance of at least ten (10) feet along the face on both sides where such cutting is to be performed. Methane examinations shall be made before cutting and welding is initiated on such panlines.

10.3. When cutting and welding operations have been completed a certified person as defined above shall search for fires and hot spots. If fires or hot spots are found, they shall be extinguished immediately.

§36-6-11. Longwall Mining - General Requirements.

11.1. All hydraulic line repairs shall be performed in accordance with the requirements of the manufacturer's specifications.

11.2. All hydraulic roof support units and associated apparatus on a longwall working face shall be visually inspected at least once during each coal production shift by a qualified person. A written record of such examination shall be maintained on the surface.

§36-6-12. Longwall Mining; First Aid Equipment.

12.1. First aid equipment required on each working section as defined in Chapter 22 A, Article 2, Section 59 of the West Virginia Code shall be maintained in the headgate and tailgate entries at a point not to exceed one hundred-fifty (150) feet outby the longwall working face.

§36-6-13. Accessible Travel Route - Longwall Mining Section.

13.1. An accessible travel route shall be maintained at all times off of the tailgate end of the retreat longwall working face.

However, the operator may develop a plan for approval, by the Office of Miners' Health, Safety and Training to continue operation of the longwall working section in the event the tailgate route becomes impassable. Such plan shall include necessary provisions to be taken to provide additional protective devices for longwall section personnel.

When the tailgate travel routes becomes impassable the longwall operation shall cease immediately and all persons working on such longwall section shall be familiarized of the procedures to follow for escape from such section. Such approval plan by the Office of Miners' Health, Safety and Training shall be implemented immediately.

The operator shall immediately notify the Office of Miners' Health, Safety and Training when such travel route becomes impassable.

The Office of Miners' Health, Safety and Training representative shall immediately upon notification establish a scheduled meeting with the operator and representatives of the miners at such mine.

§36-6-14. Training - Longwall Mining Section.

14.1. Training programs in the hazards of longwall mining shall be submitted for approval to the Director of the Office of Miners' Health, Safety and Training.

The training program shall consist of the following:

- (a) Escapeway and Travel Routes
- (b) Ventilation
- (c) Roof Support

- (d) Communications
- (e) Stop Controls and Signals
- (f) Location of First-Aid Equipment
- (g) Safety Rules for Longwall Mining

TITLE 36 SERIES 7 SHORTWALL MINING

§36-7-1. General.

- 1.1 Rules and regulations governing shortwall mining within the state of West Virginia.
- 1.2 Authority. W. Va. Code 22-6-4.
- 1.3 Filing Date. November 1, 1980
- 1.4 Effective Date. December 1, 1980
- 1.5 Other Law Applicable. All provisions of the Mining Law of this state, specifically Chapter 22A, Article 2 of the

Code are applicable to shortwall mining, except to the extent that these regulations cover the specific requirement.

§36-7-2. Effective Law And Regulation.

2.1. These regulations shall have the effect of the law and violation shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22, Article 1 of the West Virginia Code relative to enforcement are applicable to the enforcement of these regulations.

§36-7-3. Definitions.

3.1 Department. The term "Department" shall mean the State Department of Energy provided for in Section two, Article one-A, Chapter twenty-two-A of the West Virginia Code.

3.2 Approved. The term "Approved" shall mean in strict compliance with 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.

3.3 Accessible Travel Route. "Accessible Travel Route" means an unobstructed passageway not less than twenty-four (24) inches wide with reflective material at twenty-five (25) foot intervals.

3.4 Retreat Shortwall Working Face. The term "Retreat Shortwall Working Face " shall mean a working place in a coal mine in which work of extracting coal from its natural deposit in the earth is performed during a mining cycle by a shortwall mining system.

3.5 Retreat Shortwall Working Section. The term "Retreat Shortwall Working Section" shall mean all areas from and including the section transformer to and including the shortwall working face.

3.6 Caving Line. The term "Caving Line" shall mean the line on the roof formed by the rear most projection of the roof support canopies once the shortwall section has started retreating.

§36-7-4. Plans For Shortwall Mining; Approval By Department Of Energy.

4.1. After the effective date of these rules and regulation, no shortwall mining shall be started in any coal mine until required plans for shortwall mining have been filed and approved by the Department of Energy, which approval shall not be unreasonably withheld. All revisions to such approved plans shall be resubmitted for approval to the Department of Energy. Shortwall mining plans submitted for approval to the Department of Energy shall include the following:

- (a) Company Name
- (b) Mine Name
- (c) Mine Location
- (d) Mine Address
- (e) Telephone Number (Mine)
- (f) Name, Title and telephone number of person submitting plan
- (g) Mine D Number
- (h) Shortwall Mining Roof Control Plan

(All approved roof control plans for Shortwall mining sections shall include a plan indicating the roof support to be used and the working procedures to be followed when a cavity is encountered over chocks).

(i) Ventilation Plan, which shall include the complete section and face ventilation controls and other bleeder systems.

- (j) Methane and Dust Control Plan.

4.2. After approval of submitted plans has been obtained from the Department of Energy, as required in Section 4.1 and 4.2 of these rules and regulations, additional approvals for new shortwall sections will not be necessary; providing required plan initially approved and/or revised are complied with.

4.3. In coal mines where retreat shortwall mining section operations are in progress prior to the effective date of these rules and regulations, no new shortwall mining sections shall be started until required plans for shortwall mining have been filed and approved by the Department of Energy, which approval shall not be unreasonably withheld.

§36-7-5. Chock And/Or Shield Recovery Plan From Shortwall Face; Approval By Department Of Energy.

5.1. The operator shall develop a plan for recovery of chocks and/or shields or other shortwall roof support. Such recovery shall not be initiated until such recovery plan is approved by the Department of Energy, which approval shall not be unreasonably withheld. All revisions to such approved plan shall be resubmitted for approval to the Department of Energy.

§38-7-6. Methane Examination; Monitor: Face Area.

6.1. The Director or his representative shall require an approved methane monitor to be installed on the continuous mining machine.

The methane monitor shall give warning automatically when the concentration of methane reaches a maximum percentage of not more than 1.0 volume per centum of methane.

The operator of any mine which shortwall mining is performed shall establish and adopt a definite maintenance program designed to keep such methane monitors operative and a written description of such program shall be available for inspection. At least once each month the methane monitors shall be checked for operation accuracy with a known methane air mixture and shall be calibrated as necessary. A records of calibration tests shall be kept in a book on the surface.

If the methane monitor on a shortwall mining section malfunctions, the operator shall have such monitor repaired within twelve (12) hours. However, during the period of time the methane monitor is inoperative, the electric equipment shall not be operated for a longer period than ten (10) minutes without an examination for methane gas, the two (2) hour examinations as required in section 7.2 of these rules and regulations shall be conducted on one (1) hour intervals and air reading on the intake side of the shortwall face shall be collected on one (1) hour intervals.

If for extraordinary reasons parts are unavailable to correct the malfunction on the methane monitor, within twelve (12) hour, the operator shall notify the Department of Energy who will evaluate the circumstances.

If the circumstances prevail to prevent the methane monitor from being repaired to operating condition, the Department of Energy may extend the above twelve (12) hour time limit, providing the protection to the worker is not reduced.

If a malfunction to the methane monitor occurs on a shortwall working section, the supervisor on such shift shall indicate in his on-shift examination report, in the fire boss report books, the date and time such methane monitor malfunction.

6.2. It shall be the duty of the certified person designated by the mine foreman to supervise a shortwall section, to examine the shortwall face for hazards at least once every two (2) hour during each coal producing shift or more often if necessary for safety. Such examinations shall include test for methane gas and oxygen deficiency. Such methane and oxygen deficiency examination shall be made in at least one hundred (100) foot intervals, between the headgate and tailgate. The initials, date, and time shall be recorded at the test locations. Should one percent or more of methane gas be detected, the electrical equipment shall be immediately de-energized and the electrical power circuit then disconnected from the power supply until the place is pronounced safe by a certified person.

§36-7-7. Safety Provisions - Shortwall Section.

7.1. All new face roof support units shall be equipped with adjacent unit controls unless units have a wide single canopy over each unit that protects the workman from falling material when operating unit controls from within the support of shield unit being removed.

7.2. After the effective date of these rules and regulations all new installed face roof support units shall be equipped with an outlet to facilitate measurement of the yield pressure.

7.3. Yield valves of the face roof support units shall be calibrated at least annually within fifteen percent (15%) of the yield pressure specified in the approved roof control plan. A legible record of such calibrations of each valve shall be kept of the surface of the mine for at least eighteen (18) months and be available for inspection by interested persons.

§36-7-8. Cutting And Welding: Shortwall Mining.

8.1. Prior to cutting and welding being performed on a shortwall section face methane gas examinations shall be made by a certified mine foreman-fire boss or assistant mine foreman-fire boss. Cutting and welding may only be performed when methane gas is less than one percent (1%). A certified person as defined above shall be continuously present during all cutting and welding operations on the face.

8.2. When cutting and welding operations have been completed, a certified person as defined above shall search for fires and hot spots. If fires or hot spots are found, they shall be extinguished immediately.

§36-7-9. Shortwall Mining - General Requirements.

9.1. All hydraulic line repairs shall be performed in accordance with the requirements of the manufacturer's specifications.

9.2. All hydraulic roof support units and associated apparatus on a shortwall working face shall be visually inspected at least once during each coal production shift by a qualified person. A written record of such examination shall be maintained on the surface.

§36-7-10. Shortwall Mining; First-Aid Equipment.

10.1. First aid equipment required on each working section defined in Chapter 22A, Article 2, Section 59, of the West Virginia Code shall be maintained in the headgate entry.

§36-7-11. Accessible Travel Route - Shortwall Mining Section.

11.1. An accessible travel route shall be maintained at all times off of the tailgate end of the retreat shortwall working face.

However, when the tailgate travel routes become impassable, the shortwall operation shall cease immediately and all persons working on such shortwall section shall be familiarized of the procedures to follow for escape from such section.

After all shortwall section personnel have been familiarized to the procedures to follow for escape from the section, normal production of coal may resume.

The operator shall immediately notify the Department of Energy when such travel route becomes impassable.

The Department of Energy representative shall immediately upon notification establish a scheduled meeting with the operator and representatives of the miners at such mine.

§36-7-12. Training - Shortwall Mining Section.

12.1 Training programs in the hazards of short wall mining shall be submitted for approval to the Director of the Department of Energy.

The training program shall consist of the following:

- (a) Escapeway and Travel Routes
- (b) Ventilation
- (c) Roof Support
- (d) Location of First-Aid Equipment
- (e) Safety Rules for Shortwall Mining

TITLE 36 SERIES 8

THE RIGHT OF A MINER TO REFUSE TO OPERATE ALLEGED UNSAFE EQUIPMENT

§36-8-1. General.

1.1 Scope. Rules and regulations governing the right of a miner to refuse to operate alleged unsafe equipment.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. October 8, 1980

1.4 Effective Date. December 1, 1980

§36-8-2. Definitions.

As used in this series: (a) Unsafe Equipment: The term "Unsafe Equipment" shall mean any equipment designed to be operated by a miner that has a defect which is covered by state law, or rule or regulation, and that creates a condition which involves a potential hazard that could reasonably be expected to cause a miner in the vicinity to be placed in danger of injury or death.

(b) Safety representative: The term "Safety Representative" shall mean any safety representative of the miners at the mine affected.

§36-8-3. No Miner Shall Be Required To Operate Unsafe Equipment.

3.1. Miner's procedure when equipment is believed to be unsafe. When a miner believes the equipment he or she is operating, or is assigned to operate, is unsafe, the miner shall cease or refuse to operate the alleged unsafe equipment and promptly inform his or her immediate supervisor as to the identity of the alleged unsafe equipment and the particular alleged defect causing the equipment to be unsafe.

§36-8-4. Equipment Examination: Immediate Supervisor-Miner.

4.1. Prior to the alleged unsafe equipment being placed back into operation after a miner has alleged it to be unsafe, the immediate supervisor shall examine, or have examined by maintenance personnel, the alleged unsafe equipment with regard to each alleged defect noted by the miner. If the alleged defects are corrected the equipment may be placed back into operation.

§36-8-5. Dispute Procedures: Immediate Supervisor-Miner.

5.1. (a) When the immediate supervisor fails to have the alleged defects corrected, the alleged unsafe equipment may be parked in a manner that will allow the movement of other equipment; and the alleged unsafe equipment shall be de-energized, locked-out, and suitably tagged so as to keep the alleged unsafe equipment from being operated by any person.

(b) No miner shall be discriminated against for refusing to operate alleged unsafe equipment.

§36-8-6. Operator's Procedure If Dispute Remains Unsettled.

6.1. (a) If the allegations of the miner are disputed, the immediate supervisor shall notify at least one safety representative and a maintenance foreman, who shall inspect and/or test the alleged unsafe equipment within four (4) hours after notification to determine if the alleged defect exists. If the safety representative and the maintenance foreman find that the alleged defect does exist, the defect shall be corrected before the equipment is placed back into operation; if no defect is found, the equipment can be placed back into operation.

(b) If the safety representative and the maintenance foreman disagree as to the alleged defect, they shall reduce to writing in detail the results of their inspection and/or test of the alleged unsafe equipment on a form, and in the manner, prescribed by the Director of the Department of Energy. The form shall contain at least the date and time of the inspection and/or test, description and location of the alleged unsafe equipment and the detailed results of the inspection and/or test.

§36-8-7. Inspection: Department of Energy.

7.1. (a) At the conclusion of the steps outlined in Sections 4, 5 and 6 of these Rules and Regulations, the operator or his representative shall immediately notify the Director or the authorized representative requesting an investigation of his allegations of unsafe equipment. Upon receiving a request to investigate from an operator or his representative, the Director or his authorized representative shall immediately inform the operator when an inspection of the alleged unsafe equipment can be made by the Director of Energy: Provided, That such investigation shall be started within twenty-four

(24) hours after the Department of Energy is requested to investigate. The operator or his representative shall give notice of the investigation time and place to the immediate supervisor and the miner involved in the dispute. The miner shall be given reasonable time to notify his or her safety representative, if he or she so chooses, in order that they may participate in the inspection.

(b) A qualified authorized representative of the Director shall be at the place set for inspection at the time designated in order to conduct an investigation of the alleged unsafe equipment. Prior to inspecting the alleged unsafe equipment, the authorized representative of the Director shall read the form required to be completed in Section 6.1. (b) of these Rules and Regulations. The authorized representative of the Director shall inspect and/or test the alleged unsafe equipment and enter the results thereof on a form and, in the manner, prescribed by the Director. The authorized representative's conclusions as to whether or not the equipment was "unsafe equipment" shall be entered on the form, along with the reasons for such conclusion. At the conclusion of the investigation, the authorized representative of the Director shall discuss the results of the investigation with, and in the presence of, the miner, the miner's safety representative if the miner so chooses, the immediate supervisor, the maintenance personnel involved in the dispute, the mine foreman and/or superintendent.

(c) If the authorized representative of the Director finds the equipment involved in the dispute to have a defect, which is covered by state law, or rule or regulation, appropriate notices and/or orders shall be issued; which notices and/or orders shall be complied with prior to the subject equipment being placed back into operation.

§36-8-8. Decision By The Director Or The Deputy Director As To Whether Or Not The Miner Acted With Good Faith And With Good Cause.

8.1. (a) When the operator believes the miner involved in the dispute acted in bad faith and without good cause, the operator may make application to the Director charging the miner with having acted in bad faith and without good cause and requesting a determination of such charge: Provided, That such charge is made within five (5) days of the alleged dispute.

(b) The operator's application charging the miner shall be mailed by certified mail to the Director, the charged miner, and the safety representative, if any.

8.2. Upon receiving a charge from an operator, the Director shall promptly cause such investigation as he deems appropriate and schedule a hearing within twenty (20) days after receiving the charge, allowing the operator and the miner an opportunity to be heard.

(a) Notice of hearing; Contents of notice. (1) Unless waived by the operator and the miner involved in the dispute, no hearing shall be conducted under these Rules and Regulations unless the miner and operator shall have received at least ten (10) days' written notice.

(2) Each written notice of the hearing shall contain the date, time and place of the hearing and a short and plain statement of matters which are to be the subject of or asserted at the hearing. Such notice shall be given by certified mail.

(b) Date, time and place of hearing. The date, time and place of the hearing shall be determined by the Director.

(c) Representation at hearings. The miner involved in the dispute may represent himself, be represented by a safety representative or be represented by an attorney at law admitted to practice before the courts of any state or the District of Columbia. The operator may be represented by a full-time employee or an attorney at law admitted to practice before the courts of any state or the District of Columbia.

(d) Applicability of Administrative Procedures Act. All of the pertinent provisions of Article 5, Chapter 29A of the West Virginia Code shall apply to and govern hearings conducted under these Rules and Regulations with like effect as if the provisions of said Article 5 were set forth herein. If any provision of these rules of practice and procedure contained in Section 8 herein are inconsistent with any pertinent provisions of said Article 5, the provisions of said Article 5 shall control.

(e) Waiver of evidentiary presentation. (1) Any party who desires to submit written pleadings, comments or information in lieu of an evidentiary hearing may submit such documents prior to the hearing date, for the Director's or Deputy Director's, as the case may be, consideration in the matter in the event hearing is waived as provided in subsection (e) (2) of this Section.

(2) Parties entitled to an evidentiary hearing may waive such right in writing, but unless all entitled parties file timely waivers, a hearing will be conducted. Such waivers must be unequivocal and request the Director or Deputy Director, as the case may be, to decide the matter at issue on the materials submitted in subsection (e) (1) of this Section and any stipulations the parties might enter into.

(3) When a hearing is waived under the provisions of this subsection, the written record in the case shall be submitted to the Director or Deputy Director, as the case may be, for decision.

(f) Burden of proof. In proceedings under these Rules and Regulations, the operator making application to the Director under subsection 8.1(a) of this Section shall have the burden of proving his case by a preponderance of the evidence.

(g) Proposed findings, conclusions and orders. The Director or Deputy Director, as the case may be, may request the submission by parties of the proposed findings of fact, conclusions of law and orders, together with a supporting brief: Provided, That such documents shall be submitted within twenty (20) days after their request. Such proposals and briefs shall be served upon all parties, and shall contain adequate references to the record and authorities relied upon.

(h) Hearings to be public. All hearings conducted under these Rules and Regulations shall be open to the public.

(i) Decisions and orders. (1) Within twenty (20) days after conclusion of the hearing and submission of the all documents or after submission of the case and consideration of the record as a whole in the event a hearing is waived, the Director or Deputy Director, as the case may be, shall render a decision and order which shall be in writing and shall include a statement of (a) findings and conclusions, and the reasons or basis therefore on the material issues of fact and law and (b) the appropriate ruling or order granting, granting in part or denying the relief sought.

(2) A copy of all decisions and orders shall be served, by certified mail, upon all parties and, unless the decision and/or order provides, the decision and order so served shall become effective immediately following service.

TITLE 36 SERIES 9

ELECTRICAL PROVISIONS IN SHAFT AND/OR SLOPE CONSTRUCTION OPERATIONS

§36-9-1. General.

1.1 Scope. Rules and Regulations Governing Electrical Provisions in Shaft and/or Slope Construction Operations Within the State of West Virginia.

1.2 Authority. W. Va. Code 22-6-4.

1.3 Filing Date. October 8, 1980.

1.4 Effective Date. December 1, 1980.

§36-9-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22 A, Article 1 A, of the West Virginia Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-9-3. Definitions.

3.1. Approved. The term "approved" shall mean 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.

3.2. Permissible. The term "permissible" shall mean any equipment, device or explosive that has been approved as permissible by the United States Bureau of Mines and meets all requirements, restrictions, exceptions, limitations and conditions attached to such classification by the Bureau.

3.3. Certified Electrician. The term "certified electrician" shall mean any person who is qualified as a mine electrician and who has passed an examination given by the Department of Energy, or has at least three 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 non-coal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and has satisfactorily completed an electrical training program approved by the Department of Energy.

3.4. Armored Cable. The term "armored cable" shall mean a cable provided with a wrapping of metal, usually steel wires or tapes, primarily for the purpose of mechanical protection.

3.5. Borehole Cable. The term "borehole cable" shall mean a cable designed for vertical suspension in a borehole or shaft and used for power circuits in the mine.

3.6. Cable. The term "cable" shall mean a standard conductor (single conductor cable) or a combination of conductors insulated from one another, (multiple conductor cable).

3.7. Flame-Resistant Cable, Portable. The term "flame-resistant cable, portable" shall mean a portable flame-resistant cable that has passed the flame tests of the federal bureau of mines.

3.8. Portable (Training) Cable. The term "portable (training) cable" shall mean a flexible cable or cord used for connecting mobile, portable or stationary equipment to an external source of electric energy where permanent mine wiring is prohibited or is impracticable.

3.9. Branch Circuit. The term "branch circuit" shall mean any circuit, alternating current, connected to and leading from the main power lines.

3.10. Circuit Breaker. The term "circuit breaker" shall mean a device for interrupting a circuit between separable contacts under normal or abnormal conditions.

3.11. Zig-zag Transformer (Grounding Transformer). -- The term "zig-zag transformer (grounding transformer)" shall mean a transformer intended primarily to provide a neutral point for grounding purposes.

3.12. Neutral Point. The term "neutral point" shall mean the connection point of transformer or generator windings from which the voltage to ground is nominally zero, and is the point generally used for system groundings in wye-connected A.C. power system.

3.13. Neutral (Derived). The term "neutral (derived)" shall mean a neutral point or connection established by the addition of a zig-zag or grounding transformer to a normally ungrounded power system.

3.14. Effectively Grounded. The term "effectively grounded" is an expression which means grounded through a grounding connection of sufficiently low impedance (inherent or intentionally added or both) so that fault grounds: which may occur cannot build up voltages in excess of limits established for apparatus, circuits or systems so grounded.

3.15. Grounded (Earthed). The term "grounded (earthed)" shall mean that the system, circuit, or apparatus referred to is provided with a ground.

3.16. Ground or Grounding Conductor (Mining). The term "ground or grounding conductor (mining)", also referred to as a safety ground conductor, safety ground and frame ground, shall mean a metallic conductor used to

connect the metal frame or enclosure of any equipment, mine track device or wiring system to an effective grounding medium.

3.17. Delta Connected. The term "delta connected" shall mean a power system in which the windings or transformers or A.C. generators are connected to form a triangular phase relationship, and with phase conductors connected to each point of the triangle.

3.18. Wye-connected. The term "wye-connected" shall mean a power system connection in which one end of each phase windings or transformers or A.C. generators are connected together to form a neutral point, and a neutral conductor may or may not be connected to the neutral point, and the neutral point may or may not be grounded.

3.19. High Voltage. The term "high voltage" shall mean voltages of more than one thousand volts.

3.20. Medium Voltage. The term "medium voltage" shall mean voltages from six hundred sixty-one to one thousand volts.

3.21. Low Voltage. The term "low voltage" shall mean up to and including six hundred sixty volts.

3.22. Lightning Arrester. The term "lightning arrester" shall mean a protective device for limiting surge voltage on equipment by discharging or bypassing surge current to ground, and is capable of repeating these functions as specified.

3.23. Power Center or Distribution Center. The term "power center or distribution center" shall mean a combined transformer or distribution unit, complete within a metal enclosure from which one or more power circuits are taken.

§36-9-4. Electrical Provisions-Shaft and/or Slope.

4.1. Power circuits and electric equipment shall be de-energized before work is done on such circuits and equipment, except when necessary for troubleshooting or testing.

4.2. No electrical work shall be performed on electrical distribution circuits or equipment, except by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices shall be locked out and suitably tagged by the persons who perform such work, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such persons who installed them, or, if such persons are unavailable, by persons authorized by the operator or his agent.

4.3. Electrical equipment shall be examined weekly, tested monthly, and properly maintained by a qualified person to assure safe operating conditions. When a potentially dangerous condition is found on electric equipment, such equipment shall be removed from service until such condition is corrected. A record of such examination shall be kept and made available to an authorized representative of the director of the department of energy and to the miners in such mine.

4.4. Surface transformers shall be elevated at least eight (8) feet above the ground or enclosed by a fence six (6) feet high, grounded if metal; shall be properly grounded; shall be installed so that they will not present a fire hazard; and shall be guarded by sufficient danger signs. The gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

4.5. Electric conductors shall be sufficient in size and have adequate carrying capacity and be of such construction that a rise in temperatures resulting from normal operation will not damage the insulating materials.

4.6. Electrical connections or splices in electric conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.

4.7. Short circuit protection to protect all electric equipment and circuits against short circuits and overloads, shall be provided by an automatic circuit breaker or other no less effective device approved by the Director of the Department of Energy. Three-phase motors on all electric equipment shall be provided with overload protection that will de-energize all three phases in the event that any phase is overloaded.

4.8. The booms and masts of equipment operated on the surface of any shaft or slope shall not be operated within ten (10) feet of an energized overhead powerline. Where the voltage of overhead powerlines is sixty-nine thousand (69,000) volts or more the minimum distance from the boom or mast shall be as follows:

Nominal power line voltage in (1,000) volts)	Minimum distance in feet
69-114	12
115-229	15
230-344	20
345-499	25
500 or more	35

4.9. During construction electrical equipment employed below the collar or within twenty-five (25) feet of the return or exhaust of a slope or shaft during excavation shall be approved or permissible and shall be maintained in a permissible condition.

4.10. The insulation of all electric conductors employed below the collar of any slope and shaft during excavation shall be of the flame resistant type.

4.11. During the construction of shaft or slope only lamps and portable flood lights approved by the Bureau of Mines shall be permitted below the collar of the shaft or slope.

4.12. Metallic frames, casings, and other enclosures of electric equipment that can become "alive" through failure of insulation or by contact with energized parts shall be effectively grounded.

4.13. All power wires (except trailing cables on mobile equipment, specially designed cables conducting high-voltage power to underground rectifying equipment or transformers, or bare or insulated ground and return wires) shall be supported on well-insulated insulators and shall not contact combustible material, roof, or ribs.

4.14. Well-insulated insulators is interpreted to mean well-installed insulators. Insulated J-hooks may be used to suspend insulated power cables for temporary installation not exceeding six (6) months and for permanent installation of control cables such as may be used along belt conveyors.

4.15. Power wires and cables shall be insulated adequately and fully protected.

4.16. Power wires and cables shall have insulation with a dielectric strength at least equal to the voltage of the circuit.

4.17. Each ungrounded, exposed power conductor and each ungrounded exposed telephone wire that leads underground shall be equipped with suitable lightning arresters of approved type within one-hundred (100) feet of the point where the circuit enters the mine. Lightning arresters shall be connected to a low resistance grounding medium on the surface which shall be separated from neutral grounds by a distance of not less than twenty-five (25) feet.

4.18. Short circuit protection for trailing cables shall be provided by an automatic circuit breaker or other no less effective device approved by the Director of the Department of Energy of adequate current-interrupting capacity in each ungrounded conductor. Disconnecting devices used to disconnect power from trailing cables shall be plainly marked and identified and such devices shall be equipped or designed in such a manner that it can be determined by visual observation that the power is disconnected.

§36-9-5. Lights to be used in shaft.

5.1. Only approved cap lights shall be used in shafts. Lights shall be suspended in shafts by cable or chain other than the power conductor. In slopes lights must be substantially installed. Power cables shall be of an approved type.

Power cables shall not be taunt from shaft collar to light. Power cables shall be in good condition and splices shall be:

(a) Mechanically strong with adequate electric conductivity and flexibility,

(b) Effectively insulated and sealed so as to exclude moisture, and

(c) Vulcanized or otherwise treated with suitable materials to provide flame-resistant qualities and good bonding to outer jacket.

Lights shall be suspended not less than twenty (20) feet above where men are working. Lights and power shall not be restored in work area of shaft or slope until examination has been made for gas by the shaft-slope examiner and found clear. Fronts of lights need not be guarded with a metal guard providing light is permissible with an approved lens.

§36-9-6. Applicability of Mining Laws.

6.1. All provisions of the Mining Laws of this State intended to safeguard life or property shall extend to all Shaft and Slope Construction Operations insofar as such laws are applicable thereto.

TITLE 36 SERIES 10 ROOF CONTROL

§36-10-1. General.

1.1 Scope. This series sets for requirements for controlling roof, face, and ribs, including coal or rock bursts, in underground coal mines. Roof Control systems installed prior to the effective date of this series are not affected so long as the support system continues to effectively control the roof, face and ribs.

1.2 Authority. W. Va. Code 22A-1A-2 and 22-6-4.

1.3 Filing Date. January 11, 1996.

1.4 Effective Date. July 15, 1996.

1.5 Repeal of Former Rule. This rule repeals and replaces West Virginia Department of Miner's Health, Safety, and Training Rules, Title 56, Series 10, effective May 1, 1988; West Virginia Board of Coal Mine Health and Safety Rules, Title 36, Series 10 effective March 1, 1981; and Title 36 Series 25 effective August 10, 1987.

§36-10-2. Definitions.

As used in these regulations, unless used in a context that clearly requires a different meaning, the term:

2.1. Adopted approved roof control plan. The roof control plan and revisions thereof suitable to the roof conditions and mining systems of each coal mine which has been adopted by the mine and approved by the Director pursuant to W. Va. Code 22A-2-25.

2.2. Approved. In strict compliance with mining law, or in the absence of law, accepted by a recognized standardizing body or organization where approval is generally recognized as authoritative on the subject.

2.3. Automated temporary roof support system. The devices and mechanisms, including the ATRS, used, and methods followed by which the ATRS is activated and set to support the roof.

2.2. Automated temporary roof support or ATRS. A mechanical device used to support the roof temporarily.

2.5. Director. The Director of the West Virginia Office of Miners' Health, Safety and Training.

2.6. Pillar recovery. Any reduction in pillar size during retreat mining.

§36-10-3. Protection From Falls of Roof, Face and Ribs.

3.1. The roof, face and ribs of areas where persons work or travel shall be supported or otherwise controlled to protect persons from hazards related to falls of the roof, face, or ribs and coal or rock bursts.

3.2. No person shall work or travel under unsupported roof unless in accordance with this Series.

§36-10-4. Mining Methods.

4.1. The method of mining shall not expose any person to hazards caused by excessive widths of rooms, crosscuts and entries, or faulty pillar recovery methods. Pillar dimensions shall be compatible with effective control of the roof, face, and ribs and coal or rock bursts.

4.2. A sightline or other method of directional control shall be used to maintain the projected direction of mining in entries, rooms, crosscuts, and pillar splits.

4.3. A side cut shall be started only from an area that is supported in accordance with the roof control plan.

4.4. A working face shall not be mined through into an unsupported area of active workings, except when the unsupported area is inaccessible.

4.5. Additional roof support shall be installed where:

(1) The width of the opening specified in the roof control plan is exceeded by more than twelve (12) inches; and

(2) The distance over which the excessive width exists is more than five (5) feet.

§36-10-5. Roof Bolting.

5.1. For roof bolts and accessories addressed in ASTM F 432-88, "Standard Specification for Roof and Rock Bolts and Accessories", the mine operator shall:

(1) Obtain a manufacturer's certification that the material was manufactured and tested in accordance with the specifications of ASTM F 432-88; and

(2) Make this certification available to an authorized representative of the Director.

5.2. Roof bolts and accessories not addressed in ASTM F 432-88 may be used, provided that the use of such materials is approved by the Director or his authorized representative based on:

(1) Demonstrations which show that the materials have successfully supported the roof in an area of a coal mine with similar strata, opening dimensions and roof stresses; or

(2) Tests have shown the materials to be effective for supporting the roof in an area of the affected mine which has similar strata, opening dimensions and roof stresses as the area where the roof bolts are to be used. During the test process, access to the test area shall be limited to persons necessary to conduct the test.

5.3. Bearing plates.

(1) A bearing plate shall be firmly installed with each roof bolt.

(2) Bearing plates used directly against the mine roof shall be at least six (6) inches square or the equivalent, except that where the mine roof is firm and not susceptible to sloughing, bearing plates five (5) inches square or the equivalent may be used.

(3) Bearing plates used with wood or metal materials shall be at least four (4) inches square or the equivalent.

(4) Wooden materials that are used between a bearing plate and the mine roof in areas which will exist for three (3) years or more shall be treated to minimize deterioration.

5.4. When washers are used with roof bolts, the washers shall conform to the shape of the roof bolt head, and bearing plate.

5.5. Finishing Bolts.

(1) The diameter of finishing bits shall be within a tolerance of plus or minus 0.030 inch of the manufacturer's recommended hole diameter for the anchor used.

(2) When separate finishing bits are used, they shall be distinguishable from other bits.

5.6. Tensioned roof bolts.

(1) Roof bolts that provide support by creating a beam of laminated strata shall be at least thirty (30) inches long. Roof bolts that provide support by suspending the roof from overlying stronger strata shall be long enough to anchor at least twelve (12) inches into the stronger strata.

(2) Test holes, spaced at intervals specified in the roof control plan, shall be drilled to a depth of at least twelve (12) inches above the anchorage horizon of mechanically anchored tensioned bolts being used. When a test hole indicates that bolts would not anchor in competent strata, corrective action shall be taken.

(3) The installed torque or tension ranges for roof bolts as specified in the roof control plan shall maintain the integrity of the support system and shall not exceed the yield point of the roof bolt nor anchorage capacity of the strata.

(4) In each roof bolting cycle, the actual torque or tension of the first tensioned roof bolt installed with each drill head shall be measured immediately after it is installed. Thereafter, for each drill head used, at least one (1) roof bolt out of every four (4) installed shall be measured for actual torque or tension. If the torque or tension of any of the roof bolts measured is not within the range specified in the roof control plan, corrective action shall be taken.

(5) In working places from which coal is produced during any portion of a twenty-four (24) hour period, the actual torque or tension on at least one (1) out of every ten (10) previously installed mechanically anchored tensioned roof bolts shall be measured from the outby corner of the last open crosscut to the face in each advancing section. Corrective action shall be taken if the majority of the bolts measured:

(a) Do not maintain at least seventy percent (70%) of the minimum torque or tension specified in the roof control plan, fifty percent (50%) if the roof bolt plates bear against wood; or

(b) Have exceeded the maximum specified torque or tension by fifty percent (50%).

(6) The mine operator or a person designated by the operator shall certify by signature and date that measurements required by subsection 5.6.5 of this section have been made. This certification shall be maintained for at least one (1) year and shall be made available to an authorized representative of the Director and representatives of the miners.

(7) Tensioned roof bolts installed in the roof support pattern shall not be used to anchor trailing cables or used for any other purpose that could affect the tension of the bolt. Hanging trailing cables, line brattice, telephone lines, or other similar devices which do not place sudden loads on the bolts are permitted.

(8) Angle compensating devices shall be used to compensate for the angle when tensioned roof bolts are installed at angles greater than five (5) degrees from the perpendicular to the bearing plate.

5.7. Non-tensioned grouted roof bolts. The first non-tensioned grouted roof bolt installed during each roof bolting cycle shall be tested during or immediately after the first row of bolts has been installed. If the bolt tested does not withstand at least one hundred fifty (150) foot-pounds of torque without rotating in the hole, corrective action shall be taken.

5.8. Removal of Roof Hazards. Prior to or during bolting operations in working places, the person responsible for performing such work shall immediately notify a supervisor if abnormal or hazardous conditions are encountered. No further work shall be performed until a supervisor examines the area where he has been informed that abnormal or hazardous conditions exist and directs the correction of such condition.

5.9. Working Around Roof Bolting Machines. On all roof bolting machines except continuous mining machines with integral roof bolters, during the time that the ATRS system is being engaged against or retracted from the mine roof, all persons except those specified below shall be outby the last row of permanent roof supports. This requirement shall not apply to the equipment operator, provided that adequate protection is provided for the equipment operator while setting the ATRS.

5.10. Roof Bolting Machines - Requirements. Roof bolting machines used in seams forty-eight (48) inches or higher shall be equipped with a mechanical means of holding the drill steel during drilling operations, which minimizes the need for the equipment operator to handle the drill steel. The Director may require such devices on roof bolting machines used in seams under forty-eight (48) inches where the technology for such equipment to operate under these conditions is available.

5.11. Fast raise on boom feed roof bolting machines: All boom feed roof bolting machines utilizing fast feed will be provided with controls that are designed by the equipment manufacturer and approved by the Director of the Office of Miners' Health, Safety and Training that minimize, the operators' exposure to the pinch point area, while engaging the fast feed function. The fast feed will be designed in such a manner that minimizes accidental activation. Fast feed is defined as a feed rate greater than twelve (12) inches per second.

§36-10-6. Installation of Roof Support Using Mining Machines with Integral Roof Bolters.

When roof bolts are installed by a continuous mining machine with integral roof bolting equipment:

6.1. The distance between roof bolts shall not exceed ten (10) feet crosswise.

6.2. Roof bolts to be installed nine (9) feet or more apart shall be installed with a wooden crossbar at least three (3) inches thick and eight (8) inches wide, or material which provides equivalent support.

6.3. Roof bolts to be installed more than eight (8) feet but less than nine (9) feet apart shall be installed with a wooden plank at least two (2) inches thick and eight (8) inches wide, or material which provides equivalent support.

§36-10-7. Conventional roof support.

7.1. When conventional roof support materials are used as the only means of support:

(1) The width of any opening shall not exceed twenty (20) feet;

(2) The spacing of roadway roof support shall not exceed five (5) feet;

(3) (a) Supports shall be installed to within five (5) feet of the uncut face;

(b) When supports nearest the face must be removed to facilitate the operation of face equipment, equivalent temporary support shall be installed prior to removing the supports;

(4) Straight roadways shall not exceed sixteen (16) feet wide where full overhead support is used and fourteen (14) feet wide where only posts are used;

(5) Curved roadways shall not exceed sixteen (16) feet wide; and

(6) The roof at the entrance of all openings along travelways which are no longer needed for storing supplies or for travel of equipment shall be supported by extending the line of support across the opening.

7.2. Conventional roof support materials shall meet the following specifications:

(1) The minimum diameter of cross-sectional area of wooden posts shall be as follows:

Post length Cross Sectional (in inches) area of split posts (in sq. inches)	Diameter of round posts (in inches)	
60 or less	4	13
Over 60 to 84	5	20
Over 84 to 108	6	28
Over 108 to 132	7	39
Over 132 to 156	8	50
Over 156 to 180	9	64
Over 180 to 204	10	79
Over 204 to 228	11	95
Over 228	12	113

(2) Wooden materials used for support shall have the following dimensions:

(a) Cap blocks and footings shall have flat sides and be at least two (2) inches thick, four (4) inches wide and twelve (12) inches long.

(b) Crossbars shall have a minimum cross-sectional area of twenty-four (24) square inches and be at least three (3) inches thick.

(c) Planks shall be at least six (6) inches wide and one (1) inch thick.

(3) Cribbing materials shall have at least two (2) parallel flat sides.

7.3. A cluster of two (2) or more posts that provide equivalent strength may be used to meet the requirements of paragraph (b)(1) of this section, except that no post shall have a diameter less than four (4) inches or have a cross-sectional area less than thirteen (13) square inches.

7.4. Materials other than wood used for support shall have support strength at least equivalent to wooden material meeting the applicable provisions of this section.

7.5. Posts and jacks shall be tightly installed on solid footing.

7.6. When posts are installed under roof susceptible to sloughing a cap block, plank, crossbar, or materials that are equally effective shall be placed between the post and the roof.

7.7. Blocks used for lagging between the roof and crossbars shall be spaced to distribute the load.

7.8. Jacks used for roof support shall be used with at least thirty-six (36) square inches of roof bearing surface.

§36-10-8. Pillar recovery.

Pillar recovery shall be conducted in the following manner, unless otherwise specified in the roof control plan:

8.1. Full and partial pillar recovery shall not be conducted on the same pillar line, except where physical conditions such as unstable floor or roof, falls of roof, oil and gas well barriers or surface subsidence require that pillars be left in place.

8.2. Before mining is started in a pillar split or lift:

(1) At least two (2) rows of breaker posts or equivalent support shall be installed:

(a) As close to the initial intended breakline as practicable; and

(b) Across each opening leading into an area where full or partial pillar extraction has been completed.

(2) A row of roadside-radius (turn) posts or equivalent support shall be installed leading into the split or lift.

8.3. Before mining is started on a final stump:

(1) At least two (2) rows of posts or equivalent support shall be installed on not more than four (4) – foot centers on each side of the roadway; and

(2) Only one (1) open roadway, which shall not exceed sixteen (16) feet wide, shall lead from solid pillars to the final stump of a pillar. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed fourteen (14) feet.

8.4. During open-end pillar extraction, at least two (2) rows of breaker posts or equivalent support shall be installed on not more than four (4) - foot centers. These supports shall be installed between the lift to be started and area where pillars have been extracted. These supports shall be maintained to within seven (7) feet of the face and the width of the roadway shall not exceed sixteen (16) feet. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed fourteen (14) feet.

8.5. Overlays and underlays of the area to be mined shall be reviewed by the Director or his representative, and the mine operator during the required periodic review of the approved roof control plan as required by W. Va. Code 22A-2-25(a) at any mine where pillar recovery is being performed.

8.6. During pillar extraction all non-essential personnel shall remain outby the last open cross-cut of the place where coal is being removed.

8.7. In mines where pillar extraction (second mining) has not been previously performed, the following requirements shall be met before pillaring is begun:

(1) The operator shall review the provisions of the approved roof control plan concerning pillar extraction with all persons to be performing such work, immediately prior to the start of such work.

(2) The operator shall notify the district inspector in whose district the mine is located five (5) working days prior to the date pillaring is to begin. When deemed necessary the district inspector may require that he be present during the review of the approved roof control plan, provided that he can be present before pillaring is to begin.

§36-10-9. Warning Devices.

Except during the installation of roof supports, the end of permanent roof support shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel beyond permanent support.

§36-10-10. Automated Temporary Roof Support Systems.

10.1. All new and rebuilt roof bolting machines and continuous mining machines with integral roof drills used in a working place in a coal mine shall be provided with approved automated temporary roof support system(s): Provided, That other methods of temporarily supporting the roof may be approved by the Director in the adopted approved roof control plan.

10.2. Approved automated temporary roof support systems shall be provided on all roof bolting machines and continuous mining machines with integral roof drills used in a work place: Provided, That other methods of temporarily supporting the roof may be approved by the Director in the adopted approved roof control plan.

10.3. Automated temporary roof support systems and all other methods of temporarily supporting the roof shall be approved on an individual mine basis by the Director and shall become part of the adopted approved roof control plan. The operator shall, prior to any automated temporary roof support system being used underground, first obtain approval from the Director or an authorized representative of the Director, such approval to be in the manner and form prescribed by the Director: Provided, That such approval shall not be unreasonably withheld and furthermore, any automated temporary roof support system that has been "Approved" prior to the effective dates of Sections 5.1 (a) and (b), respectfully, shall also be approved by the Director or his authorized representative if the automated temporary roof support system meets the minimum requirements stated in Section 10.5 of these rules and regulations.

10.4. A waiver may be granted, as to the use of an automated temporary roof support system, by the Director where it has been demonstrated by the operator and determined during an investigation by an authorized representative of the Director that the use of an automated temporary roof support system would create a condition which will cause a greater hazard, to people working inby the area where permanent supports have been installed, than the method presently being employed or proposed by the operator for temporarily supporting the roof, or where the technology of an automated temporary roof support system does not exist to allow compliance with the requirements set forth in Section 10.5 of these rules and regulations, of the automated temporary roof support system, the Director may approve the use of temporary jacks and posts to be used in lieu thereof.

10.5. All machines using, or used as, automated temporary roof support shall comply with the following minimum requirements unless a waiver has been granted or another method of temporarily supporting the roof has been approved by the Director under Sections 10.3 and 10.4 of these rules and regulations.

(1) The necessary controls to position the machine and place the ATRS against the roof shall be operated from under permanently supported roof unless the design of the system will provide adequate protection for the miner while setting such supports.

(2) The ATRS shall be placed firmly against the roof before any work is performed inby permanent roof supports and shall remain against the roof while work is being done.

(3) All hydraulic jacks affecting the support capacity of an ATRS shall have check valves or equivalent protection, to prevent support failure in the event of a sudden loss of hydraulic pressure.

(4) ATRS used in conjunction with single bolt installation are required to elastically support, at a minimum, a deadweight load of eleven thousand two hundred fifty (11,250) pounds for each five (5) foot by five (5) foot square area of the roof intended to be supported.

(5) ATRS consisting of pads and/or crossbars used in single or multiple rows must elastically support, at a minimum, a deadweight load in pounds of $450 \times (L + 5) \times (W + 5)$; where L is the length of the support structure from tip to tip and W is the width taken at the center line of a support structure to the center line of another support structure.

(6) The actual capacity to support elastically a deadweight load shall be certified by a registered professional engineer.

(7) The distance that the ATRS may be set inby the last row of permanent supports shall be dependent on the spacing requirements of the permanent roof supports and must be approved by the Director in the adopted approved roof control plan.

(8) No person shall work or travel beyond the ATRS unless the distance between the coal face and the ATRS is five (5) feet or less; in addition, no person shall work or travel left or right of the ATRS unless a coal rib, a permanent support, or a temporary support is within five (5) feet of the ATRS: Provided, That when such five (5) foot limit is being determined for an ATRS consisting of a ring then said five (5) foot limit shall be determined from the center of the ring.

(9) The inch tram control speed of a roof bolting machine shall not exceed one-half () of the maximum tram control speed: *Provided*, that in no case shall the inch tram control speed exceed eighty (80) feet per minute when the roof bolting machine is being used to establish the ATRS.

§36-10-11. Manual Installation of Temporary Support.

11.1. When manually installing temporary support, only persons engaged in installing the support shall proceed beyond permanent support.

11.2. When manually installing temporary supports, the first temporary support shall be set no more than five (5) feet from a permanent roof support and the rib. All temporary supports shall be set so that the person installing the supports remains between the temporary support being set and two (2) other supports which shall be no more than five (5) feet from the support being installed. Each temporary support shall be completely installed prior to installing the next temporary support.

11.3. All temporary supports shall be placed on no more than five (5) foot centers.

11.4. Once temporary supports have been installed, work or travel beyond permanent roof support shall be done between temporary supports and the nearest permanent support or between other temporary supports.

§36-10-12. Roof Testing and Scaling.

12.1. A visual examination of the roof, face, and ribs shall be made immediately before any work is started in an area and thereafter as conditions warrant.

12.2. Where the mining height permits and the visual examination does not disclose a hazardous condition, sound and vibration roof tests, or other equivalent tests, shall be made where supports are to be installed. When sound and vibration tests are made, they shall be conducted:

(1) after the ATRS system is set against the roof and before other support is installed; or

(2) prior to manually installing a roof support. This test shall begin under supported roof and progress no further than the location where the next support is to be installed.

12.3. When a hazardous roof, face, or rib condition is detected, the condition shall be corrected before there is any other work or travel in the affected area. If the affected area is left unattended, each entrance to the area shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel into the area.

12.4. A bar for taking down loose materials shall be available in the working place or on all face equipment except haulage equipment. Bars provided for taking down loose material shall be of a length and design that will allow the removal of loose material from a position that will not expose the person performing this work to injury from falling material.

§36-10-13. Rehabilitation of Areas With Unsupported Roof.

13.1. Before rehabilitating each area where a roof fall has occurred or the roof has been removed by mining machines or by blasting:

- (1) The mine operator shall establish the clean up and support procedures that will be followed;
- (2) All persons assigned to perform rehabilitation work shall be instructed in the clean-up and support procedures; and
- (3) Ineffective, damaged, or missing roof support at the edge of the area to be rehabilitated shall be replaced or other equivalent support installed.

13.2. All persons who perform rehabilitation work shall be experienced in this work or they shall be supervised by a person experienced in rehabilitation work who is designated by the mine operator.

13.3. Where work is not being performed to rehabilitate an area in active workings where a roof fall has occurred or the roof has been removed by mining machines or by blasting, each entrance to the area shall be supported by at least one (1) row of posts on not more than five (5) foot centers, or equally effective support.

§36-10-14. Roof Support Removal.

14.1 Roof Support Removal. 14.1.1. All persons who perform the work of removing permanent roof support shall be supervised by a management person experienced in removing roof supports.

14.1.2. Only persons with at least one (1) year of underground mining experience shall perform permanent roof support removal work.

14.2. Prior to the removal of permanent roof supports, the person supervising roof removal in accordance with paragraph 14.1.1 of this section shall examine the roof conditions in the area where the supports are to be removed and designate each support to be removed.

14.3

(1) Except as provided in paragraph 14.7 of this section, prior to the removal of permanent supports, a row of temporary supports on no more than 5-foot centers or equivalent support shall be installed across the opening within four (4) feet of the supports being removed. Additional supports shall be installed where necessary to assure safe removal.

(2) Prior to the removal of roof bolts, temporary support shall be installed as close as practicable to each bolt being removed.

14.4. Temporary supports installed in accordance with this section shall not be removed unless:

- (1) removal is done by persons who are in a remote location under supported roof; and
- (2) at least two rows of temporary supports, set across the opening on no more than 5-foot centers, are maintained between the miners and the unsupported area.

14.5. Each entrance to an area where supports have been removed shall be posted with a readily visible warning or a physical barrier shall be installed to impede travel into the area.

14.6. Except as provided in paragraph 14.7 of this section, permanent support shall not be removed where:

- (1) roof bolt torque or tension measurements or the condition of conventional support indicate excessive loading;
- (2) roof fractures are present;
- (3) there is any other indication that the roof is structurally weak;
- (4) pillar recovery has been conducted.

14.7. Permanent supports may be removed provided that:

- (1) removal is done by persons who are in a remote location under supported roof; and
- (2) at least two rows of temporary supports, set across the opening on no more than 5-foot centers are maintained between the miners and the unsupported area.

14.8. The provisions of this section do not apply to removal of conventional supports for starting crosscuts and pillar splits or lifts except that prior to the removal of these supports an examination of the roof conditions shall be made.

§36-10-15. Supplemental Support Materials, Equipment and Tools.

15.1. A supply of supplementary roof support materials and the tools and equipment necessary to install the materials shall be available at a readily accessible location on each working section or within four (4) crosscuts of each working section.

15.2. The quantity of support materials and tools and equipment maintained available in accordance with this section shall be sufficient to support the roof if adverse roof conditions are encountered, or in the event of an accident involving a fall.

§36-10-16. Roof Control Plan.

16.1 Roof Control Plan. (1) Each mine operator shall develop and follow a roof control plan, approved by the Director that is suitable to the prevailing geological conditions, and the mining system to be used at the mine. Additional measures shall be taken to protect persons if unusual hazards are encountered.

(2) The proposed roof control plan and any revisions to the plan shall be submitted, in writing, to the Director. When revisions to a roof control plan are proposed, only the revised pages need to be submitted unless otherwise specified by the Director.

16.2 (1) The mine operator will be notified in writing of the approval or denial of approval of a proposed roof control plan or proposed revision.

(2) When approval of a proposed plan or revision is denied, the deficiencies of the plan or revision and recommended changes will be specified and the mine operator will be afforded an opportunity to discuss the deficiencies and changes with the roof control inspectors or the Director.

(3) Before new support materials, devices or systems other than roof bolts and accessories, are used as the only means of roof support, the Director may require that their effectiveness be demonstrated by experimental installations.

16.3. No proposed roof control plan or revision to a roof control plan shall be implemented before it is approved.

16.4. Before implementing an approved revision to a roof control plan, all persons who are affected by the revision shall be instructed in its provisions.

16.5. The approved roof control plan and any revisions shall be available to the miners and representative of miners at the mine.

§36-10-17. Roof Control Plan Information.

17.1. The following information shall be included in each roof control plan:

(1) The name and address of the company.

(2) The name, address, mine identification number, and location of the mine.

(3) The name and title of the company official responsible for the plan.

(4) A typical columnar section of the mine strata which shall:

(a) Show the name and the thickness of the coalbed to be mined and any persistent partings;

(b) Identify the type and show the thickness of each stratum up to and including the main roof above the coalbed and for distance of at least ten (10) feet below the coalbed; and

(c) Indicate the maximum cover over the area to be mined.

(5) A description and drawings of the sequence of installation and spacing of supports for each method of mining used.

(6) When an ATRS system is used, the maximum distance that an ATRS system is to be set beyond the last row of permanent support.

(7) When tunnel liners or arches are to be used for roof support, specifications and installation procedures for the liners or arches.

(8) Drawings indicating the planned width of openings, size of pillars, method of pillar recovery, and the sequence of mining pillars.

(9) A list of all support materials required to be used in the roof, face, and rib control system, including, if roof bolts are to be installed:

(a) The length, diameter, grade and type of anchorage unit to be used;

(b) The drill hole size to be used; and

(c) The installed torque or tension range for tensioned roof bolts.

(10) When mechanically anchored tensioned roof bolts are used, the intervals at which test holes will be drilled.

(11) A description of the method of protecting persons:

(a) From falling material at drift openings; and

(b) When mining approaches within one hundred fifty (150) feet of an outcrop.

17.2. Each drawing submitted with a roof control plan shall contain a legend explaining all symbols used and shall specify the scale of the drawing which shall not be less than five (5) feet to the inch or more than twenty (20) feet to the inch.

17.3. All roof control plan information, including drawings, shall be submitted on 8 by 11 inch paper, or paper folded to this size.

§36-10-18. Roof Control Plan-Approved Criteria.

18.1. This section sets forth the criteria that shall be considered on a mine-by-mine basis in the formulation and approval of roof control plans and revisions. Additional measures may be required in plans by the Director or his authorized representative. Roof control plans that do not conform to the applicable criteria in this section may be approved by the Director or his authorized representative, provided that effective control of the roof, face, and ribs can be maintained.

18.2. Roof bolting. (1) Roof bolts should be installed on centers not exceeding five (5) feet lengthwise and crosswise, except as specified in Section 6.

(2) When tensioned roof bolts are used as a means of roof support, the torque or tension range should be capable of supporting roof bolt loads of at least fifty percent (50%) of either the yield point of the bolt or anchorage capacity of the strata, whichever is less.

(3) Any opening that is more than twenty (20) feet wide should be supported by a combination of roof bolts and conventional supports.

(4) In any opening more than twenty (20) feet wide:

(a) Posts should be installed to limit each roadway to sixteen (16) feet wide where straight and eighteen (18) feet wide where curved; and

(b) A row of posts should be set for each five (5) feet of space between the roadway posts and the ribs.

(5) Openings should not be more than thirty (30) feet wide.

18.3. Installation of roof support using mining machines with integral roof bolters.

(1) Before an intersection or pillar split is started, roof bolts should be installed on at least five (5) foot centers where the work is performed.

(2) Where the roof is supported by only two (2) roof bolts crosswise, openings should not be more than sixteen (16) feet wide.

18.4. Pillar recovery.

(1) During development, any dimension of a pillar should be at least twenty (20) feet.

(2) Pillar splits and lifts should not be more than twenty (20) feet wide.

(3) Breaker posts should be installed on not more than four (4) foot centers.

(4) Roadside-radius (turn) posts, or equivalent support, should be installed on not more than four (4) centers leading into each pillar split or lift.

(5) Before full pillar recovery is started in areas where roof bolts are used as the only means of roof support and openings are more than sixteen (16) feet wide, at least one (1) row of posts should be installed to limit the roadway width to sixteen (16) feet. These posts should be:

(a) Extended from the entrance to the split through the intersection outby the pillar in which the split or lift is being made; and

(b) Spaced on not more than five (5) foot centers.

18.5. Unsupported openings at intersections. Openings that create an intersection should be permanently supported or at least one (1) row of temporary supports should be installed on not more than five (5) foot centers across the opening before any other work or travel in the intersection.

18.6. Longwall mining systems.

(1) Systematic supplemental support should be installed throughout:

(a) The tailgate entry of the first longwall panel prior to any mining; and

(b) In the proposed tailgate entry of each subsequent panel in advance of the frontal abutment stresses of the panel being mined.

(2) When a ground failure prevents travel out of the section through the tailgate side of the longwall section, the roof control plan should address:

(a) Notification of miners that the travelway is blocked;

(b) Re-instruction of miners regarding escapeways and escape procedures in the event of an emergency;

(c) Re-instruction of miners on the availability and use of self-contained self-rescue devices;

(d) Monitoring and evaluation of the air entering the longwall section;

(e) Location and effectiveness of the two-way communication systems; and

(f) A means of transportation from the section to the main line.

(3) The plan provisions addressed by paragraph 18.6.2 of this section should remain in effect until a travelway is reestablished on the tailgate side of a longwall section.

§36-10-19. Evaluation and Revision of Roof Control Plan.

19.1. Revisions of the roof control plan shall be proposed by the operator:

(1) When conditions indicate that the plan is not suitable for controlling the roof, face, ribs, or coal or rock bursts; or

(2) When accident and injury experience at the mine indicates the plan is inadequate. The accident and injury experience at each mine shall be reviewed at least every six (6) months.

19.2. Each unplanned roof fall and rib fall and coal or rock burst that occurs in the active workings shall be plotted on a mine map if it:

(1) Is above the anchorage zone where roof bolts are used;

(2) Impairs ventilation;

(3) Impedes passage of persons;

(4) Causes miners to be withdrawn from the area affected; or

(5) Disrupts regular mining activities for more than one (1) hour.

19.3. The mine map of which roof falls are plotted shall be available at the mine site for inspection by authorized representatives of the Director and representatives of miners at the mine.

19.4. The roof control plan for each mine shall be reviewed every six (6) months by an authorized representative of the Director. This review shall take into consideration any falls of the roof, face, and ribs and the adequacy of the support systems used at the time.

§36-10-20. Underground Auger Mines - Special Requirements.

20.1. Required support systems for mine openings exceeding twenty (20) feet. In underground auger mines, the mine openings may exceed twenty (20) feet in width, provided that:

- (1) The mine openings do not exceed twenty-six (26) feet; and
- (2) A combination full roof bolting plan/conventional roof control plan shall be developed and the roof maintained in strict compliance with section 18 of this Series.

TITLE 36 SERIES 11

UNDERGROUND MINE FOREMAN-FIRE BOSS REQUIRED; ASSISTANTS; CERTIFICATION; THE REOPENING OF ABANDONED MINES AND THE DE-ENERGIZATION OF SELF- PROPELLED ELECTRIC COAL FEEDERS; PERFORMANCE REQUIREMENTS

§36-11-1. General.

1.1 Scope. Rules and Regulations Governing When Underground Mine Foreman-Fire Boss Required; Assistants; Certification; The Reopening of Abandoned Mines; and the De-energization of Self-Propelled Electric Coal Feeders; Performance Requirements.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. November 6, 1981

1.4 Effective Date. January 1, 1982

§36-11-2. Effect of Regulations.

These rules and regulations have the effect of the law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-11-3. Definitions.

All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

§36-11-4. When Underground Mine Foreman-Fire Boss Required; Assistants; Certification.

(a) In every underground mine where five (5) or more persons are employed in a period of twenty-four (24) hours, the operator shall employ at least one (1) person certified in accordance with the provisions of Article 9, Chapter 22 of the West Virginia Code, as a mine foreman-fire boss. Each applicant for certification as a mine foreman-fire boss shall, at the time he is issued a certificate of competency: (1) Be a resident or employed in a mine in this state; (2) have had at least five (5) years' experience in the underground working, ventilation and drainage of a coal mine, which shall include at least eighteen (18) months' experience on or at a working section of an underground mine or be a graduate of the School of Mines at West Virginia University or of another accredited mining engineering school with a bachelor's degree in mining engineering technology, electrical, mechanical or civil engineering; and have had at least two (2) years practical experience in an underground mine, which shall include at least eighteen (18) months' experience on or at a working section of an underground mine; or be a graduate of an accredited college or university with an associate degree in mining, electrical, mining engineering technology, mechanical engineering or civil engineering and have at least four (4) years' practical experience in an underground mine, which shall include at least eighteen (18) months' experience on or at a working section of an underground mine; and (3) have demonstrated his knowledge of dangerous mine gases and their detection, mine safety, first aid, safety appliances, state and federal mining laws and regulations and other subjects by completing such training, educations and examinations as may be required of him under these rules and regulations.

(b) In mines in which the operations are so extensive that the duties devolving upon the mine foreman-fire boss cannot be discharged by one man, one or more assistant mine foremen-fire bosses may be designated. Such persons shall act under the instruction of the mine foreman-fire boss, who shall be responsible for their conduct in the discharge of their duties. Each assistant so designated shall be certified under the provisions of Article 9, Chapter 22 of the West Virginia Code. Each applicant for certification as assistant mine foreman-fire boss shall, at the time he is issued a certificate of competency, possess all the qualifications required of a mine foreman-fire boss: Provided, That he shall at the time he is certified be required to have at least three (3) years' experience in the underground working, ventilation and drainage of coal mines, which shall include eighteen (18) months on or at a working section of an underground mine or be a graduate of the School of Mines at West Virginia University or of another accredited engineering school with a bachelor's degree in mining engineering technology, electrical, mechanical or civil engineering; and have had twelve (12) months' practical experience in an underground mine, all of which shall have been on or at a working section or be a graduate of an accredited college or university with an associate degree in mining, electrical, mining engineering technology, mechanical or civil engineering and have had at least two (2) years' practical experience in an underground mine, which shall include at least eighteen (18) months' experience on or at a working section of an underground mine.

(c) Any person holding a mine foreman's certificate issued by any other state may act in the capacity of mine foreman-fire boss in any mine in this state until the next regular mine foreman-fire boss' examination held by the department, but not to exceed a maximum of ninety (90) days.

(d) After the effective date of this section, all duties heretofore performed by persons certified as mine foreman, assistant mine foreman or fire boss shall be performed by persons certified as underground mine foreman-fire boss or an assistant underground mine foreman fire boss. After the effective date of this section, every certificate heretofore issued to an assistant mine foreman or fire boss shall be deemed to be equal value to a certificate issued hereafter to an assistant mine foreman-fire boss, and every certificate heretofore issued to a mine foreman shall be deemed to be equal value to a certificate issued hereafter to a mine foreman-fire boss.

§36-11-5. Reopening Of Abandoned Mines.

No person, shall reopen for any purpose any old or abandoned mine without first giving the Director of the Department of Energy ten (10) days written notice. Such notice shall state clearly the name or names of the owner or owners of the mine proposed to be reopened.

Upon receipt of such notice, the Director of the Department of Energy shall have his representative present at the time at the mine designated in the notice for such opening, who shall have full authority necessary to protect the health and safety of those persons performing such work.

No old or abandoned mine shall be reopened for the purpose of producing coal unless a permit approval is obtained from the Director of the Department of Energy as required by Chapter 22A, Article 2, Section 63 of the West Virginia Code.

§36-11-6. De-energization Of Self-propelled Electric Coal Feeders; Performance Requirements.

Three (3) months after the effective date of these rules and regulations, de-energization of the tramping motors of self propelled electric coal feeders shall be provided by:

- (1) Mechanical actuation of an existing push button emergency stopswitch;
- (2) Mechanical actuation of an existing lever emergency stopswitch;
- (3) The addition of a separate electro-mechanical switch assembly.

The existing emergency stopswitch or additional switch assembly shall be actuated by a bar or lever which shall extend a sufficient distance in each direction to permit quick de-energization of the tramping motors of self-propelled electric coal feeders from all locations from which the equipment can be operated.

Movement of not more than two (2) inches of the actuating bar or lever, resulting from the application of not more than fifteen (15) pounds of force upon contact with any portion of the equipment operator's body at any point along the length of the actuating bar or lever, shall cause de-energization of the tramping motors of the self-propelled electric coal feeders.

TITLE 36 SERIES 12 ELECTRICAL PROVISIONS FOR UNDERGROUND MINING

§36-12-1. General.

- 1.1 Scope. Rules and regulations governing electrical provisions for underground mining.
- 1.2 Authority. W. Va. Code 22-6-4.
- 1.3 Filing Date. August 14, 1995.
- 1.4 Effective Date. January 15, 1996.

§36-12-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of the rules and regulations.

§36-12-3. Definitions.

3.1. All terms in these rules and regulations, not defined herein, shall have the meanings set forth in 1-1A-22A of the Code.

(a) Permanent Underground Battery Charging Station-The term "Permanent underground battery charging station" shall mean a battery charging station that has been located in one specific location for a period of time exceeding one (1) year.

(b) Ground Fault Circuit Interrupting Devices - A device for the protection of personnel that functions to de-energize a circuit or portions thereof within an established period of time when a circuit to ground exceeds some predetermined value that is less than required to operate the over current protective device of the supply circuit.

(c) Wet Location (as referred to in 4.45 of this regulation) - Installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and unprotected.

§36-12-4. General Provisions.

Operators of coal mines in which electricity is used as a means of power shall comply with the following provisions:

4.1. All surface transformers, unless of a construction which will eliminate shock hazards, or unless installed at least eight (8) feet above ground, shall be enclosed in a house or surrounded by a fence at least six (6) feet high. If the enclosure is of metal, it shall be grounded effectively. The gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

4.2. Underground transformers shall be air cooled or cooled with nonflammable liquid or inert gas.

4.3. Underground stations containing circuit breakers filled with inflammable liquids shall be put on a separate split of air or ventilated to the return air, and shall be of fireproof construction.

4.4. Transformers shall be provided with adequate overload protection.

4.5. "Danger -- High Voltage" signs shall be posted conspicuously on all transformer enclosures, high-potential switchboards and other high-potential installations.

4.6. Dry insulating platforms of rubber or other suitable nonconductive material shall be kept in place at each switchboard and at stationary machinery where shock hazards exist.

4.7. Capacitors used for power factor connection shall be nonflammable liquid filled. Suitable drain-off resistors or other means to protect workmen against electric shock following removal of power shall be provided.

4.8. All unattended underground loading points where electric driven hydraulic systems are used shall utilize a fireproof oil or emulsion.

4.9. Before electrical changes are made to permissible equipment for use in a mine, they shall be approved by the Director of the Office of Miners' Health, Safety and Training.

4.10 Reverse current protection shall be provided at storage battery charging stations to prevent the storage batteries from energizing the power circuits in the event of a power failure.

4.11. In all mines all junction or distribution boxes used for making multiple power connection in by the last open crosscut shall be permissible.

4.12. All hand-held electric drills, blower and exhaust fans, electric pumps, and such other low horsepower electric face equipment which are taken into or used in by the last open crosscut of any coal mine shall be permissible.

4.13. All electric face equipment which is taken into or used in by the last open crosscut of any coal mine shall be permissible.

4.14. In mines operated in coal seams which are located at elevations above the water table, the phrase "coal seams above the water table" means coal seams in a mine which are located at the elevation above a river or the tributary of a river into which a local surface water system naturally drains.

4.15. The operator of each coal mine shall maintain in permissible condition all electric face equipment, which is taken into or used in by the last open crosscut of any mine.

4.16. Except where permissible power connection units are used, all power-connection points out by the last open crosscut shall be in intake air.

4.17. All power circuits and electric equipment shall be de-energized before work is done on such circuits and equipment, except when necessary for trouble shooting or testing. When testing or troubleshooting an energized electrical circuit, gloves rated for the maximum voltage of the circuit shall be worn at all times by the person performing the work.

4.18. Energized trolley wires may be repaired only by a person trained to perform electrical work and to maintain electrical equipment and the operator of a mine shall require that such persons wear approved and tested insulated shoes and wireman's gloves.

4.19. No electrical work shall be performed on low-, medium-, or high-voltage distribution circuits or equipment, except by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices shall be locked out and suitably tagged by the persons who perform such work, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such person who installed them, or, if such persons are unavailable, by persons authorized by the operator or his agent.

4.20. All electric equipment shall be examined weekly, tested monthly, and properly maintained by a qualified person to assure safe operating conditions. When a potentially dangerous condition is found on electric equipment, such equipment shall be removed from service until such conditions are corrected. A record of such examinations shall be kept and made available to an authorized representative of the Director of the Office of Miners' Health, Safety and Training and to the miners in such mine.

4.21. All electric conductors shall be sufficient in size and have adequate current-carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating material.

4.22. All electrical connection or splices in conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.

4.23. Cables shall enter metal frames of motors, splice boxes, and electric compartment only through proper fittings. When insulated wire, other than cables pass through metal frames, the holes shall be substantially bushed with insulated bushings.

4.24. All power wire (except trailing cables on mobile equipment, specially designed cables conducting high-voltage power to underground rectifying equipment or transformers, or bare insulated ground and return wires) shall be supported on well-installed insulators and shall not contact combustible material, coal roof or ribs.

4.25. Power wires and cables, including but not limited to phone communications and control wires, except trolley wires, trolley feeder wires and bare signal wires, shall be insulated adequately and fully protected.

4.26. Automatic circuit-breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and circuits against short circuit and overloads. Three-phase motors and all electric equipment shall be provided with overload protection that will de-energized all three phases in the event that any phase is overloaded.

4.27. Incandescent lamps installed along haulageways and at other locations shall not contact combustible material, and if powered from trolley or direct current feeder circuits, need not be provided with separate short circuits or overload protection, if the lamp is not more than eight (8) feet in distance from such circuits.

4.28. In all main power circuits, disconnecting switches shall be installed underground within five hundred (500) feet of the bottoms of shafts and boreholes through which main power circuits enter the underground area of the mine and within five hundred (500) feet of all places where main power circuits enter the underground area of the mine.

4.29. All electric equipment shall be provided with switches or other controls that are safely designed, constructed and installed.

4.30. Each underground, exposed power conductor that leads underground shall be equipped with suitable lightning arresters of approved type within one hundred (100) feet of the point where the circuit enters the mine. Lightning arresters shall be connected to a low-resistance grounding medium on the surface which shall be separate from neutral grounding medium on the surface which shall be separated from neutral ground by a distance of not less than twenty-five (25) feet.

4.31. Except for areas of a coal mine inby the last open crosscut, incandescent lamps may be used to illuminate underground areas. When incandescent lamps are used in a track entry or belt entry or near track entries to illuminate special areas other than structures, the lamps shall be installed in weatherproof sockets located in positions such that the lamps will not come in contact with any combustible material. Lamps used in all other places must be of substantial construction and be fitted with a glass enclosure.

4.32. An authorized representative may require in any mine that electric face equipment be provided with devices that will permit the equipment to be de-energized quickly in the event of an emergency.

4.33. An authorized representative of the Director shall require manually operated emergency stop switches, designed to de-energize the traction motor circuit when the contractors or controller fail to open, to be installed on all battery powered tractors, taken into or used inby the last open crosscut of any entry or room.

4.34. Trailing cables used in coal mines shall meet the requirements for flame-resistant cables.

4.35. Short circuit protection for trailing cables shall be provided by an automatic circuit breaker or other no less effective device approved by the Director of the Office of Miners' Health, Safety and Training of adequate current-interrupting capacity in each underground conductor. Disconnecting devices used to disconnect power from trailing cables shall be plainly marked and identified and such devices shall be equipped or designed in such a manner that it can be determined by visual observation that the power is disconnected.

4.36. When two (2) or more trailing cables junction to the same distribution center, means shall be provided to assure against connecting a trailing cable to the wrong size circuit breaker.

4.37. One (1) temporary splice may be made in any trailing cable. Such trailing cable may only be used for the next twenty-four (24) hour period. No temporary splice shall be made in a trailing cable within twenty-five (25) feet of the machine, except cable reel equipment. Temporary splices in trailing cables shall be made in a workmanlike manner and shall be mechanically strong and well insulated. Trailing cables or hand cables which have exposed wires or which have splices that heat or spark under load shall not be used. As used in this section, the term "splice" means a mechanical joining of one (1) or more conductors that have been severed.

4.38. When (permanent) splices in trailing cables are made, they shall be:

- a) Mechanically strong with adequate electrical conductivity and flexibility,
- b) Effectively insulated and sealed so as exclude moisture, and
- c) Vulcanized or otherwise treated with suitable materials to provide flame-resistant qualities and good bonding to the outer jacket.

4.39. Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections. No cables will be hung in manner which will damage the insulation or conductors.

4.40. Trailing cables shall be adequately protected to prevent damage by mobile equipment.

4.41. Trailing cable and power cable connections to junction boxes and to electrical equipment shall not be made or broken under load.

4.42. All metallic sheaths, armors and conduits enclosing power conductors shall be electrically continuous throughout and shall be grounded by methods approved by an authorized representative of the Director of the Office of Miners' Health, Safety and Training.

4.43. Except where waived by the Director, metallic frames, casings and other enclosures of electric equipment that can become alive through failure of insulation or by contact with energized parts shall be grounded, and on or before the first day of January, 1978, shall have a ground monitoring system.

4.44. In instance where single-phase 110-220 volt circuits are used to feed electrical equipment, the only method of grounding that will be approved is the connection of all metallic frames, casing and other enclosures of such equipment to a separate grounding conductor which establishes a continuous connection to a grounded center tap of the transformer. In the case of 120 volt single winding transformers used to feed electrical equipment, the only method of grounding that will be approved is the connection of all metallic frames, casings and other enclosures of such equipment to a separate grounding conductor which establishes a continuous connection to a grounded center tap or a grounded leg of the transformer.

4.45. At preparation plants, surface areas of underground mines and shop areas all 120 volt AC 15-20 amp circuits used to power portable hand tools used in wet locations shall be protected with ground fault circuit interrupting devices.

4.46. The attachment of grounding wires to a mine tract or other grounded power conductor will be approved if separate clamps, suitable for such purpose are used and installed to provide a solid connection.

4.47. The frames of all off-track direct-current machines and the enclosures of related detached components shall be effectively grounded or otherwise maintained at no less safe voltages.

4.48. Installation of silicon diodes shall be restricted to electric equipment receiving power from a direct current system with one polarity grounded. Where such diodes are used on circuits having a nominal voltage rating of two hundred fifty (250), they must have a forward current rating of four hundred (400) amperes or more, and have a peak inverse voltage rating of four hundred (400) or more. Where such diodes are used on circuits having nominal voltage rating of five hundred and fifty (550), they must have a forward current rating of two hundred and fifty (250) amperes or more, and have a peak inverse voltage rating of eight hundred (800) or more.

4.49. In addition to the grounded diode, a polarizing diode must be installed in the machine control circuit to prevent operation of the machine when the polarity of a trailing cable is reversed.

4.50. When installed on permissible equipment, all grounding diodes, over-current devices, and polarizing diodes must be placed in explosion-proof compartments.

4.51. High-voltage lines, both on the surface and underground, shall be de-energized and grounded before work is performed on them, except that repairs may be permitted, in the case of energized surface high-voltage lines, if such repairs are made by a qualified person in accordance with procedures and safeguards, including, but not limited to, a requirement that the operator of such mine provide, test and maintain protective devices in making such repairs.

4.52. When two (2) or more persons are working on an energized high-voltage surface line simultaneously, and any one of them is within reach of another, such persons shall not be allowed to work on different phases on equipment with different potentials.

4.53. All persons performing work on energized high-voltage surface lines shall wear protective rubber gloves, sleeves, and climber guards if climbers are worn. Protective rubber gloves shall not be worn wrong side out or without protective leather gloves. Protective devices worn by a person assigned to perform repairs on high-voltage surface lines shall be worn continuously from the time he leaves the ground until he returns to the ground, and, if such devices are employed for extended periods, such persons shall visually inspect the equipment assigned him for defects before each use, and, in no case, less than twice each day.

4.54. Disconnecting or cutout switches on energized high-voltage surface lines shall be operated only with insulated sticks, fuse tongs or pullers which are adequately insulated and maintained to protect the operator from the voltage to which he is exposed. When such switches are operated from the ground, the person operating such devices shall wear protective rubber gloves.

4.55. Solely for purposes of grounding underground high-voltage power systems, grounded messenger wires used to suspend the cables of such systems may be used as a grounding medium.

4.56. When not in use, power circuits ungrounded shall be de-energized on idle days and idle shifts, except that rectifiers and transformers may remain energized.

4.57. High-voltage circuits entering the underground area of any coal mine shall be protected by suitable circuit breakers of adequate interrupting capacity. Such breakers shall be equipped with devices to provide protection against undervoltage, grounded phase, short circuit and overcurrent.

4.58. Circuit breakers protecting high-voltage circuits entering an underground area of any coal mine shall be located on the surface and in no case installed either underground or within a drift.

4.59. One circuit breaker may be used to protect two (2) or more branch circuits, if the circuit breaker is adjusted to afford overcurrent protection for the smallest conductor.

4.60. The grounding resistor, where required, shall be of the proper ohmic value to limit the voltage drop in the grounding circuit external to the resistor to not more than one hundred (100) volts under fault condition. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

4.61. High-voltage circuits extending underground and supplying portable mobile or stationary high-voltage equipment shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the source transformers, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend along with the power conductors and serve as a grounding conductor for the frames of all high-voltage equipment supplied power from the circuit, except that the Director or his authorized representative may permit ungrounded high-voltage circuits to be extended underground to feed stationary electrical equipment if such circuits are either steel armored or installed in grounded, rigid steel conduit throughout their entire length, and upon his finding that such exception does not pose a hazard to the miners. Within one hundred (100) feet of the point on the surface where high-voltage circuits enter the underground portion of the mine, disconnecting devices shall be installed and so equipped or designed in such manner that it can be determined by visual observation that the power is disconnected, except that the Director or his authorized representative may permit such devices to be installed at a greater distance from such area of the mine if he determines, based on existing physical conditions, that such installation will be more accessible at a greater distance and will not pose any hazard to the miners.

4.62. High-voltage resistance grounded systems serving portable or mobile equipment shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure continuity, and the fail-safe ground check circuit breaker to open when either the ground or pilot check wire is broken, or other no less effective device approved by the Director or his authorized representative to assure such continuity.

4.63. Underground high-voltage cables used in resistance grounded systems shall be equipped with metallic shields around each power conductor with one (1) or more ground conductors having a total cross-sectional area of not

less than one half the power conductor, and with an insulated internal or external conductor not smaller than No. 10 (A.W.G.) for the ground continuity check circuit.

4.64. All such cables shall be adequate for the intended current and voltage. Splices made in such cables shall provide continuity of all components.

4.65. Single-phase loads, such as transformer primaries, shall be connected phase-to-phase.

4.66. All underground high-voltage transmission cables shall be installed only in regularly inspected air courses and haulageways, and shall be covered, buried, or placed so as to afford protection against damage, guarded where men regularly work or pass under them unless they are six and one-half feet or more above the floor or rail, securely anchored, properly insulated, guarded at ends, and covered, insulated, or placed to prevent contact with trolley wires and other low-voltage circuits.

4.67. Disconnecting devices shall be installed at the beginning of branch lines in underground high-voltage circuits and equipped or designed in such a manner that it can be determined by visual observation that the circuit is de-energized when the switches are open.

4.68. Circuit breakers and disconnecting switches underground shall be marked for identification.

4.69. In case of high-voltage cables used as trailing cables, temporary splices shall not be used and all permanent splices shall be made in accordance with the manufacturer's specifications.

4.70. Frames, supporting structures and enclosures of stationary, portable or mobile underground high-voltage equipment supplying power to such equipment receiving power from resistance grounded systems shall be effectively grounded to the high-voltage ground.

4.71. Low-and medium-voltage power circuits serving three-phase alternating current equipment serving portable or mobile equipment shall be protected by suitable circuit breakers of adequate interrupting capacity which are properly tested and maintained as prescribed by the Director. Such breakers shall be equipped with devices to provide protection against under-voltage, grounded phase, short circuit and overcurrent.

4.72. Power centers and portable transformers shall be de-energized before they are moved from one location to another, except that, when equipment powered by sources other than such centers or transformers is not available, the Director may permit such centers and transformers to be moved while energized if he determines that another equivalent or greater hazard may otherwise be created, and if they are moved under the supervision of a qualified person, and if such centers and transformers are examined prior to such movement by such person and found to be grounded by methods approved by an authorized representative of the Director and otherwise protected from hazards to the miner. A record shall be kept of such examinations. High-voltage cables, other than trailing cables, shall not be moved or handled at any time while energized except that when such centers and transformers are moved while energized as permitted under this section, energized high-voltage cables attached to such centers and transformers may be moved only by a qualified person and the operator of such mine shall require that such person wear approved and tested insulated wireman's gloves.

4.73. Low-and medium-voltage three-phase alternating-current circuits used underground shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the power center, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend along with the power conductors and serve as a grounding conductor for the frames of all electrical equipment supplied power from the circuit, except that the Director or his authorized representative may permit underground low-and medium-voltage circuits to be used underground to feed such stationary electrical equipment if such circuits are either steel armored or installed in grounded rigid steel conduit throughout their entire length. The grounding resistor, where required, shall be of the proper ohmic value to limit the ground fault current to twenty-five (25) amperes. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

4.74. Low-and medium-voltage resistance grounded systems serving portable or mobile equipment shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure continuity which ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken, or other not less effective device approved by the Director or his authorized representative to assure such continuity, except that an extension of time, not in excess of twelve months, may be permitted by the Director on a mine-to-mine basis if he determines that such equipment is not available. Cable couplers shall be constructed so that the ground continuity conductor shall be broken first and the ground conductors shall be broken last when the coupler is being uncoupled.

4.75. Disconnecting devices shall be installed in conjunction with circuit breakers portable or mobile to provide visual evidence that the power is connected.

4.76. Circuit breakers shall be marked for identification.

4.77. Single-phase loads shall be connected phase-to-phase.

4.78. Trailing cables for medium-voltage circuits shall include grounding conductors, a ground check conductor, and grounded metallic shields around each power conductor or a ground metallic shield over the assembly, except that on equipment employing cable reels, cables without shields may be used if the insulation is rated two thousand (2000) volts or more.

4.79. Trolley wires and trolley feeder wires shall be provided with cutout switches at intervals of not more than two thousand (2000) feet and near the beginning of all branches.

4.80. Trolley wire and trolley feeder wires shall be provided with overcurrent protection.

4.81. Trolley wires and trolley feeder wires, high-voltage cables, and transformers shall not be located within fifteen (15) feet of the last open crosscut and shall be kept at least one hundred and fifty (150) feet from pillar workings.

4.82. Trolley wires and trolley feeder wires, and bare signal wires shall be insulated adequately where they pass through doors and stoppings and where they cross over power wires and cables. Trolley wires and trolley feeder wires shall be guarded adequately:

- a) At all points where men are required to work or pass regularly under the wires.
- b) On both sides of all doors and stoppings.
- c) At man-trip stations.

4.83. Temporary guards shall be provided where trackmen and other persons work in proximity to trolley wires and trolley feeder wires.

4.84. Adequate precaution shall be taken to ensure that equipment being moved along haulageways will not come in contact with trolley wires or trolley feeder wires.

4.85. Trolley and feeder wires shall be installed as follows: Where installed on permanent haulage, they shall be:

- a) At least six (6) inches outside the track gauge line.
- b) Kept taut and not permitted to touch the roof, rib or crossbars. Particular care shall be taken where they pass through door openings to preclude bare wires from coming in contact with combustible material.
- c) Installations of trolley wire hangers shall be provided within three (3) feet of each splice in a trolley wire.

4.86. Permanent underground battery charging stations shall be ventilated to the return on a separate split of air.

TITLE 36 SERIES 13

THE AUTHORITY, ACCOUNTABILITY, AND RESPONSIBILITY OF UNDERGROUND MINE FOREMAN; RESPONSIBILITY OF OPERATOR IN RELATION TO MINE FOREMAN; AND REGULATORY REVIEW PROCEDURES

§36-13-1. General.

1.1 Scope. Rules and regulations governing the authority, accountability, and responsibility of underground mine foremen; responsibility of operator in relation to mine foremen; and regulatory review procedures.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. February 10, 1984

1.4 Effective Date. April 6, 1984

§36-13-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-13-3. Definitions.

All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

§36-13-4. Authority, Accountability, and Responsibility of Underground Mine Foremen; Responsibility of Operator in Relation to Mine Foremen; and Regulatory Review Procedures.

4.1. The mine foreman shall notify, in writing, the operator or superintendent of the mine, and the Director of the Department of Energy, of his inability to comply with any of the requirements of this law, and it shall then become the duty of such operator or superintendent promptly to attend to the matter complained of by the mine foreman so as to enable him to comply with the provisions hereof. Every operator of a mine shall furnish all supplies necessary for the mine foremen to comply with the requirements of this law after being requested to do so in writing by the mine foreman.

4.2. In the performance of the statutory duties delegated to mine foremen, or certified persons acting as such, they shall have no superior officers, and all employees working inside of such mine or mines shall be subordinate to them in their particular work.

Mine foremen and assistant mine foremen are statutory officers and in the performance of their statutory duties are representatives of the State. No one shall obstruct the mine foremen or assistant mine foremen in the fulfillment of any of the duties assigned to him by Chapter 22A.

4.3. The Director of the Department of Energy shall provide each operator and the mine foreman at each mine site with a copy of newly promulgated regulations and changes to regulations, as soon as practicable but no later than fourteen (14) days after the date on which the regulations become effective. The Director shall also provide each operator and the mine foreman at each mine site with a copy of all relevant State court decisions, and interpretations of regulations by the Director, as soon as practicable but no later than thirty (30) days after the date such material is issued. The Director will identify those persons with whom the material is to be reviewed at the mine site.

TITLE 36 SERIES 14
ELECTRICAL EQUIPMENT IN MINES; REQUIRED EXAMINATIONS

§36-14-1. General.

- 1.1 Scope. Rules and regulations governing electrical equipment in mines; required examinations.
- 1.2 Authority. W. Va. Code 22-6-4
- 1.3 Filing Date. January 6, 1982
- 1.4 Effective Date. February 15, 1982

§36-14-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to the enforcement of these rules and regulations.

§36-14-3. Definitions.

All terms in these rules and regulations, not defined herein, shall have the meaning set forth in Section 1, Article 1A, Chapter 22A of the Code.

§36-14-4. Electric Equipment in Mines.

(a) All examinations, as required in the paragraphs below, shall be made at a point not less than twelve (12) inches from the roof, face and ribs.

(b) In all mines, electric haulage locomotives operated from trolley wire and all other non-permissible electrical equipment or devices which may ignite gas shall not be used in return air, unless permission is granted by Director of the Department of Mines for a specified area. Permissible electrical equipment may be used in return airways: Provided, That (a) The mine operator gives notice to the Inspector-at-Large or the District Mine Inspector in the division in which the mine is located, when such work is performed in return airways at any point exceeding four hundred (400) feet out by the last open crosscut; (b) the work area is preshift examined in accordance with Chapter 22A, Article 2, Section 20 of West Virginia code; (c) the mine foreman or assistant mine foreman examines the working area in the return airway in which miners will be working at the beginning of each shift before any equipment is energized; (d) the working area is examined at least every two (2) hours during a working shift for hazards, by a certified mine foreman or assistant mine foreman; (e) methane gas examinations are made at frequent intervals as work progresses, but not to exceed twenty (20) minutes; (f) the electrical equipment is examined at least once each shift for permissible deficiencies, (g) no temporary splices are in the trailing cables of the equipment being used, and (h) the work area is provided with two portable fire extinguishers. For the purpose of this provision, return air shall mean a volume of air that has passed through and ventilated all the working place in a mine section.

(c) No person shall be placed in charge of a coal-cutting machine in any mine who is not a qualified person, capable of determining the safety of the roof and sides of the working places and of detecting the presence of explosive gas, unless they are accompanied by a certified or qualified person who has passed such examination.

(d) In any mine no machine shall be brought in by the last breakthrough next to the working face until the machine man shall have made an inspection for gas in the place where the machine is to work. If explosive gas in excess of one (1%) percent is found in the place, the machine shall not be taken in until the danger is removed.

(e) In working places a safety lamp, or other suitable approved apparatus for the detection of explosive gas, shall be provided for use with each mining machine when working, and should any indication of explosive gas in excess of one (1%) percent appear on the flame of the safety lamp, or on other apparatus used for the detection of explosive gas, the person in charge shall immediately stop the machine, cut off the current at the nearest switch and report the condition to the mine foreman or supervisor. The machine shall not again be started in such place until the condition found has been corrected and been pronounced safe by a certified person.

(f) No electric equipment shall be operated in a mine for a longer period than twenty (20) minutes without an examination as above described being made for gas; and if gas is found in excess of one (1%) percent, the current shall at once be switched off the machine, and the trailing cable shall forthwith be disconnected from the power supply until the place is pronounced safe by a certified person.

(g) Machine runners and helpers shall use care while operating mining machines. No person except those persons necessary shall remain near the machine while it is in operation. They shall examine the roof of the working place to see that it is safe before starting to operate the machine. They shall not move the machine while the cutter chain is in motion.

§36-14-5. Cutting and Welding in Mines.

5.1 When cutting and welding has been performed in any area of an underground coal mine, that area shall be examined for any hot spots immediately after the work is completed. A second examination for hot spots shall be conducted within 2 hours, but no sooner than 30 minutes after the first examination has been completed. The second examination shall be performed by a qualified person and recorded in a book provided for that purpose by a certified person.

TITLE 36 SERIES 15
VENTILATION BY USE OF MECHANICALLY OPERATED FANS

Editor's Note: The current regulation which includes a "competent person" is included here. The amendments made in 1995 concerning intentional changes in the ventilation system are not included, since declared null and void by Civil Action No. 95-Misc-565 in the Circuit Court of Kanawha County.

§36-15-1. General.

- 1.1 Scope. Rules and regulations governing ventilation by use of mechanically operated fans.
- 1.2 Authority. W. Va. Code 22-6-4.
- 1.3 Filing Date. October 18, 1995
- 1.4 Effective Date. December 1, 1995

§36-15-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article one A, Chapter twenty-two A, of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-15-3. Definitions.

3.1. (a) Competent person- a person who has been adequately trained by an authorized representative of the Office of Miners' Health, Safety and Training as prescribed by the Board of Miner Education, Training and Certification and who possesses documentation of such training to perform daily fan inspections.

(b) All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section one, Article one A, Chapter twenty-two A of the Code.

§36-15-4. Fans.

4.1. (a) The ventilation of mines, the systems for which extend for more than two hundred (200) feet underground and which are opened after the effective date of this article, shall be produced by a mechanically operated fan or mechanically operated fans. The fan or fans shall be kept in continuous operation, unless written permission to do otherwise be granted by the Director of the Office of Miners' Health, Safety and Training. In case of interruption to a ventilating fan or its machinery whereby the ventilation of the mine is interrupted, immediate action shall be taken by the mine operator or his management personnel, in all mines, to cut off the power and withdraw the men from the face regions or other areas of the mine affected. If ventilation is restored in fifteen (15) minutes, the face regions and other places in the affected areas where gas (methane) is likely to accumulate, shall be re-examined by a certified person; and if found free of explosive gas, power may be restored and work resumed. If ventilation is not restored in fifteen (15) minutes, all underground employees shall be removed from the mine, all power shall be cut off in a timely manner, and the underground employees shall not return until ventilation is restored for at least fifteen (15) minutes and the mine examined by certified persons, mine examiners or other persons holding a certificate to make preshift examination.

(b) All main fans installed after the effective date of this article shall be located on the surface in fireproof housings offset not less than fifteen (15) feet from the nearest side of the mine opening, equipped with fireproof air ducts, provided with explosion doors or a weak wall and operated from an independent power circuit. In lieu of the requirements for the location of fans and pressure-relief facilities, a fan may be directly in front of, or over a mine opening: Provided, that such opening is not in direct line with possible forces coming out of the mine if an explosion occurs: Provided, however, that there is another opening having a weak-wall stopping or explosion doors that would be in direct line with forces coming out of the mine. All main fans shall be provided with pressure-recording gauges or water gauges. A daily inspection shall be made of all main fans and machinery connected therewith by a certified electrician, or a competent person, and a record kept of the same in a book prescribed for this purpose or by adequate facilities provided to permanently record the performance of the main fans and to give warning of an interruption to a fan.

(c) Auxiliary fans and tubing shall be permitted to be used in lieu of or in conjunction with line brattice to provide adequate ventilation to the working faces: Provided, that auxiliary fans be so located and operated to avoid recirculation of air at any time. Auxiliary fans shall be approved and maintained as permissible.

(d) If the auxiliary fan is stopped or fails, the electrical equipment in the place shall be stopped and the power disconnected at the power source until ventilation in the working place is restored. During such stoppage, the ventilation shall be by means of the primary air current conducted into the place in a manner to prevent accumulation of methane.

(e) In places where auxiliary fans and tubing are used, the ventilation between shifts, weekends and idle shifts shall be provided to face areas with line brattice or the equivalent to prevent accumulation of methane.

(f) If the air passing through the auxiliary fan or tubing contains gas in excess of one percent, the current shall at once be switched off and the trailing cable shall forthwith be disconnected from the power supply until the place is pronounced safe.

(g) The Director may require that when continuous mine equipment is being used, all face ventilating systems using auxiliary fans and tubing shall be provided with machine-mounted diffuser fans, and such fans shall be continuously operated during mining operations.

(h) In the event of a fire or explosion in any coal mine, the ventilating fan or fans shall not intentionally be started, stopped, speed increased or decreased or the direction of air current changed without the approval of the general mine foreman, or in his absence one other certified mine foreman-fire boss employed at such mine, and designated by the mine foreman, who is completely familiar with the ventilating controls of the mine, and, if neither is immediately available, a

representative of the Office of Miners' Health, Safety and Training. A duly authorized representative of the employees should be consulted if practical under the circumstances.

TITLE 36 SERIES 16

THE BLOCKING OF EQUIPMENT PRIOR TO PERFORMING WORK ON SUCH EQUIPMENT

§36-16-1. General.

1.1 Scope. Rules and regulations governing the blocking of equipment prior to performing work on such equipment.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. January 6, 1982

1.4 Effective Date. February 15, 1982

§36-16-2. Effect Of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article one A, Chapter twenty-two A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-16-3. Definitions.

All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section one, Article one A, Chapter twenty-two A of the Code.

§36-16-4. Performing Work From A Raised Position: Safeguards.

4.1. Men shall not work on or from a piece of mobile equipment in a raised position until it has been blocked in place securely. This does not preclude the use of equipment specifically designed as elevated mobile work platforms.

4.2. No work shall be performed under machinery or equipment that has been raised until such machinery or equipment has been securely blocked in position.

TITLE 36 SERIES 17

UNUSED AND ABANDONED PARTS OF MINE

§36-17-1. General.

1.1 Scope. Rules and regulations governing unused and abandoned parts of mine

1.2. Authority. W. Va. Code 22-6-4

1.3. Filing Date. January 22, 1982

1.4. Effective Date. March 1, 1982

§36-17-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article one A, Chapter twenty-two A, of the Code relative to enforcement are applicable to the enforcement of these rules and regulation.

§36-17-3. Definitions.

All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section One, Article One A, Chapter Twenty-Two A of the Code.

§36-17-4. Unused And Abandoned Parts Of Mine.

4.1. (a) In any mine, all workings which are abandoned after the effective date of this rule shall be sealed or ventilated. If such workings are sealed, the sealing shall be done with incombustible material in a manner prescribed by the Director of the Department of Energy, and one or more of the seals of every sealed area shall be fitted with a pipe and cap or valve to permit the sampling of gases and measuring of hydrostatic pressure behind the seals. For the purpose of this section, working within a panel shall not be deemed to be abandoned until such panel is abandoned.

(b) Air that has been used to ventilate seals shall not be used to ventilate any working place in any mine, unless prior approval is obtained from the Director of the Department of Energy. Air that has passed through an abandoned working or an area which is inaccessible or unsafe for inspection shall not be used to ventilate any working place in any mine.

(c) No air which has been used to ventilate an area from which the pillars have been removed shall be used to ventilate any working place in a mine, except that such air, if it does not contain 0.25 volume percent or more of methane, may be used to ventilate enough advancing working places immediately adjacent to the line of retreat to maintain an orderly sequence of pillar recovery on a set of entries. Before sealed areas, temporary or permanent are reopened, the Director of the Department of Energy shall be notified.

4.2 (a) A professional engineer registered with the Board of Registration for Professional Engineers pursuant to Article Thirteen, Chapter Thirty of the West Virginia Code shall certify the design of all new seals as meeting the criteria of the final requirements of 30CFR75:335.

(1) For each basic seal design, the following criteria shall be considered:

- minimum requirements for the seal location, including strength, configuration and preparation;
- quality and strength requirements for each material involved in constructing the seal;
- details on the size and configuration of the seal and its structural elements; and
- quality control measures and minimum testing requirements to ensure that the seal meets the design requirements.

(b) Every seal design shall have the Professional Engineer's certificate and signature, in addition to his or her seal in the following form: "I the undersigned, do hereby certify that this seal design is, to the best of my knowledge, in accordance with all applicable requirements under state and federal law, rules and regulations."

(c) Certifications required in this section along with design documents, construction or as-built reports and/or drawings shall be kept at the mine by the operator for the life of such mine or life of the seal shall be available for review by station inspection personnel as well as representatives of the miners.

(d) Each phase of new seal construction shall be observed and inspected by a mine foreman-fire boss to assure that such phase has been constructed pursuant to the approved design, but in no even shall a mine foreman-fire boss observe/inspect the seal construction less than once every two hours. Results of such inspections and observations shall be recorded in a book kept on the surface for that purpose.

(e) The operation shall, prior to construction of the final seal in a set, notify the director, who shall cause an inspection to be made of the seals before the area is finally sealed.

4.3 (a) Protocols for the inspection of the physical condition of seals and the atmospheric measurement (sampling) developed pursuant to the final requirements of 30CFR75:335.

(b) In all mines containing workings using seals constructed in accordance with the provisions of 30CFR75.335(a)(2) as published prior to May 22, 2007, which are constructed of cementaceous foam blocks the operator shall, pursuant to a plan submitted to and approved by the director, remediate the seals by either enhancing the seals, constructing new seals, or other means.

(c) When seal enhancement is necessary according to 4.3(b) above of these rules, such seals must have the capability to withstand a minimum of 50psi overpressure.

(d) If the director determines that any seal(s) described in subsection (b) is incapable of being remediated in a safe and effective manner, the director shall order that the mine foreman-fire boss shall, at least every twenty-four hours, inspect the physical condition of the seal and measure the atmosphere behind the seal. In addition, the operator shall maintain areas behind these seals inert pursuant to the final requirements of 30CFR75:336(b)(3) – (b)(7).

TITLE 36 SERIES 18

THE RESPONSIBILITY FOR CARE AND MAINTENANCE OF EQUIPMENT

§36-18-1. General.

- 1.1 Scope. Rules and regulations governing the responsibility for care and maintenance of equipment.
- 1.2 Authority. W. Va. Code 22-6-4.
- 1.3 Filing Date. August 15, 1996.
- 1.4 Effective Date. October 15, 1996.

§36-18-2. Effect of Regulations.

2.1. These rules and regulations shall have the same effect of law and violations shall be deemed a violation of the law and so cited with the same effect as law. All provisions of W. Va. Code 22A-1A et seq. relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-18-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in W. Va. Code 22A-1A-1.

3.2. Unsafe Equipment: The term "Unsafe Equipment" shall mean any equipment designed to be operated by a miner that has a defect which is covered by state law, or rule or regulation, and that creates a condition which involves a potential hazard that could reasonably be expected to cause a miner in the vicinity to be placed in danger of injury or death.

§36-18-4. Responsibility For Care And Maintenance of Equipment.

4.1. Mine operators shall maintain equipment in safe operating condition. Equipment operators shall exercise reasonable care in the operation of the equipment entrusted to them and shall promptly report defects known to them, provided, if equipment has been taken out of service, by being properly tagged out, the operator shall not be issued a violation under the provision of this section; provided however, such tag placed on such equipment shall indicate the date and time such equipment was removed from service. The person removing the equipment from service and tagging such equipment shall place his signature upon the tag.

§36-18-5. Pre-Operational Equipment Check.

5.1. Each working shift prior to its operation, all self-propelled section equipment to be operated during that shift shall be examined by the equipment operator for safety defects and/or unsafe conditions.

5.2. Pre-Operational equipment examination required under 5.1 of this rule shall include the following items at a minimum. In addition, a list of these items shall be maintained on such equipment.

- (1) Stop/Start Control
- (2) Panic Bar
- (3) Tram Controls
- (4) Steering
- (5) Service Brakes
- (6) Automatic Emergency Brakes
- (7) Lights
- (8) Warning Devices
- (9) Canopies Where Required
- (10) ATRS System and Boom Controls on Roof Bolting Machines

5.3. Upon completion of the required examination under 5.1, if the equipment is determined to be unsafe, the individual making the examination shall report such unsafe equipment to his/her foreman. Any unsafe equipment shall be taken out of service and tagged until such unsafe condition is corrected. Before the unit of equipment can be placed back into service, the operator of such unit shall make a pre-operational examination.

§36-18-6. Maintenance of Personnel Carriers.

6.1 By January 1, 2009, on working sections where personnel carriers are used to transport miners underground, the personnel carrier or combination of personnel carriers, shall be of sufficient capacity to accommodate the number of persons reasonably likely to be on the section and shall be available to transport persons to a safe area in the event of an emergency.

§36-18-7. Load Locking Valves.

6.1. All continuous-mining machines and loading machines shall be equipped with load-locking valves in the boom and head lift cylinders.

TITLE 36 SERIES 19 WRITTEN REPORTS OF ACCIDENTS

§36-19-1. General.

- 1.1 Scope. Rules and regulations governing written reports of accidents.
- 1.2 Authority. W.Va. Code 22-6-4.
- 1.3 Filing Date. April 22, 1996.
- 1.4 Effective Date. June 1, 1996.

§36-19-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of W. Va. Code 22A-1A relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-19-3. Definitions.

3.1 All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in W. Va. Code 22A-1A-1.

3.2 Accident. The term "accident" means:

- (1) A death of an individual at a mine;
- (2) An injury to an individual at a mine which has a reasonable potential to cause death;
- (3) An entrapment of an individual for more than thirty (30) minutes;
- (4) An unplanned inundation of a mine by a liquid or gas;
- (5) An unplanned ignition or explosion of gas or dust;
- (6) An unplanned ignition or explosion of a blasting agent or an explosive;
- (7) An unplanned fire in or about a mine not extinguished within five (5) minutes of ignition;
- (8) An unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use; or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage;
- (9) A coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than one (1) hour;
- (10) An unstable condition at an impoundment, refuse pile, or culm bank which requires emergency action in order to prevent failure, or which cause individuals to evacuate an area; or, failure of an impoundment, refuse pile, or culm bank;
- (11) Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than thirty (30) minutes;
- (12) An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs;

3.3 Serious Personal Injury. An event at a mine which causes bodily injury to an individual which requires such individual to be admitted to a medical facility overnight for reasons other than strains, sprains or observation as determined by a physician.

3.4 Occupational Injury. The term "occupational injury" means any injury to a miner which occurs at a mine for which medical treatment is administered, or which results in death or loss of consciousness, inability to perform all duties on any day after an injury, temporary assignment to other duties, or transfer to another job.

§36-19-4. Notification of Accidents and Occupational Injuries.

4.1. If an accident as defined in 3.2 or a serious personal injury as defined in 3.3. occurs an operator shall immediately contact the district inspector or the regional inspector at large from the regional Office of Miners' Health, Safety and Training for the area where the mine is located.

4.2. Whenever loss of life or personal injury which is determined by the attending physician to have a reasonable potential to cause death shall occur by reason of any accident or occupational injury in or about any coal mine, it shall be the duty of the operator, agent, superintendent or mine foreman to within twenty-four (24) hours report the same in writing to the director of the Office of Miners' Health, Safety and Training.

4.3. Whenever any accident or occupational injury occurs in or about any coal mine to any employee or person connected with the mining operation, which does not result in death or injury with a reasonable potential to cause death, the operator, agent, mine superintendent or mine foreman shall, within ten (10) working days, report the same in writing to the director of the Office of Miners' Health, Safety and Training and upon request, to the miner representative within twenty-four (24) hours of submittal, giving full details thereof on forms provided by the department. If the operator is not made immediately aware of the injury, the written accident/injury report shall be submitted within ten (10) working days of the date the operator was notified.

§36-19-5. Difference Between Medical Treatment and First Aid.

5.1. Medical treatment includes, but is not limited to, the suturing of any wound, treatment of fractures, application of a cast or other professional means of immobilizing an injured part of the body, treatment of infection arising out of an injury, treatment of bruise by the drainage of blood, surgical removal of dead or damaged skin (debridement), amputation or permanent loss of use of any part of the body, treatment of the second (2nd) and third (3rd) degree burns. Procedures which are diagnostic in nature are not considered by themselves to constitute medical treatments. Visits to a physician, physical examinations, X-ray examinations, and hospitalization for observations, where not evidence of injury is found and no medical treatment given, do not in themselves constitute medical treatment. Procedures which are preventative in nature also are not considered by themselves to constitute medical treatment. Tetanus and flu shots are considered preventative in nature.

5.2. First aid includes any one-time treatment, and follow-up visit for the purpose of observation, of minor injuries such as cuts, scratches, first (1st) degree burns and splinters. Ointments, salves, antiseptics, and dressings to minor injuries are considered to be first aid.

5.3. The guidelines contained in thirty (30) CFR 50.20-3 and any subsequent amendments to such regulation shall be used by the Office of Miners' Health, Safety and Training to differentiate between medical treatment and first aid for specific types of injuries.

§36-19-6. Investigation of Accidents.

6.1. After notification of an accident by an operator, the MHS&T inspector at large will promptly decide whether to conduct an accident investigation and will promptly inform the operator of his decision. If MHS&T decides to investigate an accident it will initiate the investigation within 24 hours of notification. The investigating inspector shall make a report to the director of the Office of Miners' Health, Safety and Training, setting forth the results of such examination, including the condition of the mine and the cause or causes of such accident, if known. All such reports shall be made available to interested parties upon written request.

6.2. The mine inspector may investigate an occupational injury as defined in Section 3.4. However, the operator shall investigate each occupational injury that requires hospitalization within ten (10) days of occurrence.

§36-19-7. Preservation of Evidence Following Accident.

7.1. Unless granted permission by the Office of Miners' Health, Safety and Training, no operator may alter an accident site or an accident related area until completion of all investigations pertaining to the accident except to the extent necessary to rescue or recover an individual, prevent or eliminate an imminent danger, or prevent destruction of mining equipment.

TITLE 36 SERIES 20 INDEPENDENT CONTRACTORS

Editor's Note: Only the current regulation as amended in May 1991 is included here. The amendments made in 1995 are not included, since declared null and void by Civil Action No. 95-Misc-565 in the Circuit Court of Kanawha County.

§36-20-1. General.

1.1 Scope. This Regulation Amends Title 36, Series 20, Section 1, by permitting and setting forth the requirements for Independent Contractors in the State of West Virginia.

1.2 Authority. W. Va. Code 22-6-4.

1.3 Filing Date. May 2, 1991

1.4 Effective Date. May 2, 1991

§36-20-2. Effect of Regulations.

2.1. (a) These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect of law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

(b) These proposed regulations are intended to include "independent contractor" within the definition of "operator" under Chapter 22A of the Code, and to establish a procedure to allow the Director of the Office of Miners' Health, Safety and Training to enforce the State mine law, and rules and regulations issued thereunder, against independent contractors.

§36-20-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

(a) The term "operator" shall mean any firm, corporation, partnership, or individual operating any coal mine or part thereof, or engaged in the construction of any facility associated with a coal mine, and shall include any independent contractor at a coal mine.

(b) The term "Independent Contractor" shall mean any firm, corporation, partnership or individual that contracts to perform services or construction at a coal mine, excluding mine vendors, office equipment suppliers, service or delivery personnel.

(c) The term "production operator" means any owner, lessee, or other person who operates, controls, or supervises a coal mine.

(d) The term "Director" shall mean the Director of the Office of Miners' Health, Safety and Training.

§36-20-4. Independent Contractor Register.

4.1. (a) All independent contractors as defined in subsection 3.1(b) of these rules and regulations shall register with the Office of Miners' Health, Safety and Training and receive a contractor identification number before performing services or construction work at coal mines in this state.

4.2. (a) To register, all independent contractors shall provide the Office of Miners' Health, Safety and Training the following information on forms provided by the Office of Miners' Health, Safety and Training:

(1) The independent contractor's trade name, business address, and business telephone;

(2) A general description of the nature of the work to be performed by the independent contractor; and

(3) The independent contractor's address of record for service of citations, or other documents involving the independent contractor.

(b) If any of the above information changes, the independent contractor shall advise the Office of Miners' Health, Safety and Training of such change within 30 days.

(c) Upon receipt of the above information the Office of Miners' Health, Safety and Training shall issue a contractor identification number. Prompt issuance of the contractor identification number shall not be unreasonably withheld.

4.3. Prior to performing work at the mine, each independent contractor shall provide the production-operator the information contained in subsection 4.2(a), along with his Office of Miners' Health, Safety and Training contractor identification number.

4.4. Each production-operator shall maintain in writing at the mine the information required by subsection 4.3 for each independent contractor at the mine. The production-operator shall provide the above information to an authorized representative of the Director upon the beginning of any inspection.

§36-20-5. Service of Documents; Independent Contractors.

5.1. Service of notices, orders, and other documents upon independent contractors shall be completed upon delivery to the independent contractor at the work site and mailed to the independent contractor's address of record. A copy of all notices, orders, and other required documents shall be posted on a conspicuous bulletin board at the work site.

§36-20-6. Address of Record and Telephone Number; Independent Contractors.

6.1. The address and telephone number required under this part shall be the independent contractor's official address and telephone number for purposes of Chapter Twenty-Two A (22A) of the Code and these regulations. Service of documents upon independent contractors may be proved by a post office return receipt showing that the documents were delivered to the address of record because the independent contractor is no longer at that address and has established no forwarding address; because delivery was not accepted at that address; or because no such address exists. Independent contractors may request service by delivery to another appropriate address of record provided by the independent contractor.

§36-20-7. Enforcement of Citations and Orders.

7.1 These regulations shall not be construed to limit the basic compliance responsibilities of production-operators. Overall compliance responsibility of production-operators under Chapter 22A of the Code shall include assuring compliance with the Code provisions and regulations which apply to the work being performed by independent contractors at the mine.

7.2. It is the general enforcement policy of the Office of Miners' Health, Safety and Training that the independent contractor will be held responsible for violation committed by the independent contractor or its employees where the production-operator has complied with Section 4 of these regulations.

7.3. (a) Enforcement action against production-operators for violations which involve independent contractors may be taken by the Office of Miners' Health, Safety and Training where the production-operator has contributed to the

existence of a violation, or the production-operator's miners are exposed to the hazard, or the production-operator has control over the existence of the hazard.

(b) A production-operator may be properly cited for a violation of Chapter 22A of the regulations involving an independent contractor where:

1. The production operator has contributed by either an act or an omission to the occurrence of violation in the course of an independent contractor's work, or
2. The production-operator has contributed by either an act or omission to the continued existence of a violation committed by an independent contractor, or
3. The production-operator's miners are exposed to the hazard, or
4. The production-operator has control over the condition that needs abatement.

(c) In addition to the provisions of Section 7.3(b) of these regulations, the production-operator may also be required to assure continued compliance with the Code and regulations applicable to an independent contractor at the mine until the contractor is fully able to assume compliance responsibility.

7.4. Whenever a mine inspector finds a violation or imminent danger in an area where an independent contractor is operating, such inspector shall make a determination whether to issue the appropriate notice of violation or order to either the production-operator or the independent contractor, or both, based upon the criteria set out in Sections 7.2 and 7.3 of these regulations.

TITLE 36 SERIES 21

THE INSTRUCTION OF EMPLOYEES AND SUPERVISION OF APPRENTICES; ANNUAL EXAMINATION OF PERSONS USING FLAME SAFETY LAMPS; RECORDS OF EXAMINATION; MAINTENANCE OF METHANE DETECTORS

§36-21-1. General.

1.1 Scope. Rules and Regulations Governing the Instruction of Employees and Supervision of Apprentices; Annual Examination of Persons Using Flame Safety Lamps; Records of Examinations; Maintenance of Methane Detectors.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. March 12, 1982

1.4 Effective Date. April 23, 1982

§36-21-2. Effects Of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-21-3. Definitions.

All terms in these rules and regulations, not defined herein, shall have the meaning set forth in Section 1, Article 1A, Chapter 22A of the Code.

§36-21-4. Instruction Of Employees And Supervision Of Apprentices; Annual Examination Of Persons Using Flame Safety Lamps; Records Of Examinations; Maintenance Of Methane Detectors, Etc.

4.1. It shall be the duty of the mine foreman or assistance mine foreman of every coal mine in this state to see that every person employed to work in such mine shall, before beginning work therein, be instructed in the particular danger incident to his work in such mine and be furnished a copy of the mining laws and rules of such mine. It shall be the duty of every mine operator who employs apprentices, as that term is used in Sections 3 and 4, Articles 10, Chapter 22 of the West Virginia Code, to ensure that the apprentices are effectively supervised with regard to safety practices and to instruct apprentices in safe mining practices. Every apprentice shall work under the direction of the mine foreman or his assistant mine foreman and they shall be responsible for his safety. The mine foreman or assistant mine foreman may delegate the supervision of an apprentice to an experienced miner, but the foreman and his assistant mine foreman shall remain responsible for the apprentice. During the first ninety (90) days of employment in a mine, the apprentice shall work within sight and sound of the mine foreman assistant mine foreman or an experienced miner, and in such a location that the mine foreman, assistant mine foreman or experienced miner can effectively respond to cries for help of the apprentice. Such location shall be on the same side of any belt, conveyor or mining equipment.

No person shall be qualified for testing for methane and oxygen deficiency unless each such person has been trained and demonstrates to the satisfaction of an authorized representative of the director of the department of energy that he is qualified to test for methane with a flame safety lamp or other approved methane detectors. Records of such examinations shall be kept by the operator and the director of the department of mines.

Persons whose duties require them to use a flame safety lamp and other approved detectors, that have been qualified by the department of energy to test for methane and oxygen deficiency, shall be examined at least annually to their competence by a certified mine foreman-fire boss and a record that such examination was given, together with pertinent data relating thereto, shall be kept on file by the operator and a copy shall be furnished to the department of energy.

Persons whose duties require them to administer the annual examinations for methane and oxygen deficiency shall be examined annually by a qualified official from the department of energy. Each operator shall provide for the

proper maintenance and care of the permissible flame safety lamp or any other approved device for detecting methane and oxygen deficiency by a person trained in such maintenance, and before each shift, care shall be taken to insure that such lamp or other device is in a permissible condition. Flame safety lamps shall be given proper maintenance and inspection before each working shift in a manner recommended by the manufacturing company and approved by the Director of the Department of Energy. Other approved gas detectors shall be given proper maintenance and shall be tested in accordance with the manufacturer's recommendations before each working shift and calibrated each thirty (30) calendar days.

TITLE 36 SERIES 22
**NO ACT PERMITTED ENDANGERING SECURITY OF MINE; SEARCH FOR INTOXICANTS,
MATCHES, ETC.**

§36-22-1. General.

1.1 Scope. Rules and regulations governing no act permitted endangering security of mine; search for intoxicants, matches, etc.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. December 1, 1983

1.4 Effective Date. January 15, 1984

§36-22-2. Effect and Purpose of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement of these rules and regulations.

2.2. The purpose of this section is to prevent persons from acting in such a manner as to endanger persons working in or at a mine and to establish guidelines to prevent hazardous articles and intoxicants from being carried into and utilized by persons working in or at a mine.

§36-22-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1A, Section 1 of the Code.

§36-22-4. No Act Permitted Endangering Security of Mine; Search for Intoxicants, Matches, Etc.

4.1. No miner, workman or other person shall knowingly damage any shaft, lamp, instrument, or machinery. No person shall alter or obstruct any air course or ventilating devices unless instructed by a certified person, or enter any part of a mine against caution, or disobey any order of any mine foreman or assistant mine foreman given in carrying out any of the provisions of this section.

4.2. Open lights, smoking, and smokers' articles, including matches, are prohibited in all mines. No person shall at any time enter mines with or carry therein any matches, pipes, cigars, cigarettes, or any device for making lights or fire not authorized or approved. The operator shall at frequent intervals, search or cause to be searched, any person, including his clothing and material belongings, entering or about to enter the mine, or inside the mine, to prevent such person from taking or carrying therein any of the above mentioned articles or intoxicants.

Any search of a person for purposes of enforcement of this paragraph, may be required of persons entering a mine or work area of a mine. If any person refuses to submit to a search, that person shall not be permitted to enter the mine or work area of a mine until such time as a personal search is conducted. Searches of persons may be conducted in a mine or work area of a mine. If any person refuses to submit to a search, that person shall be required to leave such mine or work area of a mine until such time as a personal search is conducted.

4.3. No person shall at any time carry into any mine or work area of any mine any intoxicant or enter any mine or work area of any mine while under the influence of intoxicants. For the purpose of enforcement of this paragraph the word "intoxicant" shall mean alcoholic liquor as defined in West Virginia Code Chapter 60, Article 1, Section 5, or a controlled substance as defined in West Virginia Code Chapter 60A, Article 1, Section 101 (d) not specifically prescribed by a physician who is fully aware of and has taken into account the job duties the person is expected to perform.

4.4. For purposes of enforcement of Section 4.3 of these regulations, an operator shall refuse entry into a mine or remove from the mine any person whom the operator has a reasonable cause to believe is under the influence of intoxicants. The operator shall immediately notify a miner's representative employed on such shift that such action has been taken. The names and telephone numbers of the miner's representatives shall be provided to the mine operator and posted on the mine bulletin board. Reasonable cause shall be determined by the existence of one or more of the following conditions:

- (1) Odor of alcohol or other intoxicant about the individual or on his breath;
- (2) Abnormally slurred speech, stammering, stumbling, weaving, or other loss of motor coordination;
- (3) Unexplained animated signs of intoxication or influence drugs on the individual;
- (4) Other discernable signs of intoxication or influence drugs on the individual.

4.5. Any miner who has been denied entry or removed from the mine pursuant to Section 4.4. of these regulations shall be afforded the opportunity to receive a timely and appropriate medical examination to be provided by the operator. The operator shall afford the miner the opportunity for transportation to the medical facility where the examination will be performed. Such medical examination may include administration by a physician of tests prescribed and approved by the Department of Health of the State of West Virginia for the determination of a base of a controlled

substance or alcohol pursuant to Chapter 17C, Article 5 of West Virginia Code. If the results of any such tests demonstrates a blood alcohol level of one tenth (.10) of one percent (1%) or more by volume, or the presence of controlled substances to a degree which renders such person incapable of performing safely, such tests shall be determinative that a person is "under the influence" for purposes of this section.

The designated miner's representative shall be provided the opportunity to participate with the operator or his authorized representative during the administration of the appropriate medical examination; however, the medical examination shall not be delayed by the absence of the miner representative. The representative shall be compensated by the operator until such time that the representative leaves the mine site.

Each operator shall provide to the Director of the Department of Energy by June 1st of each year, on a form provided by the Director, a list of any such tests required during the previous twelve (12) months and the results of such tests. The information shall be used by the Department to evaluate the effectiveness of the regulation, and shall in no way identify the name of the employee required to take the test or the mine where that person is employed.

TITLE 36 SERIES 23

SURFACE CONSTRUCTION OPERATIONS WITHIN THE COAL MINING INDUSTRY

Editor's Note: The current regulation is included here. The amendments made in January 1995 are not included, since declared null and void by Civil Action No. 95-Misc-565 in the Circuit Court of Kanawha County. Also, the many tables referenced in this section can be found in Addendum 2 in the rear of this manual.

§36-23-1. General.

1.1 Scope. Rules and regulations governing surface construction operations within coal mining industry within the State of West Virginia.

1.2 Authority. W. Va. Code 22-4-6

1.3 Filing Date. January 9, 1995

1.4 Effective Date. July 1, 1995

§36-23-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-23-3. Definitions.

Unless the context in which used clearly requires a different meaning, the following definitions shall apply to these rules and regulations.

3.1 Accident. The term "Accident" shall mean any explosion, ignition, fire, or inundation, or injury to, or death of any person at the surface construction project.

3.2 Agent. The term "Agent" means any person charged with the responsibility for the operation of all or a part of a surface construction project or the supervision of the employees at the surface construction project.

3.3 "ANSI." Means the American National Standards Institute.

3.4 Approved. The term "Approved" shall mean in strict compliance with the 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.

3.5 Authorized person. Means a person assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the job site.

3.6 Board of Appeals. The term "Board of Appeals" shall mean as provided for in Section 1 of Chapter 22, Article 5, of the Code.

3.7 Competent person. Means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

3.8 Construction work. Means the building, rebuilding, alteration, or demolition of any facility or addition to existing facility at a surface mine or surface area of an underground mine, including painting, decoration or restoration associated with such work, and the excavation of land connected therewith, but excluding shaft and slope sinking and work performed on the surface incidental to shaft or slope sinking.

3.9 Defect. Means any characteristic or condition which tends to weaken or reduce the strength of a tool, object, or structure of which it is a part.

3.10 Department. The term "Department" shall mean the Office of Miners' Health, Safety and Training provided for in Section 3 of Chapter 2A, Article 1A of the Code.

3.11 Designated person. Means "Authorized Person" as defined in paragraph 3.5 of this section.

3.12 Director of Office of Miners' Health, Safety and Training The term "Director of Office of Miners' Health, Safety and Training" shall mean the director of Office of Miners' Health, Safety and Training provided for in Section 3 of Chapter 22A, Article 1A, of the Code.

3.13 Employee. Means a person employed by the employer at a surface construction project.

3.14 Employer. Means an operator which employs employees at a surface construction project.

3.15 Foreman. The term "Foreman" shall mean a person whom the employer or superintendent shall place in charge of employees at a construction project.

3.16 Hazardous substance. Means a substance which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful, is likely to cause death or injury.

3.17 Imminent danger. The term "Imminent Danger" means the existence of any condition or practice at a surface construction project which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated.

3.18 Mine. The term "Mine" includes the shafts, slopes, drifts or inclines connected with, or intended in the future to be connected with, excavations penetrating coal seams or strata, which excavations are ventilated by one general air current or divisions thereof, and connected by one general system of mine haulage over which coal may be delivered to one (1) or more points outside the mine, and the surface structures or equipment connected or associated therewith which contribute directly or indirectly to the mining, preparation or handling of coal, or construction thereof.

3.19 Mine Inspector. The term "Mine Inspector" shall mean a state mine inspector provided for in Section 7 of Chapter 22A, Article 1A, of the Code.

3.20 Mine inspectors' examining board. The term "Mine Inspectors' Examining Board" shall mean the mine inspectors' examining board provided for in Section 1 of Chapter 22, Article 11, of the Code.

3.21 Operator. The term "Operator" shall mean any firm, corporation, partnership or individual operating any coal mine or part thereof, or engaged in the construction of any facility associated with a coal mine.

3.22 Qualified. Means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work or the project.

3.23 S.A.E.. Means Society of Automotive Engineers.

3.24 Safety factor. Means the ratio of the ultimate breaking strength of a member or piece of material or equipment to the actual working stress or safe load when in use.

3.25 Shall. Means mandatory.

3.26 Should. Means recommended.

3.27 Suitable. Means that which fits and has the qualities or qualifications to meet a given purpose, occasion, condition, function, or circumstances.

3.28 Superintendent. The term "Superintendent" shall mean the person in charge of a surface construction project.

3.29 Supervisor. The term "Supervisor" shall mean a superintendent, foreman, assistant foreman, or any person specifically designated by the employer to supervise work or employees and who is acting pursuant to such specific designation and instructions.

3.30 Surface construction worker. The term "Surface Construction Worker" means "Employee" as defined in paragraph 3.13. of this section.

3.31 Surface construction project. The term "Surface Construction Project" shall mean any construction work being performed on the surface of any underground coal mine or surface coal mine by an employer, but shall not include any work performed on the surface incidental to shaft or slope sinking.

§36-23-4. General Accident Prevention.

4.1. The employer shall initiate programs which provide for frequent and regular inspections of surface construction project sites, materials, and equipment, by competent persons designated by the employer.

4.2. The use of any machine, tool, material or equipment which is not in compliance with any applicable requirement of this part is prohibited. Such machine, tool, material, or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

4.3. The employer shall permit only qualified employees to operate equipment and machinery.

§36-23-5. Housekeeping.

5.1. During the course of construction, alteration or repairs, form and scrap lumber with protruding nails, and all other debris shall be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures.

5.2. Combustible scrap and debris shall be removed at regular intervals during the course of construction. Safe means shall be provided to facilitate such removal.

5.3. Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers used for garbage and other oily, flammable, or hazardous wastes, such as caustics or acids, shall be equipped with covers. Garbage and other wastes shall be disposed of at frequent and regular intervals.

§36-23-6. Pressure Vessels.

6.1. Current and valid certification by an insurance company or regulatory authority shall be deemed as acceptable evidence of safe installation, inspection, and testing of pressure vessels provided by the employer.

§36-23-7. Employment of Certified Supervisor.

The employer shall designate at least one (1) certified construction supervisor for each surface construction project at each specific mine where the employer employs ten (10) or more employees.

§36-23-8. Construction Supervisor Certification.

8.1. Construction supervisor certification shall be issued to an applicant upon verification that the applicant has three (3) or more years experience in surface construction work. Information relating to work experience shall be sworn to by the applicant and verified by the employer, or employers, for which the work was performed.

8.2. All supervisors who are or have been employed as such on construction work on or prior to the effective date of these regulations shall be granted certification upon request of the employer, or employers, for which the work was performed.

8.3. Any person holding construction supervisor certification issued by any other state may act in the capacity of a certified supervisor at any surface construction project in this State for a period not to exceed ninety (90) days.

§36-23-9. Duties of Certified Supervisor.

9.1. The supervisor shall examine within the first four (4) hours of a working shift, the working places of a construction project for unsafe working conditions, and make sure appropriate action is taken to either correct, or prevent exposure of employees to unsafe conditions.

9.2. The results of such examination shall be recorded in a prescribed book approved by the Director. The supervisor shall make sure that reasonable action is taken to abate the violation of any rule or regulation which comes to his attention, provided nothing herein shall prevent an employer from contesting an alleged violation.

9.3. The supervisor shall make sure that all notices required by a rule or regulation are properly posted, and that a copy of the rules and regulations promulgated by the Coal Mine Health and Safety Board are available at the project.

9.4. The supervisor shall make sure that new employees are warned about hazards inherent to the type of work they will perform, and instructed in safety procedures.

9.5. The supervisor shall make sure that procedures are followed that assure all first aid supplies and equipment are adequately maintained.

9.6. The supervisor shall make sure that procedures are implemented to keep unauthorized persons off the surface construction project site.

9.7. The employer may designate one (1) or more certified supervisors to perform any of the duties specified in this Section.

9.8. At each construction operation there shall be a bulletin board at some conspicuous place on the construction site, in such a manner that notices, orders, and decisions required by Chapter 22A of the West Virginia Code or Regulation to be posted on the bulletin board may be posted thereon, be easily visible to all persons desiring to read them, and be protected against damage by weather and against unauthorized removal.

§36-23-10. First Aid Requirements.

10.1. First aid and medical attention. First aid services and provisions for medical care shall be made available by the employer for every employee covered by these regulations.

10.2. Medical services and first aid. (a) The employer shall insure the availability of medical personnel for advice and consultation on matters of occupational health.

(b) Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury.

(c) Each surface construction operator shall maintain at each work site a fully equipped first aid station.

The first aid equipment required to be maintained shall include at least the following:

- (1) One (1) 36 unit first aid kit
- (2) One (1) broken-backboard
- (3) One (1) stretcher or stretcher basked
- (4) Two (2) cloth blankets

(d) All first aid supplies required to be maintained under this section shall be stored in suitable sanitary, dust-tight, moisture-proof containers and such supplies shall be accessible to the construction workers.

(e) No first-aid material shall be removed or diverted without authorization, except in case of accident in or about the mine.

(f) Proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service, shall be provided, at all times.

(g) The telephone numbers of physicians, hospitals, or ambulances shall be conspicuously posted.

10.3. First aid training of surface construction employees. Each surface construction operator shall provide every new employee within six (6) months of the date of his employment with the opportunity for first-aid training as prescribed by the director unless such employee has previously received such training. Each employee shall be required to take refresher first-aid training of not less than five (5) hours within each twenty-four (24) months of employment. The employee shall be paid regular wages, or overtime pay if applicable, for all periods of first-aid training.

10.4. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

10.5. (a) Emergency communications requirements. Each operator of a construction project shall maintain a communication system for use in an emergency.

The emergency communication system required to be maintained in these regulations may be established by telephone or radio transmission or by any other means of prompt approved communications to any facility which has available the means of communications with the person or persons providing emergency medical assistance or transportation.

(b) Arrangements for emergency medical assistance and transportation for injured persons; posting requirements. While employees are on duty each operator of a construction project shall have made arrangements with a licensed

physician, medical service, medical clinic or hospital to provide medical assistance for any person injured at any construction project.

While employees are on duty each operator shall have made arrangements with an ambulance service, or otherwise provided for emergency transportation for any person injured at a construction project.

Each operator shall immediately after making arrangements required under the provisions of these rules and regulations, or immediately after any changes of such agreement post at appropriate places at the construction project the name, titles, and addresses, and telephone numbers of all persons or services correctly available under such arrangements to provide medical assistance and transportation at the construction project.

§36-23-11. Sanitation.

11.1. Potable water. (a) An adequate supply of potable water shall be provided in all places of employment.

(b) Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

(c) Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purposes.

(d) The common drinking cup is prohibited.

(e) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(f) Non-potable water.

(1) Outlets for non-potable water, such as water for industrial or firefighting purposes only, shall be identified clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(g) There shall be no cross connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

(h) "Potable Water" means water which meets the quality standards prescribed in the United States Public Health Service Drinking Water Standards, or water which is approved for drinking purposes by the State or local authority having jurisdiction.

11.2. Sanitary toilet facilities. (a) At least one (1) sanitary toilet shall be provided where ten (10) or less construction workers use each such toilet facilities.

(b) Where ten (10) or more construction workers use such toilet facilities, sufficient toilets shall be furnished to provide approximately (1) sanitary toilet for each ten (10) construction workers.

(c) Where thirty (30) or more construction workers use toilet facilities, one (1) urinal may be substituted for one (1) flush toilet; however, where such substitutions are made, they shall not reduce the number of toilets below a ratio of two (2) toilets to one (1) urinal.

(d) An adequate supply of toilet paper shall be provided with each toilet.

§36-23-12. Illumination.

12.1. General. Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be adequately illuminated.

§36-23-13. Personal Protective and Life Saving Equipment.

13.1. The employer is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions or where this part indicates the need for using such equipment to reduce the hazards to the employees.

13.2. Design. All personal protective equipment shall be of safe design and construction for the work to be performed.

13.3. Head protection. Employees working in and around surface construction operations shall be protected by protective helmets.

13.4. Safety-toed shoes shall be worn by all persons in and around a surface construction operations.

§36-23-14. Eye and Face Protection.

14.1. General. Employees shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents.

§36-23-15. Respiratory Protection.

15.1. (a) Respirators shall be provided by the employer when such equipment is necessary to protect the health of an employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employee shall use the provided respiratory protection in accordance with instruction and training received.

(b) Where practicable, the respirators should be assigned to individual workers for their exclusive use.

§36-23-16. Safety Belts, Lifelines, and Lanyards.

16.1. Lifelines, safety belts, and lanyards shall be used only for employee safeguarding. Any lifeline, safety belt, or lanyard actually subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding.

16.2. Lifelines shall be secured above the point of operation to an anchorage or structural member capable of supporting a minimum dead weight of five thousand four hundred (5,400) pounds. Separate lifelines shall be used to protect each employee.

16.3. Lifelines used on rock-scaling operations, or in areas where the lifeline may be subjected to cutting or abrasion, shall be a minimum of seven-eighths (7/8) inch wire core manila rope. For all other lifeline applications, a

minimum of three quarter inch (3/4") manila or equivalent, with a minimum breaking strength of five thousand four hundred (5,400) pounds, shall be used.

16.4. Safety belt lanyard shall be a minimum of one half inch (") nylon, or equivalent, with a maximum length for a fall of no greater than six (6) feet. The rope shall have a nominal breaking strength of five thousand four hundred (5,400) pounds.

16.5. All safety belts and lanyard hardware shall be drop forged or pressed steel, cadmium plated in accordance with Type 1, Class B plating specified in Federal specification QQ-P-416. Surface shall be smooth and free of sharp edges.

16.6. All safety belt and lanyard hardware, except rivets, shall be capable of withstanding a tensile loading of four thousand (4,000) pounds without cracking, breaking, or taking a permanent deformation.

16.7. Safety protection to prevent an employee from falling shall be provided at all times where the potential fall distance exceeds fifteen (15) feet, and safety belts shall not be used where they are impractical or would pose a safety hazard to the employee.

§36-23-17. Safety Nets.

17.1. Safety nets shall be provided when work places are more than twenty-five (25) feet above the ground or water surface where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts are impractical.

17.2. Where safety net protection is required by this part, operations shall not be undertaken until the net is in place and has been tested.

17.3. (a) Nets shall extend eight (8) feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than twenty-five (25) feet below such work surface. Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.

(b) It is intended that only one (1) level of nets be required for bridge construction.

17.4. The mesh size of nets shall not exceed six (6) inches by six (6) inches. All new nets shall meet accepted performance standards of seventeen thousand five hundred (17,500) foot-pounds minimum impact resistance as determined and certified by the manufacturer, and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of five thousand (5,000) pounds.

17.5. Forged steel safety hooks or shackles shall be used to fasten the net to its supports.

17.6. Connections between net panels shall develop the full strength of the net.

§36-23-18. Working Over or Near Water.

18.1. Employees working over or near water, where the danger of drowning exists, shall be provided with United States Coast Guard approved life jackets or buoyant work vests.

18.2. Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.

18.3. Ring buoys with at least ninety (90) feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed two hundred (200) feet.

18.4. At least one (1) lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

§36-23-19. Definitions Applicable to This Subject.

19.1. "Lanyard" means a rope, suitable for supporting one (1) person. One (1) end is fastened to a safety belt or harness and the other end is secured to a substantial object or a safety line.

19.2. "Lifeline" means a rope, suitable for supporting one (1) person, to which a lanyard or safety belt (or harness) is attached.

19.3. "Safety Belt" means a device, usually worn around the waist, which, by reason of its attachment to a lanyard and lifeline or a structure, will prevent a worker from falling.

§36-23-20. Fire Protection.

20.1. General requirements. (a) The employer shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction program and demolition work, and he shall provide the firefighting equipment to extinguish the fire hazard that may occur. As fire hazards occur, there shall be no delay in providing the necessary equipment.

(b) Access to all available firefighting equipment shall be maintained at all times.

(c) All firefighting equipment, provided by the employer, shall be conspicuously located.

(d) All firefighting equipment shall be periodically inspected and maintained in operating condition. Defective equipment shall be immediately replaced.

(e) Fire drills and demonstrations of various types of available firefighting equipment shall be held for employees at least every six (6) months.

§36-23-21. Portable Firefighting Equipment.

21.1. Fire extinguishers and small hose lines. (a) A fire extinguisher, rated not less than 2A, shall be provided for each three thousand (3,000) square feet of the protected building area, or major fraction thereof. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed one hundred (100) feet.

(b) A one half (1/2) inch diameter garden-type hose line, not to exceed one hundred (100) feet in length and equipped with a nozzle, may be substituted for a 2A-rated fire extinguisher, providing it is capable of discharging a minimum of five (5) gallons per minute with a minimum hose stream range of thirty (30) feet horizontally. The garden-type hose lines shall be mounted on conventional racks or reels. The number and location of hose racks or reels shall be such that at least one (1) hose stream can be applied to all points in the area.

(c) One (1) or more fire extinguishers, rated not less than 2A, shall be provided on each floor. In multi-story buildings, at least one (1) fire extinguisher shall be located adjacent to stairway.

(d) A fire extinguisher, rated not less than 10B, shall be provided within fifty (50) feet of wherever more than five (5) gallons of flammable or combustible liquids or five (5) pounds of flammable gas are being used on the job site. This requirement does not apply to the integral fuel tanks of motor vehicles.

(e) Carbon tetrachloride and other toxic vaporizing liquid fire extinguishers are prohibited.

(f) Portable fire extinguishers shall be inspected at least every six (6) months and maintained in accordance with maintenance and use of portable fire extinguishers NFPA No. 10A-1970.

(g) Fire extinguishers which have been listed or approved by a nationally recognized testing laboratory, shall be used to meet the requirements of this subpart.

(h) Table 1 shall be used as a guide for selecting the appropriate portable fire extinguishers.

21.2. Fire hose and connections. (a) One hundred (100) feet, or less, of one and one-half (1 1/2) inch hose, with a nozzle capable of discharging water at twenty-five (25) gallons per minute, may be substituted for a fire extinguisher rated not more than 2A in the designated area provided that the hose line can reach all points in the area.

(b) If fire hose connections are not compatible with local firefighting equipment, the contractor shall provide adapters, or equivalent, to permit connections.

(c) During demolition involving combustible materials, charged hose lines, supplied by hydrants, water tank trucks with pumps, or equivalent, shall be made available.

§36-23-22. Fire Prevention.

22.1. Ignition hazards. (a) Electrical wiring and equipment for light, heat, or power purposes shall be installed in compliance with the National Electric Code, NFPA 70-1971; ANSI CI-1971 (Rev. of 1968).

(b) Internal combustion engine powered equipment shall be so located that the exhausts are well away from combustible materials. When the exhausts are piped to outside the building under construction, a clearance of at least six (6) inches shall be maintained between such piping and combustible material.

(c) Smoking shall be prohibited at or in the vicinity of operations which constitute a fire hazard, and shall be conspicuously posted: "No Smoking or Open Flame".

(d) The nozzle of air, inert gas, and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapors, shall be bonded to the tank or vessel shell. Bonding devices shall not be attached or detached in hazardous concentrations of flammable gases or vapors.

22.2. Temporary buildings. (a) No temporary building shall be erected where it will adversely affect any means of exit.

(b) Temporary buildings, when located within another building or structure, shall be of either noncombustible construction or of combustible having a fire resistance of not less than one (1) hour.

(c) Temporary buildings, located other than inside another building and not used for the storage, handling, or use of flammable or combustible liquids, flammable gases, explosives, or blasting agents, or similar hazardous occupancies, shall be located at a distance of not less than ten (10) feet from another building or structure. Groups of temporary buildings, not exceeding two thousand (2,000) square feet in aggregate, shall, for the purposes of this part, be considered a single temporary building.

22.3. Open yard storage. (a) Combustible materials shall be piled with due regard to the stability of piles and in no case higher than twenty (20) feet.

(b) Driveways between and around combustible storage piles shall be free from accumulation of rubbish, or other articles or materials.

(c) The entire storage site shall be kept free from accumulation of unnecessary combustible materials. Weeds and grass shall be kept down and a regular procedure provided for the periodic clean-up of the entire area.

(d) When there is a danger of an underground fire, that land shall not be used for combustible or flammable storage.

(e) Method of piling shall be solid wherever possible and in orderly and regular piles. No combustible material shall be permanently stored outdoors within ten (10) feet of a building or structure.

(f) Portable fire extinguishing equipment, suitable for the fire hazard involved, shall be provided at convenient, conspicuously accessible locations, in the yard area. Portable fire extinguishers, rated not less than 2A, shall be placed so that maximum travel distance to the nearest unit shall not exceed one hundred (100) feet.

22.4. Indoor storage. (a) Storage shall not obstruct, or adversely affect, means of exit.

(b) All materials shall be stored, handled, and piled with due regard to their fire characteristics.

(c) Aisle space shall be maintained to safely accommodate the widest vehicle that may be used within the building for firefighting purposes.

(d) Clearance shall be maintained around lights and heating units to prevent ignition of combustible materials.

(e) A clearance of twenty-four (24) inches shall be maintained around the path of travel of fire doors unless a barricade is provided, in which case no clearance is needed. Material shall not be stored within thirty-six (36) inches of a fire door opening.

(f) When burning, cutting, or welding is performed in an area that may contain methane, an examination shall be conducted prior to, during, and after such burning, cutting, or welding by a qualified person.

§36-23-23. Flammable and Combustible Liquids.

23.1. General requirements. (a) Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one (1) gallon, except that this shall not apply to those flammable liquid materials which are highly viscid, (extremely hard to pour), which may be used and handled in original shipping containers. For quantities of one (1) gallon or less, only the original container or approved metal safety cans shall be used for storage, use, and handling of flammable liquids.

(b) Flammable or combustible liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

23.2. Indoor storage of flammable and combustible liquids. (a) No more than twenty-five (25) gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet.

(b) Quantities of flammable and combustible liquids in excess of twenty-five (25) gallons shall be stored in an acceptable or approved cabinet meeting the following requirements:

(1) Acceptable wooden storage cabinets shall be constructed in the following manner, or equivalent: The bottom, sides, and top shall be constructed of an exterior grade of plywood at least one (1) inch in thickness, which shall not break down or delaminate under standard fire test conditions.

All joints shall be rabbited and shall be fastened in two (2) directions with flathead wood screws. When more than one (1) door is used, there shall be a rabbited overlap of not less than one (1) inch. Steel hinges shall be mounted in such a manner as to not lose their holding capacity due to loosening or burning out of the screws when subjected to fire. Such cabinets shall be painted inside and out with fire retardant paint.

(2) Approved metal storage cabinets will be acceptable.

(3) Cabinets shall be labeled in conspicuous lettering, "Flammable--Keep Fire Away".

(c) Not more than sixty (60) gallons of flammable or one hundred twenty (120) gallons of combustible liquids shall be stored in any one (1) storage cabinet. Not more than three (3) such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room.

(d) (1) Inside storage rooms shall be constructed to meet the required fire-resistive rating for their use. Such construction shall comply with the test specifications set forth in Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1969.

(2) Where an automatic extinguishing system is provided, the system shall be designed and installed in an approved manner. Openings to other rooms or buildings shall be provided with noncombustible liquid tight raised sills or ramps at least four (4) inches in height, or the floor in the storage area shall be at least four (4) inches below the surrounding floor. Openings shall be provided with approved self-closing fire doors. The room shall be liquid tight where the walls join the floor. A permissible alternate to the sill or ramp is an open-grated trench, inside of the room, which drains to a safe location. Where other portions of the building or other buildings are exposed, windows shall be protected as set forth in the Standard for Fire Door and Windows, NFPA No. 80-1970, for Class E or F openings. Wood of at least one (1) inch nominal thickness may be used for shelving, racks, dunnage, scuffboards, floor overlay, and similar installations.

(3) Materials which will react with water and create a fire hazard shall not be stored in the same room with flammable or combustible liquids. Storage in inside storage rooms shall comply with Table 2 following.

(4) Electrical wiring and equipment located in inside storage rooms shall be approved for Class 1, Division 2, Hazardous locations for definitions of Class 1, Division 1 Hazardous locations, see 31.5.

(5) Every inside storage room shall be provided with either a gravity or a mechanical exhausting system. Such system shall commence not more than twelve (12) inches above the floor and be designed to provide for a complete change of air within the room at least six (6) times per hour. If a mechanical exhausting system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and lighting fixtures shall be operated by the same switch. An electric pilot light shall be installed adjacent to the switch if flammable liquids are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as the exhausting outlet from the room, shall be on the exterior of the building in which the room is located.

(6) In every inside storage room there shall be maintained one (1) clear aisle at least three (3) feet wide. Containers over thirty (30) gallon capacity shall not be stacked one (1) upon the other.

(7) Flammable and combustible liquids in excess of that permitted in inside storage rooms shall be stored outside of buildings in accordance with paragraph 23.3. of this section.

23.3. Storage outside buildings. (a) Storage of containers (not more than sixty (60) gallons each) shall not exceed one thousand one hundred (1,100) gallons in any one (1) pile or area. Piles or groups of containers shall be separated by a five (5) foot clearance. Piles or groups of containers shall not be nearer than twenty (20) feet to a building.

(b) Within two hundred (200) feet of each pile of containers, there shall be a twelve (12) foot wide access way to permit approach of fire control apparatus.

(c) The storage area shall be graded in a manner to divert possible spills away from buildings or other exposures, or shall be surrounded by a curb or earth dike at least twelve (12) inches high. When curbs or dikes are used, provisions shall be made for draining off accumulations of ground or rain water, or spills of flammable or combustible liquids. Drains shall terminate at a safe location and shall be accessible to operation under fire conditions.

(d) Outdoor portable tank storage:

(1) Portable tanks shall not be nearer than twenty (20) feet from any building. Two (2) or more portable tanks, grouped together, having a combined capacity in excess of two thousand two hundred (2,200) gallons, shall be separated by a five (5) foot clear area. Individual portable tanks exceeding one thousand one hundred (1,100) gallons shall be separated by a five (5) foot clear area.

(2) Within two hundred (200) feet of each portable tank, there shall be a twelve (12) foot wide access way to permit approach of fire control apparatus.

(e) Storage areas shall be kept free of weeds, debris, and other combustible material not necessary to the storage.

(f) Portable tanks, not exceeding six hundred sixty (660) gallons, shall be provided with emergency venting and other devices, as required by Chapters 3 and 4 of NFPA 30-1969, the Flammable and Combustible Liquids Code.

(g) Portable tanks, in excess of six hundred sixty (660) gallons, shall have emergency ventilating and other devices as required by Chapter 2 and 3 of the Flammable and Combustible Liquids Code, NFPA Code 30-1969.

23.4. Fire control for flammable or combustible liquid storage. (a) At least one (1) portable fire extinguisher, having a rating of not less than 20-B units, shall be located outside of, but not more than ten (10) feet from, the door opening into any room used for storage of more than sixty (60) gallons of flammable or combustible liquids.

(b) At least one (1) portable fire extinguisher having a rating of not less than 20-B units shall be located not less than twenty-five (25) feet, nor more than seventy-five (75) feet from any flammable liquid storage area located outside.

(c) At least one (1) portable fire extinguisher having a rating of not less than 20-B:C units shall be provided on all tank trucks or other vehicles used for transporting and/or dispensing flammable or combustible liquids.

23.5. Dispensing liquids. (a) Areas in which flammable or combustible liquids are transferred at one (1) time, in quantities greater than five (5) gallons from one (1) tank or container to another tank or container, shall be separated from other operations by twenty-five (25) feet distance or by construction having a fire resistance of at least one (1) hour. Drainage or other means shall be provided to control spills. Adequate natural or mechanical ventilation shall be provided to maintain the concentration of flammable vapor at or below ten (10) percent of the lower flammable limit.

(b) Transfer of flammable liquids from one (1) container to another shall be done only when containers are electrically interconnected (bonded).

(c) Flammable or combustible liquids shall be drawn from or transferred into vessels, containers, or tanks within a building or outside only through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container, or portable tanks, by gravity or pump, through an approved self-closing valve. Transferring by means of air pressure of the container or portable tanks is prohibited.

(d) The dispensing units shall be protected against collision damage.

(e) Dispensing devices and nozzles for flammable liquids shall be of an approved type.

23.6. Handling liquids at point of final use. (a) Flammable liquids shall be kept in closed containers when not actually in use.

(b) Leakage or spillage of flammable or combustible liquids shall be disposed of promptly and safely.

(c) Flammable liquids may be used only where there are no open flames or other sources of ignition within fifty (50) feet of the operation, unless conditions warrant greater clearance.

23.7. Service and refueling areas. (a) Flammable or combustible liquids shall be stored in approved closed containers, in tanks located underground, or in above ground portable tanks.

(b) The tank trucks shall comply with the requirements covered in the standard for tank vehicles for flammable and combustible liquids NFPA, No. 385-1966.

(c) The dispensing hose shall be an approved type.

(d) The dispensing nozzle shall be an approved automatic-closing type without a latch-open device.

(e) Underground tanks shall not be abandoned.

(f) Clearly identified and easily accessible switch(es) shall be provided at a location remote from dispensing devices to shut off the power to all dispensing devices in the event of an emergency.

(g) (1) Heating equipment of an approved type may be installed in the lubrication or service area where there is no dispensing or transferring of flammable liquids, provided the bottom of the heating unit is at least eighteen (18) inches above the floor and is protected from physical damage.

(2) Heating equipment installed in lubrication or service areas, where flammable liquids are dispensed, shall be of an approved type for garages, and shall be installed at least eight (8) feet above the floor.

(h) There shall be no smoking or open flames in the areas used for fueling, servicing fuel systems for internal combustion engines, receiving or dispensing of flammable or combustible liquids.

(i) Conspicuous and legible signs prohibiting smoking shall be posted.

(j) The motors of all equipment being fueled shall be shut off during the fueling operation.

(k) Each service or fueling area shall be provided with at least one (1) fire extinguisher having a rating of not less than 20-B:C located so that an extinguisher will be within seventy-five (75) feet of each pump, dispenser, underground fill pipe opening, and lubrication or service area.

§36-23-24. Temporary Heating Devices.

24.1. (a) Ventilation.

(1) Fresh air shall be supplied in sufficient quantities to maintain the health and safety of workmen. Where natural means of fresh air supply is inadequate, mechanical ventilation shall be provided.

(2) When heaters are used in confined spaces, special care shall be taken to provide sufficient ventilation in order to ensure proper combustion, maintain the health and safety of workmen, and limit temperature rise in the area.

(b) Clearance and mounting. (1) Temporary heating devices shall be installed to provide sufficient clearance to combustible material not less than the amount shown in Table 3, may be installed in accordance with their approval.

(2) Temporary heating devices, which are listed for installation with lesser clearances than specified in Table 3, may be installed in accordance with their approval.

(3) Heaters not suitable for use on wood floors shall not be set directly upon them or other combustible materials. When such heaters are used, they shall rest on suitable heat insulating material or at least one (1) inch concrete, or equivalent. The insulating material shall extend beyond the heater two (2) feet or more in all directions.

(4) Heaters used in the vicinity of combustible tarpaulins, canvas, or similar coverings shall be located at least ten (10) feet from the coverings.

The coverings shall be securely fastened to prevent ignition or upsetting of the heater due to wind action on the covering or other material.

(c) Stability. Heaters, when in use, shall be set horizontally level, unless otherwise permitted by the manufacturer's markings.

(d) Solid fuel salamanders. Solid fuel salamanders are prohibited in buildings and on scaffolds.

(e) Oil-fired heaters. (1) Flammable liquid-fired heaters shall be equipped with a primary safety control to stop the flow of fuel in the event of flame failure. Barometric or gravity oil feed shall not be considered a primary safety control.

(2) Heaters designed for barometric or gravity oil feed shall be used only with the integral tanks.

(3) Heaters specifically designed and approved for use with separate supply tanks may be directly connected for gravity feed, or an automatic pump, from a supply tank.

24.2. Definitions applicable to this subpart. (a) "Approved" for the purpose of this subpart, means equipment that has been listed or approved by a nationally recognized testing laboratory such as Factory Mutual Engineering Corporation, or Underwriters Laboratories Incorporated, or federal agencies such as Bureau of Mines, or United States Coast Guard, which issues approvals for such equipment.

(b) "Closed Container" means a container so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

(c) "Combustible Liquids" means any liquid having a flash point at or above one hundred forty degrees (140 degrees) F. (sixty (60) degrees C.), and below two hundred (200) degrees F. (ninety three point four (93.4) degrees C.).

(d) "Combustion" means any chemical process that involves oxidation sufficient to produce light or heat.

(e) "Fire Resistance" means so resistant to fire that, for specified time and under conditions of a standard heat intensity, it will not fall structurally and will not permit the side away from the fire to become hotter than a specified temperature. For purposes of this part, fire resistance shall be determined by the standard Methods of Fire Tests of Building Construction and Materials, NFPA 251-1969.

(f) "Flammable" means capable of being easily ignited, burning intensely, or having a rapid rate of flame spread.

(g) "Flammable Liquids" means any liquid having a flash point below one hundred forty (140) degrees F. and having a vapor pressure not exceeding forty (40) pounds per square inch (absolute) at one hundred (100) degrees F.

(h) "Flash Point" of the liquid means the temperature at which it gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the vessel used as determined by appropriate test procedure and apparatus as specified below.

(1) The flash point of liquids having a viscosity less than forty-five (45) Saybolt Universal Second at one hundred (100) degrees F. (thirty seven point eight (37.8) degrees C.) and a flash point below one hundred seventy-five (175) degrees F. (seventy nine point four (79.4) degrees C.) shall be determined in accordance with the standard method of Test for Flash Point by the Tague Closed Tester, ASTM D-56-69.

(2) The flash point of liquids having a viscosity of forty-five Saybolt Universal Second(s) or more than one hundred seventy-five (175) degrees F. (seventy nine point four (79.4) degrees C.) or higher shall be determined in accordance with the standard method of test for Flash Point by the Pensky Martens Closed Tester, ASTM D-93-69.

(i) "Portable tank" means a closed container having a liquid capacity more than sixty (60) United States gallons, and not intended for fixed installation.

(j) "Safety Can" means an approved metal container, of not more than five (5) gallons capacity, having a flash-arresting screen, spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

(k) "Vapor Pressure" means the pressure, measured in pounds per square inch (absolute), exerted by a volatile liquid, as determined by the standard method of test for Vapor Pressure of Petroleum Products (Reid Method). (ASTM D-323-58.)

§36-23-25. Accident Prevention Signs and Tags.

25.1. General. Signs and symbols required by this subpart shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

25.2. Danger signs. (a) Danger signs (See Table 4) shall be used only where an immediate hazard exists.

(b) Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording.

25.3. Caution signs. (a) Caution signs (See Table 5) shall be used only to warn against potential hazards or to caution against unsafe practices.

(b) Caution signs shall have yellow as the predominating color; black upper panel and borders; yellow lettering of "CAUTION" on the black panel; and the lower yellow panel for additional sign wording. Black lettering shall be used for additional wording.

25.4. Exit signs. Exit signs, when required, shall be lettered in legible red letters, not less than six (6) inches high, on a white field and the principal stroke of the letters shall be at least three fourths (3/4) inch in width.

25.5. Safety instruction signs. Safety instruction signs, when used, shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the signs shall be black letters on the white background.

25.6. Directional signs. Directional signs, other than automotive traffic signs specified in paragraph 25.7. of this section, shall be white with a black panel and a white directional symbol. Any additional wording on the sign shall be black letters on the white background.

25.7. Traffic signs. (1) Construction areas shall be posted with legible traffic signs at points of hazard.

(2) All traffic control signs or devices used for protection of construction workmen shall conform to American National Standards Institute, D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.

25.8. Accident prevention tags. (a) Accident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc. They shall not be used in place of, or as a substitute for, accident prevention signs.

(b) Specifications for accident prevention tags similar to those in Table 6 shall apply.

(c) Additional Rules American National Standards Institute (ANSI) 235.1-1968, Specifications for Accident Prevention Tags, contain rules which are additional to the rules prescribed in this section. The employer shall comply with ANSI 235.1-1968 and 235.2-1968 with respect to rules not specifically prescribed in this subpart.

(d) Machinery, equipment (including machine equipment,) tools and any other device found to be creating an imminent hazard shall be removed from service and properly tagged. Such machine, equipment, tool or other device shall not be operated and the tag shall not be removed until the defective condition is corrected.

§36-23-26. Signaling.

26.1. Flagmen. (a) (1) When operations are such that signs, signals, and barricades do not provide the necessary protection on or adjacent to a highway or street, flagmen or other appropriate traffic controls shall be provided.

(2) Signaling directions by flagmen shall conform to American National Standards Institute D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.

(b) Hand signaling by flagmen shall be by use of red flags at least thirteen (13) inches square or sign paddles, and in periods of darkness, red lights.

(c) Flagmen shall be provided with and shall wear a red or orange warning garment while flagging. Warning garments worn at night shall be of reflectorized material.

26.2. Barricades. Barricades for protection of employees shall conform to the portions of these regulations. Definitions applicable to this section.

(a) "Barricade" means an obstruction to deter the passage of persons or vehicles.

(b) "Signs" are the warnings of hazard, temporarily or permanently affixed or placed, at locations where hazards exist.

(c) "Tags" are temporary signs, usually attached to a piece of equipment or part of a structure, to warn of existing or immediate hazards.

§36-23-27. General Requirements for Storage.

27.1. General. (a) All materials stored in tiers shall be stacked, racked, blocked, interlocked or otherwise secured to prevent sliding, falling or collapse.

(b) Maximum safe load limits of floors within buildings and structures, in pounds per square foot, shall be conspicuously posted in all storage areas, except for the floor or slab on grade. Maximum safe loads shall not be exceeded.

(c) Aisles and passageways shall be kept clear to provide for the free and safe movement of material handling equipment or employees. Such areas shall be kept in good repair.

(d) When a difference in road or working levels exists, means such as ramps, blocking, or grading shall be used to ensure the safe movement of vehicles between the two (2) levels.

27.2. Material storage. (a) Material stored inside buildings under construction shall not be placed within six (6) feet of any hoistway or inside floor openings, not within ten (10) feet of an exterior wall which does not extend above the top of the material stored.

(b) Employees required to work on stored material in silos, hoppers, tanks, and similar storage areas shall be equipped with lifelines and safety belts meeting the requirements of Sections 13 -19 of these regulations.

(c) Noncompatible materials shall be segregated in storage.

(d) Bagged materials shall be stacked by stepping back the layers and cross-keying the bags at least every ten (10) bags high.

(e) Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

(f) Brick stacks shall not be more than seven (7) feet in height. When a loose brick stack reaches a height of four (4) feet, it shall be tapered back two (2) inches in every foot of height above the four (4) foot level.

(g) When masonry blocks are stacked higher than six (6) feet, the stack shall be tapered back one-half (1/2) block per tier above the six (6) foot level.

(h) Lumber. (1) Used lumber shall have all nails withdrawn before stacking.

(2) Lumber shall be stacked on level and solidly supported sills.

(3) Lumber shall be so stacked as to be stable and self-supporting.

(4) Lumber piles shall not exceed twenty (20) feet in height provided that lumber to be handled manually shall not be stacked more than sixteen (16) feet high.

(i) Structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, shall be stacked and blocked so as to prevent spreading or tilting.

(j) Handling materials, general: Housekeeping. Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.

§36-23-28. Rigging Equipment for Material Handling.

28.1. General. (a) Rigging equipment for material handling shall be inspected by a competent person prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service.

(b) Rigging equipment shall not be loaded in excess of its recommended safe working load, as prescribed in Tables 7 through 26 in Section 29 of these regulations.

(c) Rigging equipment, when not in use, shall be removed from the immediate work area so as not to present a hazard to employees.

(d) Special custom design grabs, hooks, clamps, or other lifting accessories, for such units as modular panels, prefabricated structures and similar materials, shall be marked to indicate the safe working loads and shall be proof-tested prior to use to one hundred twenty-five percent (125%) of their rated load.

(e) Special containers shall be used to hoist small materials such as, bolts, rivets, tools, etc. and such containers shall be capable of safely supporting intended loads, such container shall not be over-filled to allow spillage while being hoisted.

28.2. Alloy steel chains. (a) Welded alloy steel chain slings shall have permanently affixed durable identification stating size, grade, rated capacity, and sling manufacturer.

(b) Hooks, rings, oblong links, pear-shaped links, welded or mechanical coupling links, or other attachments, when used with alloy steel chains, shall have a rated capacity at least equal to that of the chain.

(c) Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, etc., or other such attachments shall not be used.

(d) Rated capacity (working load limit) for alloy steel chain slings shall conform to the values shown in Table 7.

(e) Whenever wear at any point of any chain link exceeds that shown in Table 8, the assembly shall be removed from service.

28.3. Wire rope. (a) Tables 9 through 20 shall be used to determine the safe working loads of various sizes and classifications of improved plow steel wire rope slings with various types of terminals. For sizes, classifications, and grades not included in these tables, the safe working load recommended by the manufacturer for specific, identifiable products shall be followed, provided that a safety factor of not less than five (5) is maintained.

(b) Protruding ends of strands in splices on slings and bridles shall be covered or blunted.

(c) Wire rope shall not be secured by knots, except on haul back lines on scrapers.

(d) The following limitations shall apply to the use of wire ropes:

(1) An eye splice made in any wire rope shall have not less than three (3) full tucks. However, this requirement shall not operate to preclude the use of another form of splice or connection which can be shown to be as efficient and which is not otherwise prohibited.

(2) Except for eye splices in the ends of wires and for endless rope slings, each wire rope used in hoisting or lowering, or in pulling loads, shall consist of one (1) continuous piece without knot or splice.

(3) Eyes in wire rope bridles, slings, or bull wires shall not be formed by wire rope clips or knots.

(4) Wire rope shall not be used if, in any length of eight (8) diameters, the total number of visible broken wires exceeds ten (10) percent of the total number of wires, or if the rope shows other signs of excessive wear, corrosion, or defect.

(e) When U-bolt wire rope clips are used to form eyes, Table 26 shall be used to determine the number and packing of clips.

(1) When used for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.

28.4. Natural rope, and synthetic fiber. (a) General. When using natural or synthetic fiber rope slings, Tables 21, 22, 23 and 24 shall apply.

(b) All splices in rope slings provided by the employer shall be made in accordance with fiber rope manufacturers recommendations.

(1) In manila rope, eye splices shall contain at least three (3) full tucks, and short splices shall contain at least six (6) full tucks (three (3) on each side of the centerline of the splice).

(2) In laid synthetic fiber rope, eye splices shall contain at least four (4) full tucks, and short splices shall contain at least eight (8) full tucks (four (4) on each side of the centerline of the splice).

(3) Strand end tails shall not be trimmed short (flush with the surface of the rope) immediately adjacent to the full tucks. This precaution applies to both eye and short splices and all types of fiber rope. For fiber ropes under one (1) inch diameter, the tails shall project at least six (6) rope diameters beyond the last full tuck. For fiber ropes one (1) inch diameter and larger, the tails shall project at least six (6) inches beyond the last full tuck. In applications where the projecting tails may be objectionable, the tails shall be tapered and spliced into the body of the rope using at least two (2) additional tucks (which will require a tail length of approximately six (6) rope diameters beyond the last full tuck).

(4) Knots shall not be used in lieu of splices.

28.5. Synthetic webbing (nylon, polyester, and polypropylene). (a) The employer shall have each synthetic web sling marked or coded to show:

(1) Name or trademark of manufacturer;

(2) Rated capacities for the type of hitch;

(3) Type of material.

(b) Rated capacity shall not be exceeded.

28.6. Shackles and hooks. (a) Table 25 shall be used to determine the safe working loads of various sizes of shackles, except that higher safe working loads are permissible when recommended by the manufacturer for specific identifiable products, provided that a safety factor of not less than five (5) is maintained.

(b) The manufacturer's recommendations shall be followed in determining the safe working loads of the various sizes and types of specific and identifiable hooks. All hooks for which no applicable manufacturer's recommendations are available shall be tested to twice the intended safe working load before they are initially put into use. The employer shall maintain a record of the dates and results of such tests.

(c) Inspections. (1) In addition to the inspection required of this section, a thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis, to be determined on the basis of:

(i) Frequency of sling use;

(ii) Severity of service conditions;

(iii) Nature of lifts being made; and

(iv) Experience gained on the service life of slings used in similar circumstances. Such inspection shall in no event be at intervals greater than once every twelve (12) months.

(2) The employer shall make and maintain a record of the most recent month in which each alloy steel chain sling was thoroughly inspected, and shall make such record available for examination. Chains shall not be used to rig load to be hoisted. This does not prevent the use of chain fill on chain hoists for test purposes.

(d) Safe operating practices. Whenever any sling is used, the following practices shall be observed.

(1) Slings shall not be shortened with knots or bolts or other make-shift devices.

(2) Sling legs shall not be kinked.

(3) Slings used in a basket hitch shall have the loads balanced to prevent slippage.

(4) Slings shall be padded or protected from the sharp edges of their loads.

(5) Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.

(6) Shock loading is prohibited.

(7) A sling shall not be pulled from under a load when the load is resting on the sling.

(e) Minimum sling lengths. (1) Cable laid and six (6) x nineteen (19) and six (6) x thirty-seven (37) slings shall have a minimum clear length of wire rope ten (10) times the component rope diameter between splices, sleeves or end fittings.

(2) Braided slings shall have a minimum clear length of wire rope forty (40) times the component rope diameter between the loops or end fittings.

(3) Cable laid grommets, strands laid grommets and endless slings shall have a minimum circumferential length of ninety-six (96) times their body diameter.

Safe operating temperatures. Fiber core wire rope slings of all grades shall be permanently removed from service if they are exposed to temperatures in excess of two hundred degrees (200) F. When nonfiber core wire rope slings of any grade are used at temperatures above four hundred degrees (400) F. or below sixty degrees (60) F., recommendations of the sling manufacturer regarding use at that temperature shall be followed.

End attachments. (i) Welding of end attachments, except covers to thimbles, shall be performed prior to the assembly of the sling.

(ii) All welded end attachments shall not be used unless proof tested by the manufacture or equivalent entity at twice their rated capacity prior to initial use. The employer shall retain a certificate of the proof test, and make it available for examination.

(f) Natural and synthetic fiber type slings. (1) Safe operating temperatures. Natural and synthetic fiber rope slings, except wet frozen slings, may be used in a temperature rated from minus twenty degrees (20) to plus one hundred eighty degrees (180) F. without decreasing the working load limit. For operations providing this temperature range and for set frozen slings, the sling manufacturer's recommendations shall be followed.

(2) Splicing. Spliced fiber rope hoists shall not be used unless they have been spliced in accordance with the following minimum requirements and in accordance with any additional recommendations of the manufacturer:

(i) Fiber rope slings shall have a minimum clear length of rope between eye splices equal to ten (10) times the rope diameter.

(ii) Clamps not designed specifically for fiber ropes shall not be used for splicing.

(3) End attachments. Fiber rope slings shall not be used if end attachments in contact with rope have sharp edges or projections.

(4) Removal from service. Natural and synthetic fiber rope sling shall be immediately removed from service if any of the following conditions are present:

(i) Abnormal wear;

(ii) Powdered fiber between strands;

(iii) Broken or cut fibers;

(iv) Variations in the size or roundness of strands;

(v) Discoloration or rotting;

(vi) Distortion of hardware in the sling.

(5) Webbing. Synthetic webbing shall be of uniform thickness and width and salvage edges shall not be split from the webbing's width.

(6) Fittings. Fittings shall be:

(i) Of a minimum breaking strength equal to that of the sling; and

(ii) Free of all sharp edges that could in any way damage the webbing.

(7) Attachment of end fittings to webbing and formation of eyes. Stitching shall be the only method used to attach end fittings to webbing and to form eyes. The thread shall be in an even pattern and contain a sufficient number of stitches to develop the full breaking strength of the sling.

(8) Environmental conditions. When synthetic web slings are used, the following precautions shall be taken:

(i) Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.

(ii) Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

(iii) Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

(9) Safe operating temperatures. Synthetic web slings of polyester and nylon shall not be used at temperatures in excess of one hundred eighty degrees (180) F. Polypropylene web slings shall not be used in temperatures in excess of two hundred degrees (200) F.

(10) Removal from service. Synthetic web slings shall be immediately removed from service if any of the following conditions are present:

(i) Acid or caustic burns;

(ii) Melting or charring of any part of the sling surface;

(iii) Snags, punctures, tears or cuts;

(iv) Broken or worn stitches; or

(v) Distortion of fittings.

(11) Scope. This section applies to slings used in conjunction with other material handling equipment for the movement of material by hoisting, in employments covered by this part. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three (3) strand construction), and synthetic web (nylon, polyester, and polypropylene).

§36-23-29. Disposal of Waste Material.

29.1. The area where materials are dropped more than twenty (20) feet to any point lying outside the exterior walls of the building, shall be adequately restricted.

29.2. When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than forty-two (42) inches high and not less than six (6) feet back from the projected edge of the opening above. Signs warning of the hazard of falling materials shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.

29.3. All scrap lumber, waste material, and rubbish shall be removed from the immediate work area as the work progresses.

29.4. Disposal of waste material or debris by burning shall comply with local fire regulations.

29.5. All solvent waste, oil rags, and flammable liquids shall be kept in fire resistant covered containers until removed from work site.

§36-23-30. Tools-Hand and Power.

30.1. General requirements. (a) Condition of tools. All hand and power tools and similar equipment, whether furnished by the employer or by the employee, shall be maintained in a safe condition. All such tools shall be inspected prior to each use and any defective tools shall be removed from service.

(b) Guarding. (1) When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use.

(2) Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating or moving parts or equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard. Guarding shall meet the requirements as set forth in ANSI B15.1-1953 (R1958), Safety Code for Mechanical Power Transmission Apparatus.

(c) Personal protective equipment. Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard. All personal protective equipment shall meet the requirements and be maintained according to Sections 10-19 of these regulations.

(d) Switches. All hand-held powered platen sanders, grinders with wheels two (2) inches diameter or less, routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth (1/4) of an inch wide or less may be equipped with only a positive "On-Off" control.

All hand-held powered drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels greater than two (2) inches in diameter, disc sanders, belt sanders, reciprocating saws, saber saws, and other similar operating powered tools shall be equipped with a momentary contact "On-Off" control and may have a lock-on control provided that turn off can be accomplished by a single motion of the same finger or fingers that turn it on.

All hand-held powered tools, such as circular saws, chain saws, and percussion tools without positive accessory holding means, shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Exception: This paragraph does not apply to concrete vibrators, concrete breakers, powered tampers, jackhammers, rock drills, and similar hand operated power tools.

30.2. General requirements for all machines. (a) Point of operation is the area on a machine where work is actually performed upon the material being processed.

(1) The point of operation of machines whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards therefore, or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle.

(2) Special hand tools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding required by this section, but can only be used to supplement protection provided.

(3) The following are some of the machines which usually require point of operation guarding:

(i) Guillotine cutters

(ii) Shears

(iii) Alligator shears

(iv) Power presses

(v) Milling machines

(vi) Power saws

(vii) Jointers

(viii) Portable power tools

(ix) Forming rolls and calendars

(b) Exposure of blades. When the periphery of the blades of a fan is less than seven (7) feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than one-half (1/2) inch.

(c) Anchoring fixed machinery. Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

30.3. Hand tools. (a) Employers shall not issue or permit the use of unsafe hand tools.

(b) Wrenches, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.

(c) Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

(d) The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

30.4. Power-operated tools. (a) Electric power-operated tools.

(1) Electric power operated tools shall either be of the approved double-insulated type or grounded in accordance with this part.

(2) The use of electric cords for hoisting or lowering tools shall not be permitted.

(b) Pneumatic power tools.

- (1) Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tools from becoming accidentally disconnected.
- (2) Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
- (3) All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than one hundred (100) p.s.i. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.
- (4) Compressed air shall not be used for cleaning purposes except where reduced to less than thirty (30) p.s.i. and then only with effective chip guarding and personal protective equipment which meets the requirements of this part. The thirty (30) p.s.i. requirement does not apply for concrete form, mill scale and similar cleaning purposes.
- (5) The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
- (6) The use of hoses for hoisting or lowering tools shall not be permitted.
- (7) All hoses exceeding one-half () inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
- (8) Airless spray guns of the type which atomize paints and fluids at high pressures (one thousand (1,000) pounds or more per square inch) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.
- (9) In lieu of the above, a diffuser nut which will prevent high pressure, high velocity release, while the nozzle tip is removed, plus a nozzle tip guard which will prevent the tip from coming into contact with the operator, or other equivalent protection, shall be provided.

(c) Fuel powered tools.

- (1) All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in accordance with this section.
- (2) When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment shall apply.

(d) Hydraulic power tools.

- (1) The fluid used in hydraulic powered tools shall be fire-resistant fluids and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.
- (2) The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.

(e) Powder-actuated tools.

- (1) Only employees who have been trained in the operation and the safety hazards of the particular tools in use shall be allowed to operate a powder-actuated tool.
- (2) The tool shall be tested each day before loading to see that safety devices are in proper working condition. The method of testing shall be in accordance with the manufacturer's recommended procedure.
- (3) Any tool found not in proper working order, or that develops a defect during use, shall be immediately removed from service and not used until properly repaired.
- (4) Personal protective equipment shall be in accordance with subsections of this part.
- (5) Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any employees. Hands shall be kept clear of the open barrel end.
- (6) Loaded tools shall not be left unattended.
- (7) Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile.
- (8) Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.
- (9) No fastener shall be driven into a spalled area caused by an unsatisfactory fastening.
- (10) Tools shall not be used in an explosive or flammable atmosphere.
- (11) All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.
- (12) Powder-actuated tools used by employees shall meet all other applicable requirements of the American National Standards Institute A10.3-1970, Safety Requirements for Explosive-Actuated Fastening Tools.

30.5. Other portable tools and equipment. Abrasive blast cleaning nozzles. The blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

30.6. Abrasive wheels and tools. (a) Power. All grinding machines shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions of normal operation.

(b) Guarding. Grinding machines shall be equipped with safety guards in conformance with the requirements of ANSI B7.1-1970, Safety Code for the use, care and protection of abrasive wheels, and Sections 10, 11, and 12 of these regulations.

(c) Use of abrasive wheels.

- (1) Floor stand and bench mounted abrasive wheels, used for external grinding, shall be provided with safety guards (protection bonds). The maximum angular exposure of the grinding wheel periphery and sides shall be not more than ninety (90) degrees, except that when work requires contact with the wheel below the horizontal plane of the spindle, the

angular exposure shall not exceed one hundred twenty-five (125) degrees. In either case, the exposure shall begin not more than sixty-five (65) degrees above the horizontal plane of the spindle. Safety guards shall be strong enough to withstand the effect of a bursting wheel.

(2) Floor and bench-mounted grinders shall be provided with work rests which are rigidly supported and readily adjustable. Such work rests shall be kept at a distance not to exceed one-eighth (1/8) inch from the surface of the wheel.

(3) Cup type wheels used for external grinding shall be protected by either a revolving cup guard or a band type guard in accordance with the provisions of the ANSI B7.1-1970, Safety Code for the use, care, and protection of abrasive wheels. All other portable abrasive wheels used for external grinding, shall be provided with safety guards (protection hoods) meeting the requirements of subparagraph (5) of this paragraph, except as follows:

(i) When the work location makes it impossible, a wheel equipped with safety flanges, as described in subparagraph six (6) of this paragraph, shall be used;

(ii) When wheels two (2) inches or less in diameter which are securely mounted on the end of a steel mandrel are used.

(4) Portable abrasive wheels used for internal grinding shall be provided with safety flanges (protection flanges) meeting the requirements of subparagraph six (6) of this paragraph, except as follows:

(i) When wheels two (2) inches or less in diameter which are securely mounted on the end of a steel mandrel are used;

(ii) If the wheel is entirely within the work being ground while in use.

(5) When safety guards are required, they shall be so mounted as to maintain proper alignment with the wheel, and the guard and its fastenings shall be of sufficient strength to retain fragments of the wheel in case of accidental breakage. The maximum angular exposure of the grinding exposure of the grinding wheel periphery and sides shall not exceed one hundred eighty (180) degrees.

(6) When safety flanges are required, they shall be used only with wheels designed to fit the flanges. Only safety flanges, of a type and design and properly assembled so as to ensure that the pieces of the wheel will be retained in case of accidental breakage, shall be used.

(7) All abrasive wheels shall be closely inspected and ring-tested before mounting to ensure that they are free from cracks or defects.

(8) Grinding wheels shall fit freely on the spindle and shall not be forced on. The spindle nut shall be tightened only enough to hold the wheel in place.

(9) All employees using abrasive wheels shall be protected by eye protection equipment in accordance with the requirements of this part, except when adequate eye protection is afforded by eye shields which are permanently attached to the bench or floor stand.

(d) Other requirements. All abrasive wheels and tools used by employees shall meet other applicable requirements of ANSI B7.1-1970, Safety Code for the use, care and protection of abrasive wheels.

30.7. Woodworking tools. (a) Disconnect switches. All fixed power driven woodworking tools shall be provided with a disconnect switch that can either be locked or tagged in the off position.

(b) Speeds. The operating speed shall be etched or otherwise permanently marked on all circular saws over twenty (20) inches in diameter or operating at over ten thousand (10,000) peripheral feet per minute. Any saw so marked shall not be operated at a speed other than that marked on the blade. When a marked saw is retensioned for a different speed, the marking shall be corrected to show the new speed.

(c) Self-feed. Automatic feeding devices shall be installed on machines whenever the nature of the work will permit. Feeder attachments shall have the feed rolls or other moving parts covered or guarded so as to protect the operator from hazardous points.

(d) Guarding. All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for level cuts. The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.

(e) Personal protective equipment. All personal protective equipment provided for use shall conform to this part.

(f) Other requirements. All woodworking tools and machinery shall meet other applicable requirements of ANSI, 01.1-1961, Safety Code for woodworking machinery.

30.8. Jacks -lever and ratchet, screw, and hydraulic. (a) General requirements.

(1) The manufacturer's rated capacity shall be legibly marked on all jacks and shall not be exceeded.

(2) All jacks shall have a positive stop to prevent overtravel.

(b) Lift slab construction.

(1) Hydraulic jacks used in lift slab construction shall have a safety device which will cause the jacks to support the load in any position in the event of jack malfunctions.

(2) If lift slabs are automatically controlled, a device shall be installed which will stop the operation when the one-half (1/2) inch leveling tolerance is exceeded.

(c) Blocking. When it is necessary to provide a firm foundation, the base of the jack shall be blocked or cribbed. Where there is a possibility of slippage of the metal cap of the jack, a wood block shall be placed between the cap and the load.

30.9. Other portable tools and equipment. (a) Jacks. Operation and maintenance.

- (1) After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- (2) Hydraulic jacks exposed to freezing temperatures shall be supplied with an adequate antifreeze liquid.
- (3) All jacks shall be properly lubricated at regular intervals. The lubricating instructions of the manufacturer should be followed, and only lubricants recommended by him should be used.
- (4) Each jack shall be thoroughly inspected at times which depend upon the service conditions. Inspections shall be not less frequent than the following:
 - (i) For constant or intermittent use at one (1) locality, once every six (6) months.
 - (ii) For jacks sent out of shop for special work, when sent out and when returned.
 - (iii) For a jack subjected to abnormal load or shock, immediately before and immediately thereafter.
- (5) Repair or replacement parts shall be examined for possible defects.
- (6) Jacks which are out of order shall be tagged accordingly, and shall not be used until repairs are made.

§36-23-31. Gas Welding and Cutting.

31.1. Gas welding and cutting. (a) Transporting, moving, and storing compressed gas cylinders.

- (1) Valve protection caps shall be in place and secured.
- (2) When cylinders are hoisted, they shall be secured on a cradle, slingboard, or pallet. They shall not be hoisted or transported by means of magnets or choker slings.
- (3) Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck, or permitted to strike each other violently.
- (4) When cylinders are transported by powered vehicles, they shall be secured in a vertical position.
- (5) Valve protection caps shall not be used for lifting cylinders from one (1) vertical position to another. Bars shall not be used under valves or valve protection caps to pry cylinders loose when frozen. Warm, not boiling, water shall be used to thaw cylinders loose.
- (6) Unless cylinders are firmly secured on a special carrier on vehicle intended for this purpose, regulators shall be removed and valve protection caps put in place before cylinders are moved.
- (7) A suitable cylinder truck, chain, or other steadying device shall be used to keep cylinders from being knocked over while in use.
- (8) When work is finished, when cylinders are empty, or when cylinders are moved at any time, the cylinder valve shall be closed.
- (9) Compressed gas cylinders shall be secured in an upright position at all times, except if necessary, for short periods of time while cylinders are actually being hoisted or carried.

(b) Placing cylinders.

- (1) Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them. When this is impractical, fire-resistant shields shall be provided.
- (2) Cylinders shall be placed where they cannot become part of an electrical circuit. Electrodes shall not be struck against a cylinder to strike an arc.
- (3) Fuel gas cylinders shall be placed with valve end up whenever they are in use. They shall not be placed in a location where they would be subject to open flame, hot metal, or other sources of artificial heat.
- (4) Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces.

(c) Treatment of cylinders.

- (1) Cylinders, whether full or empty, shall not be used as rollers or supports.
- (2) No person other than the gas supplier shall attempt to mix gases in a cylinder. No one except the owner of the cylinder or person authorized by him, shall refill a cylinder. No one shall use a cylinder's contents for purposes other than those intended by the supplier.
- (3) No damaged or defective cylinder shall be used.

(d) Use of fuel gas. The employer shall thoroughly instruct employees in the safe use of fuel gas, as follows:

- (1) Before a regulator to a cylinder valve is connected, the valve shall be opened slightly and closed immediately. (This action is generally termed "Cracking" and is intended to clear the valve of dust or dirt that might otherwise enter the regulator.) The person cracking the valve shall stand to one side of the outlet, not in front of it. The valve of a fuel gas cylinder shall not be cracked where the gas would reach welding work, sparks, flame, or other possible sources of ignition.
- (2) The cylinder valve shall always be opened slowly to prevent damage to the regulator. For quick closing, valves on fuel gas cylinders shall not be opened more than one and one-half (1 1/2) turns. When a special wrench is required, it shall be left in position on the stem of the valve while the cylinder is in use so that the fuel gas flow can be shut off quickly in case of an emergency. In the case of manifolded or coupled cylinders, at least one (1) such wrench shall always be available for immediate use. Nothing shall be placed on top of a fuel gas cylinder, when in use, which may damage the safety device or interfere with the quick closing of the valve.
- (3) Fuel gas shall not be used from cylinders through torches or other devices which are equipped with shutoff valves without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold.
- (4) Before a regulator is removed from a cylinder valve, the cylinder valve shall always be closed and the gas released from the regulator.
- (5) If, when the valve on a fuel gas cylinder is opened, there is found to be a leak around the valve stem, the valve shall be closed and the gland nut tightened. If this action does not stop the leak, the use of the cylinder shall be discontinued,

and it shall be properly tagged and removed from the work area. In the event that fuel gas should leak from the cylinder valve, rather than from the valve stem, and the gas cannot be shut off, the cylinder shall be properly tagged and removed from the work area. If a regulator attached to a cylinder valve will effectively stop a leak through the valve seat, the cylinder need not be removed from the work area.

(6) If a leak should develop at a fuse plug or other safety device, the cylinder shall be removed from the work area.

(e) Fuel gas and oxygen manifolds.

(1) Fuel gas and oxygen manifolds shall bear the name of the substance they contain in letters at least one (1) inch high which shall be either painted on the manifold or on a sign permanently attached to it.

(2) Fuel gas and oxygen manifolds shall be placed in safe, well ventilated, and accessible locations. They shall not be located within enclosed spaces.

(3) Manifold hose connections, including both ends of the supply hose that lead to the manifold, shall be such that the hose cannot be interchanged between fuel gas and oxygen manifolds and supply header connections. Adapters shall not be used to permit the interchange of hose. Hose connections shall be kept free of grease and oil.

(4) When not in use, manifold and header hose connections shall be capped.

(5) Nothing shall be placed on top of a manifold, when in use, which will damage the manifold or interfere with the quick closing of the valves.

(f) Hose. (1) Fuel gas hose and oxygen hose shall be easily distinguishable from each other. The contrast may be made by different colors or by surface characteristics readily distinguishable by the sense of touch. Oxygen and fuel gas hoses shall not be interchangeable. A single hose having more than one (1) passage shall not be used.

(2) When parallel sections of oxygen and fuel gas hose are taped together not more than four (4) inches out of twelve (12) inches shall be covered by tape.

(3) All hose in use, carrying acetylene, oxygen, natural or manufactured fuel gas, or any gas or substance which may ignite or enter into combustion, or be in any way harmful to employees, shall be inspected at the beginning of each working shift. Defective hose, or hose in doubtful condition, shall not be used.

(4) Hose which has been subject to flashback, or which shows evidence of severe wear or damage, shall be tested to twice the normal pressure to which it is subject, but in no case less than three hundred (300) p.s.i. Defective hose, or hose in doubtful condition, shall not be used.

(5) Hose couplings shall be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.

(6) Boxes used for the storage of gas hose shall be ventilated.

(7) Hoses, cables, and other equipment shall be kept clear of passageways, ladders and stairs.

(g) Torches.

(1) Clogged torch tip openings shall be cleaned with suitable cleaning wires, drills, or other devices designed for such purposes.

(2) Torches in use shall be inspected at the beginning of each working shift for leaking shutoff valves, hose couplings, and tip connections. Defective torches shall not be used.

(3) Torches shall be lighted by friction lighters or other approved devices, and not by matches or from hot work.

(h) Regulators and gauges. Oxygen and fuel gas pressure regulators, including their related gauges, shall be in proper working order while in use.

(i) Oil and grease hazards. Oxygen cylinders and fittings shall be kept away from oil or grease. Cylinders, cylinder caps and valves, couplings, regulators, hose, and apparatus shall be kept free from oil or greasy substances and shall not be handled with oily hands or gloves. Oxygen shall not be directed at oily surfaces, greasy clothes, or within a fuel oil or other storage tank or vessel.

(j) For additional details not covered in this section, applicable technical portions of American National Standards Institute Z49.1-1967, Safety in Welding and Cutting, shall apply.

31.2. Arc welding and cutting. (a) Manual electrode holders.

(1) Only manual electrode holders which are specifically designed for arc welding and cutting, and are of a capacity capable of safely handling the maximum rated current required by the electrodes, shall be used.

(2) Any current-carrying parts passing through the portion of the holder which the arc welder or cutter grips in his hand, and the outer surfaces of the jaws of the holder, shall be fully insulated against the maximum voltage encountered to ground.

(b) Welding cables and connectors. (1) All arc welding and cutting cables shall be of the completely insulated, flexible type, capable of handling the maximum current requirements of the work in progress, taking into account the duty cycle under which the arc welder or cutter is working.

(2) Only cable free from repair or splices for a minimum distance of ten (10) feet from the cable end to which the electrode holder is connected shall be used, except that cables with standard insulated connectors or with splices whose insulating quality is equal to that of the cable are permitted.

(3) When it becomes necessary to connect or splice lengths of cable one (1) to another, substantial insulated connectors of a capacity at least equivalent to that of the cable shall be used. If connections are effected by means of cable lugs, they shall be securely fastened together to give good electrical contact, and the exposed metal parts of the lugs shall be completely insulated.

(4) Cables in need of repair shall not be used. When a cable other than the cable lead referred to in subparagraph (2) of this paragraph, becomes worn to the extent of exposing bare conductors, the portion thus exposed shall be protected by means of rubber and friction tape or other equivalent insulation.

(c) Ground returns and machine grounding. (1) A ground return cable shall have a safe current carrying capacity equal to or exceeding the specified maximum output capacity of the arc welding or cutting unit which it services. When a single ground return cable services more than one (1) unit, its safe current-carrying capacity shall equal or exceed the total specified maximum output capacities of all the units which it services.

(2) Pipelines containing gases or flammable liquids, or conduits containing electrical circuits, shall not be used as a ground return. For welding on natural gas pipelines, the technical portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, minimum federal safety standards for Gas Pipelines shall apply.

(3) When a structure or pipeline is employed as a ground return circuit, it shall be determined that the required electrical contact exists at all joints. The generation of an arc, sparks, or heat at any point shall cause rejection of the structures as a ground circuit.

(4) When a structure or pipeline is continuously employed as a ground return circuit, all joints shall be bonded, and periodic inspections shall be conducted to ensure that no condition of electrolysis or fire hazard exists by virtue of such use.

(5) The frames of all arc welding and cutting machines shall be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire which is grounded at the source of the current. Grounding circuits, other than by means of a structure, shall be checked to ensure that the circuit between the ground and the grounded power conductor has resistance low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.

(6) All ground connections shall be inspected to ensure that they are mechanically strong and electrically adequate for the required current.

(d) Operating instructions. Employers shall instruct employees in the safe means of arc welding and cutting as follows:

(1) When electrode holders are to be left unattended, the electrodes shall be removed and the holders shall be so placed or protected that they cannot make electrical contact with employees or conducting objects.

(2) Hot electrode holders shall not be dipped in water; to do so may expose the arc welder or cutter to electric shock.

(3) When the arc welder or cutter has occasion to leave his work or to stop work for any appreciable length of time, or when the arc welding or cutting machine is to be moved, the power supply switch to the equipment shall be opened.

(4) Any faulty or defective equipment shall be reported to the supervisor, and shall be removed from service if an imminent hazard exists.

(5) Other requirements, as outlined in Article 630, National Electrical Code NFPA 70-1971; ANSI C1-1971 (Rev. of 1968), Electric Welders, shall be used when applicable.

(e) Shielding. When practicable, all arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc.

31.3. Fire prevention. (a) When practical, objects to be welded, cut or heated shall be moved to a designated safe location or, if the objects to be welded, cut or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place, or otherwise protected.

(b) If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means shall be taken to confine the heat, sparks, and slag, and to protect the immovable fire hazards from them.

(c) No welding, cutting, or heating shall be done where the application of flammable paints, or the presence of other flammable compounds, or heavy dust concentrations creates a hazard.

(d) Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for instant use.

(e) When the welding, cutting, or heating operation is such that normal fire prevention precautions are not sufficient, additional personnel shall be assigned to guard against fire while the actual welding, cutting, or heating operation is being performed, and for a sufficient period of time after completion of the work to ensure that no possibility of fire exists. Such personnel shall be instructed as to the specific anticipated fire hazards and how the fire-fighting equipment provided is to be used.

(f) When welding, cutting, or heating is performed on walls, floors, and ceilings, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions shall be taken on the opposite side as are taken on the side on which the welding is being performed.

(g) In areas that may contain methane gas, an examination for gas shall be conducted with permissible flame safety lamps or other approved detectors before and during welding.

(h) For the elimination of possible fire in enclosed spaces as a result of gas escaping through leaking or improperly closed torch shall be positively shut off at some point outside the enclosed space whenever the torch is not to be used or whenever the torch is left unattended for a substantial period of time, such as during the lunch period. Overnight and at the change of shifts, the torch and hose shall be removed from the confined space. Open end fuel gas and oxygen hoses shall be immediately removed from enclosed spaces when they are disconnected from the torch or other gas-consuming device.

(i) Except when the contents are being removed or transferred, drums, pails, and other containers, which contain or have contained flammable liquids, shall be kept closed. Empty containers shall be removed to a safe area apart from hot work operations or open flames.

(j) Drums, containers, or hollow structures which have contained toxic or flammable substances shall, before welding, cutting, or heating is undertaken on them, either be filled with water or thoroughly cleaned of such substances and ventilated and tested. For welding, cutting, and heating on steel pipelines containing natural gas, the pertinent portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49CFR Part 192, minimum federal safety standards for Gas Pipelines shall apply.

31.4. Ventilation and protection in welding, cutting and heating. (a) Mechanical ventilation. For purposes of this section, mechanical ventilation shall meet the following requirements:

- (1) Mechanical ventilation shall consist of either general mechanical ventilation systems or local exhaust systems.
- (2) General mechanical ventilation shall be of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits, as defined in this part.
- (3) Local exhaust ventilation shall consist of freely movable hoods intended to be placed by the welder or burner as close as practicable to the work. This system shall be of sufficient capacity and so arranged as to remove fumes and smoke at the source and keep the concentration of them in the breathing zone within safe limits as defined in this part.
- (4) Contaminated air exhausted from a working space shall be discharged into the open air or otherwise clear of the source of intake air.
- (5) All air replacing that withdrawn shall be clean and respirable.
- (6) Oxygen shall not be used for ventilation purposes, comfort cooling, blowing dust from clothing, or for cleaning the work area.

(b) Welding, cutting, and heating in confined spaces.

- (1) Except as provided in subparagraph (2) of this paragraph, and paragraph (c)(2) of this section, either general mechanical or local exhaust ventilation meeting the requirements of paragraph (a) of this section shall be provided whenever welding, cutting, or heating is performed in a confined space.
- (2) When sufficient ventilation cannot be obtained without blocking the means of access, employees in the confined space shall be protected by air line respirators in accordance with the requirements of this part, and an employee on the outside of such a confined space shall be assigned to maintain communication with those working within it and to aid them in an emergency.

(c) Welding, cutting, or heating of metals of toxic significance.

(1) Welding, cutting, or heating in any enclosed spaces involving the metals specified in this subparagraph shall be performed with either general mechanical or local exhaust ventilation meeting the requirements of paragraph (i) of this section:

- (i) Zinc-bearing base or filler metals or metals coated with zinc-bearing materials;
- (ii) Lead base metals;
- (iii) Cadmium-bearing filler materials;
- (iv) Chromium-bearing metals or metals coated with chromium-bearing materials.

(2) Welding, cutting, or heating in any enclosed spaces involving the metals specified in this subparagraph shall be performed with local exhaust ventilation in accordance with the requirements of paragraph (a) of this section, or employees shall be protected by air line respirators in accordance with the requirements of this part:

- (i) Metals containing lead, other than as an impurity, or metal coated with lead-bearing materials;
- (ii) Cadmium-bearing or cadmium-coated base metals;
- (iii) Metals coated with mercury-bearing materials;
- (iv) Beryllium-containing base or filler metals. Because of its high toxicity, work involving beryllium shall be done with both local exhaust ventilation and air line respirators.

(3) Employees performing such operations in the open air shall be protected by filter-type respirators in accordance with the requirements of this section, except that employees performing such operations on beryllium-containing base or filler metals shall be protected by air line respirators in accordance with the requirements of this part.

(4) Other employees exposed to the same atmosphere as the welders or burners shall be protected in the same manner as the welder or burner.

(d) Inert-gas metal-arc welding.

(1) Since the inert-gas metal-arc welding process involves the production of ultra-violet radiation of intensities of five (5) to thirty (30) times that produced during shielded metal-arc welding, the decomposition of chlorinated solvents by ultra-violet rays, and the liberation of toxic fumes and gases, employees shall not be permitted to engage in or be exposed to the process until the following special precautions have been taken:

(i) The use of chlorinated solvents shall be kept at least two hundred (200) feet, unless shielded, from the exposed arc, and surfaces prepared with chlorinated solvents shall be thoroughly dry before welding is permitted on such surfaces.

(ii) Employees in the area not protected from the arc by screening shall be protected by filter lenses. When two (2) or more welders are exposed to each other's arc, filter lens goggles of a suitable type shall be worn under welding helmets. Hand shields to protect the welder against flashes and radiant energy shall be used when either the helmet is lifted or the shield is removed.

(iii) Welders and other employees who are exposed to radiation shall be suitably protected so that the skin is covered completely to prevent burns and other damage by ultra-violet rays. Welding helmets and hand shield shall be free of leaks and openings, and free of highly reflective surfaces.

(iv) When inert-gas metal arc welding is being performed on stainless steel, the requirements of paragraph (c)(2) of this section shall be met to protect against dangerous concentrations of nitrogen dioxide.

(e) General welding, cutting, and heating.

(1) Welding, cutting, and heating, not involving conditions or materials described in paragraph (b), (c), or (d) of this section, may normally be done without mechanical ventilation or respiratory protective equipment, but where, because of unusual physical or atmospheric conditions, an unsafe accumulation of contaminants exists, suitable mechanical ventilation or respiratory protective equipment shall be provided.

(2) Employees performing any type of welding, cutting, or heating shall be protected by suitable eye protective equipment.

31.5. Welding, cutting, and heating in way of preservative coatings. (a) Before welding, cutting, or heating is commenced on any surface covered by a preservative coating whose flammability is not known, a test shall be made by a competent person to determine its flammability. Preservative coatings shall be considered to be highly flammable when scraping burn with extreme rapidity.

(b) Precautions shall be taken to prevent ignition of highly flammable hardened preservative coatings. When coatings are determined to be highly flammable, they shall be stripped from the area to be heated to prevent ignition.

(c) Protection against toxic preservative coatings. (1) In enclosed spaces, all surfaces covered with toxic preservatives shall be stripped of all toxic coatings for a distance of at least four (4) inches from the area of heat application, or the employees shall be protected by air line respirators.

(2) In the open air, employees shall be protected by a respirator.

(d) The preservative coatings shall be removed a sufficient distance from the area to be heated to ensure that the temperature of the unstripped metal will not be appreciably raised. Artificial cooling of the metal surrounding the heating area may be used to limit the size of the area required to be cleaned.

§36-23-32. Electrical.

All persons performing electrical work at construction projects shall be certified by the State Fire Marshall or by the Department of Mines.

32.1. General Requirements. (a) All electrical work, installation, and wire capacities shall be in accordance with the pertinent provisions of the National Electrical Code, NFPA 70-1971; ANSI C1-1971 (Rev. of C1-1968) unless otherwise provided by these regulations.

(b) Applicability. These regulations apply only to electrical installations and used on the job site, both temporary and permanent. For power distribution and transmission lines, refer to subpart V of OSHA Safety and Health Regulations for Construction.

(c) Protection of employees. (1) No employer shall permit an employee to work in such proximity to any part of an electric power circuit that he may contact the same in the course of his work unless the employee is protected against electric shock by de-energizing the circuit and grounding it or by guarding it by effective insulation or other means. In work areas where the exact location of underground electric power lines is unknown, workmen using jackhammers, bars, or other hand tools which may contact a line shall be provided with insulated protective gloves.

(2) Before work is begun, the employer shall ascertain by inquiry or direct observation, or by instruments, whether any part of an electric power circuit, exposed, or concealed, is so located that the performance of the work may bring any person, tool, or machine into physical or electrical contact therewith. The employer shall post and maintain proper warning signs where such a circuit exists. He shall advise his employees of the location of such lines, the hazards involved and the protective measures to be taken.

(d) Passageways and open spaces. Suitable barriers or other means shall be provided to ensure that work space for electrical equipment will not be used as a passageway during periods when energized parts of electrical equipment are used.

(e) Work space around equipment. Sufficient space shall be provided and maintained in the area of electrical equipment to permit ready and safe operation and maintenance of such equipment. When parts are exposed, the minimum clearance for the work space shall be not less than six and one-quarter (6 1/4) feet high, nor less than a radius of three (3) feet wide, and there shall be clearance sufficient to permit at least ninety degrees (90) opening of all doors or hinged panels. All working clearances shall be maintained in accordance with article 110-16, National Electrical Code, NFPA 70-1971; ANSI CI-1971 (Rev. of CI-1968).

(f) Load ratings. In existing installation no changes in circuit protection shall be made to increase the load in excess of load rating of the circuit wiring, as specified in National Electrical Code, NFPA 70-1971; ANSI CI-1971 (Rev. of CI-1968) (Article 310.)

(g) Lockout and tagging of circuits. (1) Equipment or circuits that are de-energized shall be rendered inoperative and have tags attached at all points where such equipment or circuits can be energized.

(2) Tags shall be placed to identify plainly the equipment or circuits being worked on.

(h) Ground-fault protection. (1) General. Notwithstanding any other provision of this part, the requirements in Section 210-7 of the 1971 National Electrical Code (NFPA 70-1971; ANSI CI-1971), that all fifteen (15-) and twenty (20-) ampere receptacle outlets on single-phase circuits for construction sites have approved ground-fault circuit protection for

personnel does not apply. In lieu thereof, the employer shall use either ground-fault circuit interrupters or an assured equipment grounding conductor program to protect employees on construction sites. These requirements are in addition to any other requirements for equipment grounding conductors.

(2) Ground-fault circuit interrupters. All one hundred twenty (120) volt, single-phase, fifteen (15-) and twenty (20-) ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters for personnel protection. Receptacles on a two (2-) wire, single-phase portable or vehicle-mounted generator rated not more than five (5)kw, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with ground-fault circuit interrupters.

(3) Assured equipment grounding conductor program. The employer shall establish and implement an assured equipment grounding conductor program on construction sites covering all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. This program shall comply with the following minimum requirements:

(i) A written description of the program, including the specific procedures adopted by the employer, shall be available at the job site for inspection and copying by the Director and any affected employee.

(ii) The employer shall designate one (1) or more competent persons to implement the program.

(iii) Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indication of possible internal damage. Equipment found damaged or defective may not be used until repaired.

(iv) The following tests shall be performed on all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and cord and plug-connected equipment required to be grounded:

(a) All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

(b) Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.

(v) All required tests shall be performed:

(a) Before first use;

(b) Before equipment is returned to service following any repairs;

(c) Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over); and

(d) At intervals not to exceed three (3) months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding six (6) months.

(vi) The employer may not make available or permit the use by employees of any equipment which has not met the requirements of this section.

(vii) Tests performed as required in this paragraph shall be recorded in a book approved by the Department of Mines. This test record shall identify each receptacle, cord set, and cord-and plug-connected equipment that passed the test, and shall indicate the last date it was tested or the interval for which it was tested. This record shall be kept by means of logs, color coding, or other effective means, and shall be maintained until replaced by a more current record. The record shall be made available on the job site for inspection by any affected employee.

32.2. Grounding and bonding. (a) Portable and/or cord plug connected equipment.

(1) The non current-carrying metal parts of portable and/or plug-connected equipment shall be grounded.

(2) Portable tools and appliances protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the equipment shall be distinctively marked.

(b) Fixed equipment. Exposed non- current-carrying metal parts of fixed electrical equipment, including motors, generators, frames and tracks of electrically operated cranes, electrically driven machinery, etc., shall be grounded.

(c) Effective grounding. The path from circuits, equipment, structures, and conduit or enclosures to ground shall be permanent and continuous; have ample carrying capacity to conduct safely the current liable to be imposed on it; and have impedance sufficiently low to limit the potential above ground and to result in the operation of the overcurrent devices in the circuit.

(d) Ground resistance. Driven rod electrodes shall, where practicable, have a resistance to ground not to exceed twenty-five (25) ohms where the resistance is not as low as 25 ohms, two (2) or more electrodes connected in parallel shall be used.

(e) Testing of grounds. Grounding circuits shall be checked to ensure that the circuit between the ground and the grounded power conductor has a resistance which is low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.

(f) Extension cords. Extension cords used with portable electric tools and appliances shall be of the three (3)-wire type.

(g) Bonding. Conductors used for bonding and grounding stationary and movable equipment shall be of ample size to carry the anticipated current.

When attaching bonding and grounding clamps or clips, a secure and positive metal-to-metal contact shall be made. Such attachments shall be made before closures are opened and material movements are started and shall not be broken until after material movements are stopped and closures are made.

(h) Temporary wiring. All temporary wiring shall be effectively grounded in accordance with the National Electrical Code, NFPA 70-1971; ANSI CI-1971 (Rev. of CI-1968), Articles 305 and 310.

(i) Construction site. Precautions shall be taken to make any necessary open wiring inaccessible to unauthorized personnel.

(j) Temporary lighting. Temporary lights shall be equipped with guards to prevent accidental contact with the bulb, except that guards are not required when the construction of the reflector is such that the bulb is deeply recessed.

Temporary lights shall be equipped with heavy duty electric cords with connections and insulation maintained in safe condition. Temporary lights shall not be suspended by their electric cords unless cords and lights are designed for this means of suspension. Splices shall have insulation equal to that of the cable.

Working spaces, walkways, and similar locations shall be kept clear of cords so as not to create a hazard to employees.

Portable electric lighting used in moist and/or other hazardous locations, as for example, drums, tanks, and vessels shall be operated at a maximum of twelve (12) volts.

32.3. Equipment installation and maintenance. (a) Flexible cable and cords. (1) Receptacles for attachment plugs shall be of approved, concealed contact type with a contact for extending ground continuity and shall be so designed and constructed that the plug may be pulled out without leaving any live parts exposed to accidental contact.

(2) Where different voltages, frequencies, or types of current (A.C. or D.C.) are to be supplied by portable cords, receptacles shall be of such design that attachment plugs used on such circuits are not interchangeable.

(3) Attachment plugs or other connectors supplying equipment at more than three hundred (300) volts shall be of the skirted type or otherwise so designed that arcs will be confined.

(4) Attachment plugs for use in work areas shall be so constructed that they will endure rough use and be equipped with a suitable cord grip to prevent strain on the terminal screws.

(5) Flexible cord shall be used only in continuous lengths without splice, except suitable molded or vulcanized splices may be used where properly made, and the insulation shall be equal to the cable being spliced and wire connections soldered.

(6) Trailing cables shall be protected from damage.

(7) Splices in trailing cable shall be mechanically strong components and insulated to retain the mechanical and dielectric strength of the original cable.

(8) Cable passing through work areas shall be covered or elevated to protect it from damage which would create a hazard to employees.

(9) Handlamps of the portable type shall be of the molded composition or other type approved for the purpose. Brass-shell, paper-lined lampholders shall not be used. Handlamps shall be equipped with a handle and a substantial guard over the bulb and attached to the lampholder or the handle.

(10) Worn or frayed electric cables shall not be used.

(11) Extension cords shall be protected against accidental damage as may be caused by traffic, sharp corners, or projections and pinching in doors or elsewhere.

(12) Extension cords shall not be fastened with staples, hung from nails, or suspended by wire.

(b) Overcurrent protection. (1) Overcurrent protection shall be provided by fuses or circuit breakers for each feeder and branch circuit, and shall be based on the current-carrying capacity of the conductors supplied and the power load being used.

(2) No overcurrent devices shall be placed in any permanently grounded conductor, except where the overcurrent device simultaneously opens all conductors of the circuit or for motor running protection.

(3) When fuses are installed or removed with one (1) or both terminals energized, special tools insulated for the voltage shall be used.

(c) Switches, circuit breakers, and disconnecting means. (1) Each disconnecting means for motors and appliances, and each service feeder or branch circuit at the point where it originates, shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident.

(2) Disconnecting means shall be located or shielded so that employees will not be injured.

(3) Boxes for disconnecting means shall be securely and rigidly fastened to the surface upon which they are mounted and fitted with covers.

(4) Boxes and disconnecting means installed in damp or wet locations shall be waterproof to the extent that water does not enter or accumulate.

(d) Transformers. (1) Energized transformers and other related electrically energized equipment over one hundred fifty (150) volts to ground shall be protected so as to prevent accidental contact with any person. Protection shall be provided by individual integrated housing or by an enclosure, such as an electrical substation fence, which accommodates a group of such equipment. Metallic enclosures shall be grounded.

(2) Access to energized equipment covered by subparagraph (1) of this paragraph shall be secured by lock or other fasteners requiring the use of tools to open them.

(3) Signs indicating danger and prohibiting unauthorized access shall be conspicuously displayed on the housing or other enclosure around the equipment.

(4) Transformers mounted on utility poles at a height of more than twelve (12) feet from the ground are exempt from the requirements of this paragraph.

(e) Welding and cutting equipment. Welding and cutting equipment shall meet the requirements specified in Sections 20 and 31 of these regulations.

32.4. Battery rooms and battery charging. (a) General requirements. (1) Batteries of the non-seal type shall be located in enclosures with outside vents or in well ventilated rooms, so arranged as to prevent the escape of fumes, gases, or electrolyte spray into other areas.

(2) Ventilation shall be provided to ensure diffusion to the gases from the battery to prevent the accumulation of an explosive mixture.

(3) Racks and trays shall be substantial and treated to be resistant to the electrolyte.

(4) Floors shall be of acid resistant construction or be protected from acid accumulations.

(5) Face shields, aprons, and rubber gloves shall be provided for workmen handling acids or batteries.

(6) Facilities for quick drenching of the eyes and body shall be provided within twenty-five (25) feet of the work area for emergency use.

(7) Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.

(b) Charging. (1) Battery charging installations shall be located in areas designated for that purpose.

(2) When charging batteries, the vent caps shall be kept in place to avoid electrolyte spray. Care shall be taken to assure that vent caps are functioning.

32.5. Hazardous locations. (a) General. For the purpose of this section, hazardous locations are defined as follows:

(1) Class 1 Locations: Class 1 Locations are those in which flammable gases or vapors are or may be present in quantities sufficient to produce explosive or ignitable mixtures.

(2) Class 2 Locations: Class 2 Locations are those which are hazardous because of the presence of combustible dust.

(3) Class 3 Locations: Class 3 Locations are those which are hazardous because of the presence of easily ignitable fibers or flyings, but in which such fibers or flyings are not likely to be in suspension in air in quantities sufficient to produce ignitable mixtures.

(4) See the National Electrical Code, NFPA 70-1971; ANSI CI-1971 (Rev. of CI-1968) for further definitions of Divisions 1 and 2 for each class.

(b) All components and utilization equipment used in a hazardous location shall be chosen from among those listed by a nationally recognized testing laboratory, such as Underwriters Laboratories, Inc., or Factory Mutual Engineering Corporation, except custom-made components and utilization equipment.

(c) Equipment approved for a specific hazardous location shall not be installed or intermixed with equipment approved for another specific hazardous location.

(d) Employer shall ensure that all wiring components and utilization equipment are maintained as vapor, dust, or fiber tight as contemplated by their approvals. There shall be no loose or missing screws, gaskets, threaded connections, or other impairments to this tight condition.

32.6. Definitions applicable to this subpart. (a) The definition of "Approved" as set forth in this section shall apply.

(b) "Bonding Jumper" a conductor to assure the required electrical conductivity between metal parts required to be electrically connected.

(c) "Branch Circuits" that portion of a wiring system extending beyond the final overcurrent device protecting the circuit. (A device not approved for branch circuit protection, such as thermal cutout or motor overload protective device, is not considered as the overcurrent device protecting the circuit.)

(d) "Circuit Breaker" a device designed to open and close a circuit by manual means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating.

(e) "Exposed" (as applied to live parts) means that a live part can be inadvertently touched or approached nearer than a safe distance by a person. This term applies to parts not suitably guarded, isolated, or insulated.

(f) "Ground" a conducting connection, whether intentional or accidental, between an electrical circuit or equipment and earth, or to some conducting body which serves in place of the earth.

(g) "Grounded" connected to earth or to some conducting body which serves in place of the earth.

(h) "Hazard" is considered to include casualty, fire, and shock when applicable.

(i) "Isolated" means not readily accessible to person unless special means of access are used.

(j) "Raceway" any channel for loosely holding wires or cable in interior work which is designed expressly and used solely for this purpose. Raceways may be of metal, wood, or insulating material, and the term includes wood and metal moldings consisting of a backing and capping, and also metal ducts into which wires are to be pulled.

(k) "Shock Hazard" considered to exist at an accessible part in a circuit between the part and ground, or other accessible parts if the potential is more than forty-two and four-tenths (42.4) volts peak and the current through a one thousand five hundred (1,500)-ohm load is more than five (5) milliamperes.

(l) "Weatherproof" so constructed or protected that exposure to the weather shall not interfere with successful operation.

§36-23-33. Ladders and Scaffolding.

33.1. Ladders. (a) General requirements. (1) Except where either permanent or temporary stairways or suitable ramps or runways are provided, ladders described in this subpart shall be used to give safe access to all elevations. All ladders shall be inspected by a competent person before each use. Ladders with defects shall be removed from service.

(2) The use of ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction is prohibited.

When ladders with such defects are discovered, they shall be immediately withdrawn from service. Inspection of metal ladders shall include checking for corrosion of interiors or open end hollow rungs.

(3) Manufactured portable wood ladders provided by the employer shall be in accordance with the provisions of the ANSI A14.1-1968, Safety Code for portable wood ladders.

(4) Portable metal ladders shall be of strength equivalent to that of wood ladders. Manufactured portable metal ladders provided by the employer shall be in accordance with the provisions of the ANSI, A14.2-1956, Safety Code for portable metal ladders.

(5) Fixed ladders shall be in accordance with the provisions of the American National Standards Institute A14.3-1956, Safety Code for fixed ladders.

(6) Portable ladder feet shall be placed on a substantial base, and the area around the top and bottom of the ladder shall be kept clear.

(7) Portable ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support.) Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.

(8) Ladders shall not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any work, unless protected by barricades or guards.

(9) The side rails shall extend not less than thirty-six (36) inches above the landing. When this is not practical, grab rails, which provide a secure grip for an employee moving to or from the point of access, shall be installed.

(10) Portable ladders in use shall be tied, blocked, or otherwise secured to prevent their being displaced.

(11) Portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.

(b) Job-made ladders. (1) Job-made ladders shall be constructed for intended use. If a ladder is to provide the only means of access or exit from a working area for twenty-five (25) or more employees, or simultaneous two (2)-way traffic is expected, a double cleat ladder shall be installed.

(2) Double cleat ladders shall not exceed twenty-four (24) feet in length.

(3) Single cleat ladders shall not exceed thirty (30) feet in length between supports (base and top landing). If ladders are to connect different landings, or if the length required exceeds this maximum length, two (2) or more separate ladders shall be used, offset with a platform between each ladder. Guardrails and toeboards shall be erected on exposed sides of the platforms.

(4) The width of single cleat ladders shall be at least fifteen (15) inches, but not more than twenty (20) inches, between rails at the top.

(5) Side rails shall be parallel or flared top to bottom by not more than one-quarter (1/4) of an inch for each two (2) feet of length.

(6) Wood side rails of ladders having cleats shall be not less than one and one-half (1 1/2) inches thick and three and one-half (3 1/2) inches deep (two (2) inches x four (4) inches nominal) when made of Group 2 or Group 3 woods (see Table 27) may be used in the same cross-section of dimensions for cleat ladders up to twenty (20) feet in length.

(7) It is preferable that side rails be continuous. If splicing is necessary to attain the required length, however, the splice must develop the full strength of a continuous side rail of the same length.

(8) Two (2) inch x four (4) inch lumber shall be used for side rails of single cleat ladders up to sixteen (16) feet long; three (3) inch x six (6) inch lumber shall be used for single cleat ladders from sixteen (16) to thirty (30) feet in length.

(9) Two (2) inch x four (4) inch lumber shall be used for side and middle rails of double cleat ladders up to twelve (12) feet in length; two (2) inch x six (6) inch lumber four double cleat ladders from twelve (12) to twenty-four (24) feet in length.

(10) Wood cleats shall have the following minimum dimensions when made of Group 1 woods, (see Table 28):

(11) Cleats may be made of species of any other group of wood (see Table 27) provided equal or greater strength is maintained.

(12) Cleats shall be inset into the edges of the side rails one-half (1/2) inch or filler block shall be used on the rails between the cleats. The cleats shall be secured to each rail with three (3) ten (10)d common wire nails or other fasteners of equivalent strength. Cleats shall be uniformly spaced, twelve (12) inches top-to-top.

33.2. Scaffolding. (a) General requirements. (1) Scaffolds shall be erected in accordance with requirements of this section. All scaffolding shall be inspected prior to each use and scaffolding found defective of improper type or not properly constructed will not be used until corrected. Scaffolding shall be inspected for dry rot, cracks or other defects prior to construction of a scaffold. Scaffold planks shall be inspected as to the above mentioned. Defective planks shall be removed from service.

(2) The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks, shall not be used to support scaffolds or planks.

(3) No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons.

(4) Guardrails and toeboards shall be installed on all open sides and ends of platforms more than ten (10) feet above the ground or floor, except needle beam scaffolds and floats. Scaffolds four (4) feet to ten (10) feet in height, having a minimum horizontal dimension in either direction of less than forty-five (45) inches, shall have standard guardrails installed on all open sides and ends of the platform.

- (5) Guardrails shall be two (2) inches x four (4) inches, or the equivalent, approximately forty-two (42) inches high, with a midrail, when required. Supports shall be at intervals not to exceed eight (8) feet. Toeboards shall be a minimum of four (4) inches in height.
- (6) Where persons are required to work or pass under the scaffold, scaffolds shall be provided with a screen between the toeboard and the guardrail, extending along the entire opening, consisting of the No. 18 gauge wire, one and one-half (1 1/2) inch mesh, or the equivalent.
- (7) Scaffolds and their components shall be capable of supporting without failure at least four (4) times the maximum intended load.
- (8) Any scaffold including accessories such as braces, brackets, trusses, screw legs, ladders, etc., damaged or weakened from any cause shall be immediately repaired or replaced.
- (9) All load-carrying timber members of scaffold framing shall be a minimum of one thousand five hundred (1,500) fiber construction grade lumber. All dimensions are nominal sizes, except that where rough sizes are noted, only rough or undressed lumber of the size specified will satisfy minimum requirements.
- (10) All planking shall be scaffold grades, or equivalent, as recognized by approved grading rules for the species of wood used. The maximum permissible spans for two (2-) x ten (10)-inch or wider planks shall be as shown in Table 29:
- (11) The maximum permissible span for one and one-quarter (1 1/4) inch x nine (9) inch or wider plank of full thickness shall be four (4) feet with medium duty loading of fifty (50) p.s.f.
- (12) All planking or platforms shall be overlapped (minimum twelve (12) inches), or secured from movement.
- (13) An access ladder or equivalent safe access shall be provided.
- (14) Scaffold planks shall extend over their end supports not less than six (6) inches nor more than twelve (12) inches.
- (15) The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.
- (16) Overhead protection shall be provided for men on a scaffold exposed to overhead hazards.
- (17) Slippery conditions on scaffolds shall be eliminated as soon as possible after they occur.
- (18) No welding, burning, riveting, or open flame work shall be performed on any staging suspended means of fiber or synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.
- (19) Wire, synthetic, or fiber rope used for scaffold suspension shall be capable of supporting at least six (6) times the rated load.
- (20) The use of shore or lean-to scaffolds is prohibited.
- (21) Lumber sizes, when used in this subpart, refer to nominal sizes except where otherwise stated.
- (b) Wood pole scaffolds. (1) Scaffold poles shall bear on a foundation of sufficient size and strength to spread the load from the pole over a sufficient area to prevent settlement. All poles shall be set plumb.
- (2) Where wood poles are spliced, the ends shall be squared and the upper section shall rest squarely on the lower section. Wood splice plates shall be provided on at least two (2) adjacent sides and shall be not less than four (4) feet in length, overlapping the abutted ends equally, and have the same width and not less than the cross sectional area of the pole. Splice plates or other materials of equivalent strength may be used.
- (3) Independent pole scaffolds shall be set as near to the wall of the building as practicable.
- (4) All pole scaffolds shall be securely guyed or tied to the building or structure. Where the height or length exceeds twenty-five (25) feet, the scaffold shall be secured at intervals not greater than twenty-five (25) feet vertically and horizontally.
- (5) Putlogs or bearers shall be set with their greater dimension vertical, long enough to project over the ledgers of the inner and outer rows of poles at least three (3) inches for proper support.
- (6) Every wooden putlog on single pole scaffolds shall be reinforced with three-sixteenths (3/16) inch x two (2) inch steel strip, or equivalent, secured to its lower edge throughout its entire length.
- (7) Ledgers shall be long enough to extend over two (2) pole spaces. Ledgers shall not be spliced between the poles. Ledgers shall be reinforced by bearing blocks securely nailed to the side of the pole to form a support for the ledger.
- (8) Diagonal bracing shall be provided to prevent the poles from moving in a direction parallel with the wall of the building, or from buckling.
- (9) Cross bracing shall be provided between the inner and outer sets of poles in independent pole scaffolds. The free ends of pole scaffolds shall be cross braced.
- (10) Full diagonal face bracing shall be erected across the entire face of pole scaffolds in both directions. The braces shall be spliced at the poles. The inner row of poles on medium and heavy duty scaffolds shall be braced in a similar manner.
- (11) Platform plank shall be laid with their edges close together so the platform will be tight with no spaces through which tools or fragments of material can fall.
- (12) Where planking is lapped, each plank shall lap its end supports at least twelve (12) inches. Where the ends of planks abut each other to form a flush floor, the butt joint shall be at the centerline of a pole. The abutted ends shall rest on separate bearers. Intermediate beams shall be provided where necessary to prevent dislodgement of planks due to deflection, and the ends shall be secured to prevent their dislodgement.
- (13) When a scaffold materially changes its direction, the platform planks shall be laid to prevent tipping. The planks that meet the corner putlog at an angle shall be laid first, extending over the diagonally placed putlog far enough to have a

good safe bearing, but not far enough to involve any danger from tipping. The planking running in the opposite direction at an angle shall be laid so as to extend over and rest on the first layer of planking.

(14) When moving platforms to the next level, the old platform shall be left undisturbed until the new putlogs or bearers have been set in place, ready to receive the platform planks.

(15) Guardrails, made of lumber not less than two (2) inches x four (4) inches (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section, when required.

(16) All wood pole scaffolds sixty (60) feet or less in height shall be constructed and erected in accordance with Table 30 through 36. If they are over sixty (60) feet in height, they shall be designed by a qualified engineer competent in this field, and it shall be constructed and erected in accordance with such design.

(c) Tube and coupler scaffolds. (1) A light duty tube and coupler scaffold shall have all posts, bearers, runners, and bracing of nominal two (2) inch O. D. steel tubing. The posts shall be spaced no more than six (6) feet apart by ten (10) feet along the length of the scaffold. Other structural metals when used must be designed to carry an equivalent load. No dissimilar metals shall be used together.

(2) A medium duty tube and coupler scaffold shall have all posts, runners, and bracing of nominal two (2) inch O. D. steel tubing. Posts spaced not more than five (5) feet apart by eight (8) feet along the length of the scaffold shall have bearers of nominal two (2) inch O. D. steel tubing.

Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be used together.

(3) A heavy duty tube and coupler scaffold shall have all posts, runners, and bracing of nominal two (2) inch O. D. steel tubing, with the posts spaced not more than six (6) feet x six (6) feet six (6) inches. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be used together.

(4) Tube and coupler scaffolds shall be limited in heights and working levels to those permitted in Tables 36, 37 and 38. Drawings and specifications of all tube and coupler scaffolds above the limitations in Tables 36, 37 and 38 shall be designed by a qualified engineer competent in this field.

(5) All tube and coupler scaffolds shall be constructed and erected to support four (4) times the maximum intended loads, as set forth in Tables 36, 37 and 38, or as set forth in the specifications by a licensed professional engineer competent in this field.

(6) Posts shall be accurately spaced, erected on suitable bases, and maintained plumb.

(7) Runners shall be erected along the length of the scaffold, located on both the inside and the outside posts at even height. Runners shall be interlocked to form continuous lengths and coupled to each post. The bottom runners shall be located as close to the base as possible. Runners shall be placed not more than six (6) feet six (6) inches on centers.

(8) Bearers shall be installed transversely between posts and shall be securely coupled to the posts bearing on the runner coupler. When coupled directly to the runners, the coupler must be kept as close to the posts as possible.

(9) Bearers shall be at least four (4) inches but not more than twelve (12) inches longer than the post spacing or runner spacing.

(10) Cross bracing shall be installed across the width of the scaffold at least every third set of posts horizontally and every fourth runner vertically. Such bracing shall extend diagonally from the inner and outer runners upward to the next outer and inner runners.

(11) Longitudinal diagonal bracing on the inner and outer rows of poles shall be installed at approximately a forty-five (45) degree angle from near the base of the first outer post upward to the extreme top of the scaffold. Where the longitudinal length of the scaffold permits, such bracing shall be duplicated beginning at every fifth post. In a similar manner, longitudinal diagonal bracing shall also be installed from the last post extending back and upward toward the first post. Where conditions preclude the attachment of this bracing to the posts, it may be attached to the runners.

(12) The entire scaffold shall be tied to and securely braced against the building at intervals not to exceed thirty (30) feet horizontally and twenty-six (26) feet vertically.

(13) Guardrails, made of lumber not less than two (2) inches x four (4) inches (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboard shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(d) Tubular welded frame scaffolds. (1) Metal tubular frame scaffolds including accessories such as braces, brackets, trusses, screw legs, ladders, etc., shall be designed, constructed, and erected to safely support four (4) times the maximum rated load.

(2) Spacing of panels or frames shall be consistent with the loads imposed.

(3) Scaffolds shall be properly braced by cross bracing or diagonal braces, or both, for securing vertical members together laterally, and the cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, square, and rigid. All brace connections shall be made secure.

(4) Scaffold legs shall be set on adjustable bases or plain bases placed on mud sills or other foundations adequate to support the maximum rated load.

(5) The frames shall be placed one (1) on top of the other with coupling or stacking pins to provide proper vertical alignment of the legs.

(6) Where uplift may occur, panels shall be locked together vertically by pins or other equivalent suitable means.

(7) To prevent movement, the scaffold shall be secured to the building or structure at intervals not to exceed thirty (30) feet horizontally and twenty-six (26) feet vertically.

(8) Maximum permissible spans or planking shall be in conformity with paragraph (a)(10) of this section.

(9) Drawings and specifications for all frame scaffolds over one hundred twenty-five (125) feet in height above the base plates shall be designed by a registered professional engineer.

(10) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), and approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(e) Manually propelled mobile scaffolds. (1) When freestanding mobile scaffold towers are used, the height shall not exceed four (4) times the minimum base dimension.

(2) Casters shall be properly designed for strength and dimensions to support four (4) times the maximum intended load. All casters shall be provided with a positive locking device to hold the scaffold in position.

(3) Scaffolds shall be properly braced by cross bracing and horizontal bracing conforming with paragraph (d)(3) of this section.

(4) Platforms shall be tightly planked for the full width of the scaffold except for necessary entrance opening. Platforms shall be secured in place.

(5) A ladder or stairway shall be provided for proper access and exit and shall be affixed or built into the scaffold and so located that when in use it will not have a tendency to tip the scaffold. A landing platform must be provided at intervals not to exceed thirty-five (35) feet.

(6) The force necessary to move the mobile scaffold shall be applied near or as close to the base as practicable and provision shall be made to stabilize the tower during movement from one (1) location to another. Scaffolds shall only be moved on level floors, free of obstructions and openings.

(7) The employer shall not allow employees to ride on manually propelled scaffolds unless the following conditions exist:

(i) The floor or surface is within three (3) degrees of level, and free from pits, holes, or obstructions;

(ii) The minimum dimension of the scaffold base when ready for rolling, is at least one-half (1/2) the height.

Outriggers, if used, shall be installed on both sides of staging;

(iii) The wheels are equipped with rubber or similar resilient tires;

(iv) All tools and materials are secured or removed from the platform before the mobile scaffold is moved.

(8) Scaffolds in use by any person shall rest upon a suitable footing and shall stand plumb. The casters or wheels shall be locked to prevent any movement.

(9) Mobile scaffolds constructed of metal members shall also conform to applicable provisions of paragraphs (b), (c), or (d) of this section, depending on the material of which they are constructed.

(10) Guardrails of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(f) Outrigger scaffolds. (1) Outrigger beams shall extend not more than six (6) feet beyond the face of the building. The inboard end of outrigger beams, measured from the fulcrum point to anchorage point, shall be not less than one and one-half (1 1/2) time the outboard end in length. The beams shall rest on edge, the sides shall be plumb, and the edges shall be horizontal. The fulcrum point of the beam shall rest on a secure bearing at least six (6) inches in each horizontal dimension. The beam shall be secured in place against movement and shall be securely braced at the fulcrum point against tipping.

(2) The inboard ends of outrigger beams shall be securely anchored either by means of struts bearing against sills in contact with the overhead beams or ceiling, or by means of tension members secured to the floor joints underfoot, or by both if necessary. The inboard ends of outrigger beams shall be secured against tipping and the entire supporting structure shall be securely braced in both directions to prevent any horizontal movement.

(3) Unless outrigger scaffolds are designed by a registered professional engineer competent in this field, they shall be constructed and erected in accordance with Table 39. Outrigger scaffolds, designed by a registered professional engineer, shall be constructed and erected in accordance with such design.

(4) Planking shall be laid tight and shall extend to within three (3) inches of the building wall. Planking shall be secured to the beams.

(5) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

- (h) Masons' adjustable multiple-point suspension scaffolds. (1) The scaffold shall be capable of sustaining a working load of fifty (50) pounds per square foot and shall not be loaded in excess of that figure.
- (2) The scaffold shall be provided with hoisting machines that meet the requirements of underwriters laboratories of factory mutual engineering corporation.
- (3) The platform shall be supported by wire ropes, capable of supporting at least six (6) times the intended load, suspended from overhead outrigger beams.
- (4) The scaffold outrigger beams shall consist of structural metal securely fastened or anchored to the frame or floor system of the building or structure.
- (5) Each outrigger beam shall be equivalent in strength to at least a standard seven (7) inch, fifteen and three-tenths (15.3) lb. steel I-beam, at least fifteen (15) feet long, and shall not project more than six (6) feet six (6) inch beyond the bearing point.
- (6) Where the overhand exceeds six (6) feet six (6) inches, outrigger beams shall be composed of stronger beams or multiple beams and be installed under the supervision of a competent person.
- (7) All outrigger beams shall be set and maintained with their webs in a vertical position.
- (8) A stop bolt shall be placed at each end of every outrigger beam.
- (9) The outrigger beam shall rest on suitable wood bearing blocks.
- (10) The free end of the suspension wire ropes shall be equipped with proper size thimbles and secured by splicing or other equivalent means. The running ends shall be securely attached to the hoisting drum and at least four (4) turns of wire rope shall at all times remain on the drum. The use of fiber rope is prohibited.
- (11) Where a single outrigger beam is used, the steel shackles or clevises with which the wire ropes are attached to the outrigger beams shall be placed directly over the hoisting drums.
- (12) The scaffold platform shall be equivalent in strength to at least two (2) inches planking. (For maximum planking spans, see paragraph (a)(11) of this section.)
- (13) When employees are at work on the scaffold and an overhead hazard exists, overhead protection shall be provided on the scaffold, not more than nine (9) feet above the platform, consisting of two (2) inch planking, or material of equivalent strength, laid tight, and extending not less than the width of the scaffold.
- (14) Each scaffold shall be installed or relocated under the supervision of a competent person.
- (15) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail, and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.
- (i) (Swinging scaffolds) Two (2) point suspension. (1) Two (2) point suspension scaffold platforms shall be not less than twenty (20) inches nor more than thirty-six (36) inches wide overall. The platform shall be securely fastened to the hangers by U-bolts or by other equivalent means.
- (2) The hangers of two (2) point suspension scaffolds shall be made of mild steel, or other equivalent materials, having a cross-sectional area capable of sustaining four (4) times the maximum rated load, and shall be designed with a support for guardrail, intermediate rail, and toeboard.
- (3) When hoisting machines are used on two (2) point suspension scaffolds, such machines shall be of a design tested and approved by Underwriters Laboratories of Factory Mutual Engineering Corporation.
- (4) The roof irons or hooks shall be of mild steel, or other equivalent material, of proper size and design, securely installed and anchored. Tiebacks of three-quarter (3/4) inch manila rope, or the equivalent, shall serve as a secondary means of anchorage, installed at right angles to the face of the building, whenever possible, and secured to a structurally sound portion of the building.
- (5) Two-point suspension scaffolds shall be suspended by wire, synthetic or fiber ropes capable of supporting at least six (6) times the rated load. All other components shall be capable of supporting at least four (4) times the rated load.
- (6) The sheaves of all blocks, consisting of at least one (1) double and one (1) single block, shall fit the size and type of rope used.
- (7) All wire ropes, fiber and synthetic ropes, slings, hangers, platforms, and other supporting parts shall be inspected before every installation. Periodic inspections shall be made while the scaffold is in use.
- (8) On suspension scaffolds designed for a working load of five hundred (500) pounds, no more than two (2) men shall be permitted to work at one time. On suspension scaffolds with a working load of seven hundred fifty (750) pounds, no more than three (3) men shall be permitted to work at one time. Each employee shall be protected by an approved safety life belt attached to a lifeline. The lifeline shall be securely attached to substantial members of the structure (not scaffold), or to securely rigged lines which will safely suspend the employee in case of a fall. In order to keep the lifeline continuously attached, with a minimum of slack, to a fixed structure, the attachment point of the lifeline shall be appropriately changed as the work progresses.
- (9) Two (2) point suspension scaffolds shall be securely lashed to the building or structure to prevent them from swaying. Window cleaners' anchors shall not be used for this purpose.
- (10) The platform of every two (2) point suspension scaffold shall be one of the following types:
- (i) Ladder-type platforms. The side stringer shall be of clear straight-grained spruce or materials of equivalent strength and durability. The rungs shall be of straight-grained oak, ash, or hickory, at least one and one-eighth (1 1/8) inch in diameter, with seven-eighths (7/8) inch. The stringers shall be tied together with tie rods not less than one-quarter

(1/4) inch in diameter, passing through the stringers and riveted up tight against washers on both ends. The flooring strips shall be spaced not more than five-eighths (5/8) inch apart except at the side rails where the space may be one (1) inch. Ladder-type platforms shall be constructed in accordance with Table 40.

(ii) Plank-type platforms. Plank-type platforms shall be composed of not less than nominal two (2) inch x ten (10) inch unspliced planks, properly cleated together on the underside, starting six (6) inches from each end; intervals in between shall not exceed four (4) feet. The plank-type platform shall not extend beyond the hangers more than twelve (12) inches. A bar or other effective means shall be securely fastened to the platform at each end to prevent its slipping off the hanger. The span between hangers for plank-type platforms shall not exceed eight (8) feet.

(iii) Beam-type platforms. Beam platforms shall have side stringers of lumber not less than two (2) inch x six (6) inch set on edge. The span between hangers shall not exceed twelve (12) feet when beam platforms are used. The flooring shall be supported on two (2) inch x six (6) inch cross beams, laid flat and set into the upper edge of the stringers with a snug fit, at intervals of not more than four (4) feet, securely nailed in place. The flooring shall be of one (2) inch x six (6) inch material properly nailed. Floor boards shall not be spaced more than one-half (1/2) inch apart.

(iv) Light metal-type platforms, when used, shall be tested and listed according to Underwriters Laboratories of Factory Mutual Engineering Corporation.

(11) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail, and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(j) Stone setters' adjustable multiple-point suspension scaffolds. (1) The scaffold shall be capable of sustaining a working load of twenty-five (25) pounds per square foot and shall not be used for storage of stone or other heavy materials.

(2) When used, the hoisting machine and its supports shall be of a type tested and listed by Underwriters Laboratories of Factory Mutual Engineering Corporation.

(3) The platform shall be securely fastened to the hangers of U-bolts or other equivalent means. (For materials and spans, see subdivision (ii) of paragraph (i)(10), plank-type platforms, and Table 40 of this section.)

(4) The scaffold unit shall be suspended from metal outriggers, from brackets, wire rope slings, or iron hooks.

(5) Outriggers, when used, shall be set with their webs in a vertical position, securely anchored to the building or structure and provided with stop bolts at each end.

(6) The scaffold shall be supported by wire rope capable of supporting at least six (6) times the rated load. All other components shall be capable of supporting at least four (4) times the rated load.

(7) The free ends of the suspension wire ropes shall be equipped with proper size thimbles, secured by splicing or other equivalent means. The running ends shall be securely attached to the hoisting drum and at least four (4) turns of wire rope shall remain at the drum at all times.

(8) When two (2) or more scaffolds are used on a building or structure, they shall not be bridged one to the other, but shall be maintained at even height with the platforms abutting closely.

(9) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail, and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(k) Single-point adjustable suspension scaffolds. (1) The scaffolding, including power units or manually operated winches, shall be of a type tested and listed by Underwriters Laboratories of Factory Mutual Engineering Corporation.

(2) The power units may be either electrically or air motor driven.

(3) All power-operated gears and brakes shall be enclosed.

(4) In addition to the normal operating brake, all power-driven units shall have an emergency brake which engages automatically when the normal speed of descent is exceeded.

(5) The hoisting machines, cables, and equipment shall be regularly serviced and inspected.

(6) The units may be combined to form a two (2) point suspension scaffold. Such scaffold shall then comply with paragraph (i) of this section.

(7) The supporting cable shall be vertical for its entire length, and the basket shall not be swayed nor the cable fixed to any intermediate points to change the original path of travel.

(8) Suspension methods shall conform to applicable provisions of paragraphs (h) and (i) of this section.

(9) Guards, midrails, and toeboards shall completely enclose the cage or basket. Guardrails shall be no less than two (2) inch x four (4) inch or the equivalent, approximately forty-two (42) inches above the platform. Midrails shall be one (1) inch x six (6) inch or the equivalent, installed equidistant between the guardrail and platform. Toeboards shall be a minimum of four (4) inches in height.

(10) For additional details not covered in this paragraph, applicable technical portions of American National Standards Institute A120.1-1970, power operated devices for exterior building maintenance powered platforms, shall be used.

(l) Boatswain's chairs. (1) The chair seat shall not be less than twelve (12) inch x twenty-four (24) inch, and one (1) inch thickness. The seat shall be reinforced on the underside by cleats securely fastened to prevent the board from splitting.

(2) The two (2) fiber rope seat slings shall be of five-eighths (5/8) inch diameter, reeved through the four (4) seat holes so as to cross each other on the underside of the seat.

(3) Seat slings shall be of at least three-eighths (3/8) inch wire rope when an employee is conducting a heat-producing process, such as gas or arc welding.

(4) The employee shall be protected by a safety belt and lifeline. The attachment point of the lifeline to the structure shall be appropriately changed as the work progresses.

(5) The tackle shall consist of correct size ball bearing or brushed blocks and properly spliced five-eighths (5/8) inch diameter first-grade manila rope, or equivalent.

(6) The roof irons, hoods, or the object to which the tackle is anchored, shall be securely installed. Tiebacks, when used, shall be installed at right angles to the face of the building and securely fastened.

(m) Carpenters' bracket scaffolds. (1) The brackets shall consist of a triangular wood frame not less than two (2) inch x three (3) inch in cross section, or of metal of equivalent strength. Each member shall be properly fitted and securely joined.

(2) Each bracket shall be attached to the structure by means of one (1) of the following:

(i) A bolt, no less than five-eighths (5/8) inches in diameter, which shall extend through to the inside of the building wall;

(ii) A metal stud attachment device;

(iii) Welding to steel tanks;

(iv) Hooking over a well-secured and adequately strong supporting member.

(3) The brackets shall be spaced no more than eight (8) feet apart.

(4) No more than two (2) employees shall occupy any given eight (8) feet of a bracket scaffold at any time. Tools and materials shall not exceed seventy-five (75) pounds in addition to the occupancy.

(5) The platform shall consist of not less than two (2) inch x ten (10) inch nominal size planks extending not more than twelve (12) inches or less than six (6) inches beyond each end support.

(6) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail, of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends of all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.

(n) Bricklayers' square scaffolds. (1) The square shall not exceed five (5) feet in width and five (5) feet in height.

(2) Members shall be not less than those specified in Table 41.

(3) The squares shall be reinforced on both sides of each corner with one (1) inch x six (6) inch gusset pieces. They shall also have diagonal braces one (1) inch x eight (8) inch on both sides running from center to center of each member, or other means to secure equivalent strength and rigidity.

(4) The squares shall be set not more than five (5) feet apart for medium duty scaffolds, and not more than eight (8) feet apart for light duty scaffolds. Bracing, one (1) inch x eight (8) inch, extending from the bottom of each square to the top of the next square, shall be provided on both front and rear sides of the scaffold.

(5) Platform planks shall be at least two (2) inch x ten (10) inch nominal size. The ends of the planks shall overlap the bearers of the squares and each plank shall be supported by not less than three (3) squares.

(6) Bricklayers' square scaffolds shall not exceed three (3) tiers in height and shall be so constructed and arranged that one (1) square shall rest directly above the other. The upper tiers shall stand on a continuous row of planks laid across the next lower tier and be nailed down or otherwise secured to prevent displacement.

(7) Scaffolds shall be level and set upon a firm foundation.

(o) Horse scaffolds. (1) Horse scaffolds shall not be constructed or arranged more than two (2) tiers or ten (10) feet in height.

(2) The members of the horses shall be not less than those specified in Table 42.

(3) Horses shall be spaced not more than five (5) feet for medium duty and not more than eight (8) feet for light duty.

(4) When arranged in tiers, each horse shall be placed directly over the horse in the tier below.

(5) On all scaffolds arranged in tiers, the legs shall be nailed down or otherwise secured to the planks to prevent displacement or thrust and each tier shall be substantially cross braced.

(6) Horses or parts which have become weak or defective shall not be used.

(7) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail, of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section when required.

(p) Needle beam scaffold. (1) Wood needle beams shall be not less than four (4) inch x five (5) inch in size, with the greater dimension placed in a vertical direction. Metal beams or the equivalent, conforming to paragraphs (a)(8) and (10) of this section, may be used and shall not be altered or moved horizontally while they are in use.

(2) Ropes or hangers shall be provided for supports. The span between supports on the needle beam shall not exceed ten (10) feet for four (4) inch x six (6) inch timbers. Rope supports shall be equivalent in strength to one (1) inch diameter first-grade manila rope.

- (3) The ropes shall be attached to the needle beams by a scaffold hitch or a properly made eye splice. The loose end of the rope shall be tied by a bowline knot or by a round turn and a half hitch.
- (4) The scaffold hitch shall be arranged so as to prevent the needle beam from rolling or becoming otherwise displaced.
- (5) The platform span between the needle beams shall not exceed eight (8) feet when using two (2) inch scaffold plank. For spans greater than eight (8) feet, platforms shall be designed based on design requirements for the special span. The overhang of each end of the platform planks shall be not less than six (6) inches and not more than twelve (12) inches.
- (6) When needle beam scaffolds are used, the planks shall be secured against slipping.
- (7) All unattached tools, bolts, and nuts used on needle beam scaffolds shall be kept in suitable containers, properly secured.
- (8) One (1) end of a needle beam scaffold may be supported by a permanent structural member conforming to paragraphs (a)(8) and (10) of this section.
- (9) Each employee working on a needle beam scaffold shall be protected by a safety belt and lifeline.
- (q) Plasterers', decorators', and large area scaffolds. (1) Plasterers', lathers', and ceiling workers' inside scaffolds shall be constructed in accordance with the general requirements set forth for independent wood pole scaffolds. (See paragraph (b) and Tables 33, 34 and 39 of this section.)
- (2) All platform planks shall be laid with the edges close together.
- (3) When independent pole scaffold platforms are erected in sections, such sections shall be provided with connecting runways equipped with substantial guardrails.
- (4) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed on all open sides and ends of all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.
- (r) Interior hung scaffolds. (1) An interior hung scaffold shall be hung or suspended from the roof structure or ceiling beams.
- (2) The suspending wire or fiber rope shall be capable of supporting at least six (6) times the rated load. The rope shall be wrapped at least twice around the supporting members and twice around the bearers of the scaffold, with each end of the wire rope secured by at least three (3) standard wire-rope clips properly installed.
- (3) For hanging wood scaffolds, the following minimum nominal size material shall be used:
- (i) Supporting bearers two (2) inch x ten (10) inch on edge;
 - (ii) Planking two (2) inch x ten (10) inch, with maximum span seven (7) feet for heavy duty and ten (10) feet for light duty or medium duty.
- (4) Steel tube and coupler members may be used for hanging scaffolds with both types of scaffold designed to sustain a uniform distributed working load up to heavy duty scaffold loads with a safety factor of four (4).
- (5) Guardrails made of lumber, not less than two (2) inch x four (4) inch (or other material providing equivalent protection), approximately forty-two (42) inches high, with a midrail of one (1) inch x six (6) inch lumber (or other material providing equivalent protection), and toeboards, shall be installed at all open sides and ends on all scaffolds more than ten (10) feet above the ground or floor. Toeboards shall be a minimum of four (4) inches in height. Wire mesh shall be installed in accordance with paragraph (a)(6) of this section.
- (s) Ladder jack scaffolds. (1) All ladder jack scaffolds shall be limited to light duty and shall not exceed a height of twenty (20) feet above the floor or ground.
- (2) All ladders used in connection with ladder jack scaffolds shall be heavy-duty ladders and shall be designed and constructed in accordance with American National Standards Institute A14.1-1968 Safety Code for portable wood ladders, and A14.2-1968, Safety Code for portable metal ladders. Cleated ladders shall not be used for this purpose.
- (3) The ladder jack shall be so designed and constructed that it will bear on the side rails in addition to the ladder rungs, or if bearing on rungs only, the bearing area shall be at least ten (10) inches on each rung.
- (4) Ladders used in conjunction with ladder jacks shall be so placed, fastened, held, or equipped with devices so as to prevent slipping.
- (5) The wood platform planks shall be not less than two (2) inch nominal in thickness. Both metal and wood platform planks shall overlap the bearing surface not less than twelve (12) inches. The span between supports for wood shall not exceed eight (8) feet. Platform width shall be not less than eighteen (18) inches.
- (6) Not more than two (2) employees shall occupy any given eight (8) feet of any ladder jack scaffold at any one (1) time.
- (t) Window jack scaffolds. (1) Window jack scaffolds shall be used only for the purpose of working at the window opening through which the jack is placed.
- (2) Window jacks shall not be used to support planks placed between one (1) window jack and another or for other elements of scaffolding.
- (3) Window jack scaffolds shall be provided with guardrails unless safety belts with lifelines are attached and provided for employee.
- (4) Not more than one (1) employee shall occupy a window jack scaffold at any one (1) time.

- (u) Roofing brackets. (1) Roofing brackets shall be constructed to fit the pitch of the roof.
- (2) Brackets shall be secured in place by nailing in addition to the pointed metal projections. When it is impractical to nail brackets, rope supports shall be used. When rope supports are used, they shall consist of first grade manila of at least three-quarter (3/4) inch diameter, or equivalent.
- (3) A catch platform shall be installed below the working area of roofs more than sixteen (16) feet from the ground to eaves with a slope greater than four (4) inch in twelve (12) inch without a parapet. In width, the platform shall extend two (2) feet beyond the protection of the eaves and shall be provided with a guardrail, midrail, and toeboard. This provision shall not apply where employees engaged in work upon such roofs are protected by a safety belt attached to a lifeline.
- (v) Crawling board or chicken ladders. (1) Crawling board shall be not less than ten (10) inch wide and one (1) inch thick, having cleats one (1) inch x one and one-half (1 1/2) inch the Cleats shall be equal in length to the width of the board and spaced at equal intervals not to exceed twenty-four (24) inches. Nails shall be driven through and clinched on the underside. The crawling board shall extend from the ridge pole to the eaves when used in connection with roof construction, repair, or maintenance.
- (2) A firmly fastened lifeline of at least three-quarter (3/4) inch diameter rope, or equivalent, shall be strung beside each crawling board for a handhold.
- (3) Crawling boards shall be secured to the roof by means of adequate ridge hooks or other effective means.
- (w) Form scaffolds. (1) Form scaffolds shall be constructed of wood or other suitable materials, such as steel or aluminum members of known strength characteristics.
- All scaffolds shall be designed and erected with a minimum safety factor of four (4), computed on the basis of the maximum rated load.
- (2) All scaffold planking shall be a minimum of two (2) inch x ten (10) inch nominal scaffold grade, as recognized and approved grading rules for the species of lumber used, or equivalent material. Maximum permissible spans shall not exceed eight (8) feet on centers for two (2) inch x ten (10) inch nominal planking. Scaffold planks shall be either nailed or bolted to the ledgers or of such length that they overlap the ledgers at least six (6) inches. Unsupported projecting ends of scaffolding planks shall be limited to a maximum overhang of twelve (12) inches.
- (3) Scaffolds shall not be loaded in excess of the working load for which they were designed.
- (4) Figure-four (4) form scaffolds:
- (i) Figure-four (4) scaffolds are intended for light duty and shall not be used to support loads exceeding twenty-five (25) pounds per square foot unless specifically designed for heavier loading. For minimum design criteria, see Table 43.
- (ii) Figure-four (4) form scaffold frames shall be spaced not more than eight (8) feet on centers and constructed from sound lumber, as follows:
- The outrigger ledger shall consist of two (2) pieces of one (1) inch x six (6) inch or heavier material nailed on opposite sides of the vertical form support. Ledgers shall project not more than three (3) feet six (6) inches from the outside of the form support and shall be substantially braced and secured to prevent tipping or turning. The knee or angle brace shall intersect the ledger at least three (3) feet from the form at an angle of approximately forty-five degrees (45), and the lower end shall be nailed to a vertical support. The platform shall consist of two (2) or more two (2) inch x ten (10) inch planks, which shall be of such length that they extend at least six (6) inches beyond ledgers at each end unless secured to the ledgers. When planks are secured to the ledgers (nailed or bolted) a wood filler strip shall be used between the ledgers. Unsupported projecting ends of planks shall be limited to an overhang of twelve (12) inches.
- (5) Metal bracket form scaffolds:
- (i) Metal brackets or scaffold jacks which are an integral part of the form shall be securely bolted or welded to the form. Folding type brackets shall be either bolted or secured with a locking-type pin when extended for use.
- (ii) "Clip-On" or "Hook-Over" brackets may be used, provided the form walers are bolted to the form or secured by snap ties or shea-volt extending through the form and securely anchored.
- (iii) Metal brackets shall be spaced not more than eight (8) feet on centers.
- (iv) Scaffold planks shall be either bolted to the metal brackets or of such length that they overlap the brackets at each end by at least six (6) inches.
- Unsupported projecting ends of scaffold planks shall be limited to a maximum overhang of twelve (12) inches.
- (x) Metal bracket form scaffolds shall be equipped with wood guardrails, intermediate rails, toeboards, and scaffold planks meeting the minimum dimensions shown in Table 44. (Metal may be substituted for wood, providing it affords equivalent or greater design strength.)
- (6) Wooden bracket form scaffolds:
- (i) Wooden bracket form scaffolds shall be an integral part of the form panel. The minimum design criteria set forth herein and in Table 45 cover scaffolding intended for light duty and shall not be used to support loads exceeding twenty-five (25) pounds per square foot, unless specifically designed for heavier loading.
- (ii) Scaffold planks shall be either nailed or bolted to the ledgers or of such length that they overlap the ledgers at each end by at least six (6) inches. Unsupported projecting ends of scaffold planks shall be limited to a maximum overhang of twelve (12) inches.
- (iii) Guardrails and toeboards shall be installed on all open sides and ends of platforms and scaffolding over ten (10) feet above the floor or ground.

Guardrails shall be made of lumber two (2) inch x four (4) inch nominal dimension (or other material providing equivalent protection), approximately forty-two (42) inches high, supported at intervals not to exceed eight (8) feet. Guardrails shall be equipped with midrails constructed of one (1) inch x six (6) inch nominal lumber (or other material providing equivalent protection). Toeboard shall extend not less than four (4) inches above the scaffold plank.

(y) Pump jack scaffolds. (1) Pump jack scaffolds shall:

(i) Not carry a working load exceeding five hundred (500) pounds; and

(ii) Be capable of supporting without failure at least four (4) times the maximum load.

(iii) The manufacture components shall not be loaded in excess of the manufacturer's recommended limits.

(2) Pump jack brackets, braces, and accessories shall be fabricated from metal plates and angles. Each pump jack bracket shall have two (2) positive gripping mechanisms to prevent any failure or slippage.

(3) The platform bracket shall be fully decked and the planking secured. Planking, or equivalent, shall conform with paragraph (a) of this section.

(4) (i) When wood scaffold planks are used as platforms, poles used for pump jacks shall not be spaced more than ten (10) feet center to center. When fabricated platforms are used that fully comply with all other provisions of this paragraph (x), pole spacing may exceed ten (10) feet center to center.

(ii) Poles shall not exceed thirty (30) feet in height.

(iii) Poles shall be secured to the work wall by rigid triangular bracing, or equivalent, at the bottom, top, and other points as necessary, to provide a maximum vertical spacing of not more than ten (10) feet between braces. Each brace shall be capable of supporting a minimum of two hundred twenty-five (225) pounds tension or compression.

(iv) For the pump jack bracket to pass bracing already installed, an extra brace shall be used approximately four (4) feet above the one (1) to be passed until the original brace is reinstalled.

(5) All poles shall bear on mud sills or other adequate firm foundations.

(6) Pole lumber shall be two (2) two (2) x four's (4), of Douglas Fir, or equivalent, straight-grained, clear, free of cross-grain, shakes, large loose or dead knots, and other defects which might impair strength.

(7) When poles are constructed of two (2) continuous lengths, they shall be two (2) by fours (4), spiked together with the seam parallel to the bracket, and with ten (10) common nails, no more than twelve (12) inches center to center, staggered uniformly from opposite outside edges.

(8) If two (2) by fours (4) are spliced to make up the pole, the splices shall be so constructed as to develop the full strength of the member.

(9) A ladder shall be provided for access to the platform during use.

(10) Not more than two (2) persons shall be permitted at one (1) time upon a pump jack scaffold between any two (2) supports.

(11) Pump jack scaffolds shall be provided with standard guardrails as defined in Section 32 of these regulations, but no guardrail is required when safety belts with lifelines are provided for employees.

(12) When a work bench is used at an approximate height of forty-two (42) inches, the top guardrail may be eliminated, if the work bench is fully decked, the planking secured, and is capable of withstanding two hundred (200) pounds pressure in any direction.

(13) Employees shall not be permitted to use a work bench as a scaffold platform.

33.3. Manually propelled mobile ladder stands and scaffolds (towers). (a) General requirements.

(1) Application. This section is intended to prescribe rules and requirements for the design, construction, and use of mobile work platforms (including ladder stands but not including aerial ladders) and rolling (mobile) scaffolds (towers). This standard is promulgated to aid in providing for the safety of life, limb, and property, by establishing minimum standards for structural design requirements and for the use of mobile work platforms and towers.

(2) Working loads.

(i) Work platforms and scaffolds shall be capable of carrying the design load under varying circumstances depending upon the conditions of use.

Therefore, all parts and appurtenances necessary for their safe and efficient utilization must be integral parts of the design.

(ii) Specific design and construction requirements are not a part of this section because of the wide variety of materials and design possibilities. However, the design shall be such as to produce a mobile ladder stand or scaffold that will safely sustain the specified loads. The material selected shall be of sufficient strength to meet the test requirements and shall be protected against corrosion or deterioration.

(a) The design working load of ladder stands shall be calculated on the basis of one (1) or more two hundred (200)-pound persons with fifty (50) pounds of equipment each.

(b) The design load of all scaffolds shall be calculated on the basis of:

Light - Designed and constructed to carry a working load of twenty-five (25) pounds per square foot.

Medium - Designed and constructed to carry a working load of fifty (50) pounds per square foot.

Heavy -- Designed and constructed to carry a working load of seventy-five (75) pounds per square foot.

All ladder stands and scaffolds shall be capable of supporting at least four (4) times the design working load.

(iii) The materials used in mobile ladder stands and scaffolds shall be of standard manufacture and conform to standard specifications of strength, dimensions, and weights, and shall be selected to safely support the design working load.

(iv) Nails, bolts, or other fasteners used in the construction of ladders, scaffolds, and towers shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the unit. Nails shall be driven full length. (All nails should be immediately withdrawn from dismantled lumber.)

(v) All exposed surfaces shall be free from sharp edges, burrs or other safety hazards.

(3) Work levels.

(i) The maximum work level height shall not exceed four (4) times the minimum or least base dimensions of any mobile ladder stand or scaffold.

Where the basic mobile unit does not meet this requirement, suitable outrigger frames shall be employed to achieve this least base dimension, or provisions shall be made to guy or brace the unit against tipping.

(ii) The minimum platform width for any work level shall not be less than twenty (20) for mobile scaffolds (towers). Ladder stands shall have a minimum step width of sixteen (16) inches.

(iii) The supporting structure for the work level shall be rigidly braced, using adequate cross bracing or diagonal bracing with rigid platforms at each work level.

(iv) The steps of ladder stands shall be fabricated from slip resistant treads.

(v) The work level platform of scaffolds (towers) shall be of wood, aluminum, or plywood planking, steel or expanded metal, for the full width of the scaffold, except for necessary openings. Work platforms shall be secured in place. All planking shall be two (2) inch (nominal) scaffold grade minimum one thousand five hundred (1,500) feet (stress grade) construction grade lumber or equivalent.

(vi) All scaffold work levels ten (10) feet or higher above the ground or floor shall have a standard (four (4) inch nominal) toeboard.

(vii) All work levels ten (10) feet or higher above the ground or floor shall have a guardrail of two (2) inch x four (4) inch nominal or the equivalent installed no less than thirty-six (36) inches or more than forty-two (42) inches high, with a midrail, when required, of one (1) inch x four (4) inches nominal lumber or equivalent.

(viii) A climbing ladder or stairway shall be provided for proper access and egress, and shall be affixed or built into the scaffold and so located that its use will not have a tendency to tip the scaffold. A landing platform shall be provided at intervals not to exceed thirty (30) feet.

(4) Wheels or casters.

(i) Wheels or casters shall be properly designed for strength and dimensions to support four (4) times the design working load.

(ii) All scaffold casters shall be provided with a positive wheel and/or swivel lock to prevent movement. Ladder stands shall have at least two (2) of the four (4) casters and shall be of the swivel type.

(iii) Where leveling of the elevated work platform is required, screw jacks or other suitable means for adjusting the height shall be provided in the base section of each mobile unit.

(b) Mobile tubular welded sectional folding scaffolds. (1) General. Units including sectional stairway and sectional ladder scaffolds shall be designed to comply with the requirements of paragraph (a) of this section.

(2) Stairway. An integral set of pivoting and hinged folding diagonal and horizontal braces and a detachable work platform shall be incorporated into the structure of each sectional folding stairway scaffold.

(3) Bracing. An integral set of pivoting and hinged folding diagonal and horizontal braces and a detachable work platform shall be incorporated into the structure of each sectional folding ladder scaffold.

(4) Sectional folding stairway scaffolds. Sectional folding stairway scaffolds shall be designed as medium duty scaffolds except for high clearance. These special base sections shall be designed as light duty scaffolds. When upper sectional folding stairway scaffolds are used with a special high clearance base, the load capacity of the entire scaffold shall be reduced accordingly. The width of a sectional folding stairway scaffold shall not exceed four and one-half (4) feet. The maximum length of a sectional folding stairway scaffold shall not exceed six (6) feet.

(5) Sectional folding ladder scaffolds. Sectional folding ladder scaffolds shall be designed as light duty scaffolds including special base (open end) sections which are designed for high clearance. For certain special applications the six (6) foot long unit, eight (8) foot six (6) inch for an eight (8) foot unit or a ten (10) foot six (6) inch for a ten (10) foot long unit.

(6) End frames. The end frames of sectional ladder and stairway scaffolds shall be designed so the horizontal bearers provide supports for multiple planking levels.

(7) Erection. Only the manufacturer of the scaffold or his qualified designated agent shall be permitted to erect or supervise the erection of scaffolds exceeding fifty (50) feet in height above the base, unless such structure is approved in writing by a licensed professional engineer, or erected in accordance with instructions furnished by the manufacturer.

33.4. Definitions applicable to this subpart. (a) "Ladders"

(1) "Cleats" ladder crosspieces of rectangular cross section placed on edge on which a person may step in ascending or descending.

(2) "Single Cleat Ladder" one which consists of a pair of side rails, usually parallel, but with flared side rails permissible, connected together with cleats that are joined to the side rails at regular intervals.

(3) "Double Cleat Ladder" one that is similar to a single cleat ladder, but is wider, with an additional center rail which will allow for two (2) way traffic for workmen in ascending and descending.

(b) "Scaffolding"

(1) "Bearer" a horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.

- (2) "Boatswain's Chair" a seat supported by slings attached to a suspended rope, designed to accommodate one (1) workman in a sitting position.
- (3) "Brace" a tie that holds one (1) scaffold member in a fixed position with respect to another member.
- (4) "Bricklayers' Square Scaffold" a scaffold composed of framed wood squares which support a platform, limited to light and medium duty.
- (5) "Carpenters' Bracket Scaffold" a scaffold consisting of wood or metal brackets supporting a platform.
- (6) "Coupler" a device for locking together the component parts of a tubular metal scaffold. (The material used for the couplers shall be of a structural type, such as drop-forged steel, malleable iron, or structural grade aluminum.)
- (7) "Crawling Board or Chicken Ladder" a plank with cleats spaced and secured at equal intervals, for use by a worker on roofs, not designed to carry any material.
- (8) "Double Pole or Independent Pole Scaffold" A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.
- (9) "Float or Ship Scaffold" A scaffold hung from overhead supports by means of ropes and consisting of substantial platform having diagonal bracing underneath, resting upon and securely fastened to two (2) parallel plank bearers at right angles to the span.
- (10) "Guardrail" a rail secured to uprights and erected along the exposed sides and ends of platforms.
- (11) "Heavy Duty Scaffold" a scaffold designed and constructed to carry a working load not to exceed seventy-five (75) pounds per square foot.
- (12) "Horse Scaffold" a scaffold for light or medium duty, composed of horses supporting a work platform.
- (13) "Interior Hung Scaffold" a scaffold suspended from the ceiling or roof structure.
- (14) "Ladder jack Scaffold" a light duty scaffold supported by brackets attached to ladders.
- (15) "Ledgers (Stringers)" a horizontal scaffold member which extends from post to post and which supports the putlogs or bearers forming a tie between the posts.
- (16) "Light Duty Scaffold" a scaffold designed and constructed to carry a working load not to exceed twenty-five (25) pounds per square foot.
- (17) "Manually Propelled Mobile Scaffold" a portable rolling scaffold supported by casters.
- (18) "Masons' Adjustable Multiple-Point Suspension Scaffold" A scaffold having a continuous platform supported by bearers suspended by wire rope from overhead supports, so arranged and operated as to permit the raising or lowering of the platform to desired working positions.
- (19) "Maximum Rated Load" the total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.
- (20) "Medium Duty Scaffold" a scaffold designed and constructed to carry a working load not to exceed fifty (50) pounds per square foot.
- (21) "Midrail" a rail approximately midway between the guardrail and platform, secured to the uprights erected along the exposed sides and ends of platforms.
- (22) "Needle Beam Scaffold" a light duty scaffold consisting of needle beams supporting a platform.
- (23) "Outrigger Scaffold" a scaffold supported by outriggers or thrustouts projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside of such building or structure.
- (24) "Putlog" a scaffold member upon which the platform rests.
- (25) "Roofing or Bearer Bracket" a bracket used in slope roof construction, having provisions for fastening to the roof or supported by ropes fastened over the ridge and secured to some suitable object.
- (26) "Runner" the lengthwise horizontal bracing or bearing members or both.
- (27) "Scaffold" any temporary elevated platform and its supporting structure used for supporting workmen or materials, or both.
- (28) "Single-Point Adjustable Suspension Scaffold" a manually or power operated unit designed for light duty use, supported by a single wire rope from an overhead support so arranged and operated as to permit the raising or lowering of platform to desired working positions.
- (29) "Single-Pole Scaffold" platforms resting on putlogs or cross beams, the outside ends of which are supported on ledgers secured to a single row of posts or uprights, and the inner ends of which are supported on or in a wall.
- (30) "Stone Setters' Adjustable Multiple-Point Suspension Scaffold" a swinging type scaffold having a platform supported by hangers suspended at four (4) points so as to permit the raising or lowering of the platform to the desired working position by the use of hoisting machines.
- (31) "Toeboard" a barrier secured along the sides and ends of a platform to guard against the falling of material.
- (32) "Tube and Coupler Scaffold" an assembly consisting of tubing which serves as posts, bearers, braces, ties, and runners, a base supporting the posts and special couplers which serve to connect the uprights and to join the various members.
- (33) "Tubular Welded Frame Scaffold" a sectional panel or frame metal scaffold substantially built up of prefabricated welded sections which consists of posts and horizontal bearer with intermediate members.
- (34) "Two-Point Suspension Scaffold (Swinging Scaffold)" a scaffold, the platform of which is supported by hangers (stirrups) at two (2) points, suspended from overhead supports so as to permit the raising or lowering of the platform to the desired working position by tackle or hoisting machines.

(35) "Window Jack Scaffold" a scaffold, the platform of which is supported by a bracket of jack which projects through a window opening.

(36) "Working Load" load imposed by men, materials, and equipment.

(37) "Ladder Stand" a mobile fixed size self-supporting ladder consisting of a wide flat tread ladder in the form of stairs. The assembly may include handrails.

33.5. Guardrails, handrails, and covers. (a) General provisions. This subpart shall apply to temporary or emergency conditions where there is danger of employees or materials falling through floor, roof, or wall openings or from stairways, or runways.

(b) Guarding of floor openings and floor holes. (1) Floor openings shall be guarded by a standard railing and toeboards or cover, as specified in paragraph (f) of this section. In general, the railing shall be provided on all exposed sides, except at entrances to stairways.

(2) Ladderway floor openings or platforms shall be guarded by standard railings with standard toeboards on all exposed sides, except at entrances to opening, with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

(3) Hatchways and chute floor openings shall be guarded by one (1) of the following:

(i) Hinged covers of standard strength and construction and a standard railing with only one (1) exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings;

(ii) A removable standard railing with toeboard on not more than two (2) sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railing shall be kept in place when the opening is not in use and should preferably be hinged or otherwise mounted so as to be conveniently replaceable.

(4) Wherever there is danger of falling through a skylight opening, it shall be guarded by a fixed standard railing on all exposed sides or a cover capable of sustaining the weight of a two hundred (200) pound person.

(5) Pits and trap-door floor openings shall be guarded by floor opening covers of standard strength and construction. While the cover is not in place, the pit or trap openings shall be protected on all exposed sides by removable standard railings.

(6) Manhole floor openings shall be guarded by standard covers which need not be hinged in place. While the cover is not in place, the manhole opening shall be protected by standard railings.

(7) Temporary floor openings shall have standard railings.

(8) Floor holes, into which persons can accidentally walk, shall be guarded by either a standard railing with standard toeboard on all exposed sides, or a floor hole cover of standard strength and construction that is secured against accidental displacement. While the cover is not in place, the floor hole shall be protected by a standard railing.

(9) Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall not reduce the effective width of the platform to less than twenty (20) inches.

(c) Guarding of wall openings. (1) Wall openings, from which there is a drop of more than four (4) feet, and the bottom of the opening is less than three (3) feet above the working surface, shall be guarded as follows:

(i) When the height and placement of the opening in relation to the working surface is such that either a standard rail or intermediate rail will effectively reduce the danger of falling, one (1) or both shall be provided;

(ii) The bottom of a wall opening, which is less than four (4) inches above the working surface, regardless of width, shall be protected by a standard toeboard or an enclosing screen either of solid construction or as specified in paragraph (f)(7)(ii) of this section.

(2) An extension platform outside a wall opening onto which materials can be hoisted for handling shall have side rails or equivalent guards of standard specifications. One (1) side of an extension platform may have removable railings in order to facilitate handling materials.

(3) When a chute is attached to an opening, the provisions of paragraph (c)(1) of this section shall apply, except that a toeboard is not required.

(d) Guarding of open-sided floors, platforms, and runways. (1) Every open-sided floor or platform six (6) feet or more above adjacent floor or ground level shall be guarded by a standard railing, or the equivalent, as specified in paragraph (f)(1) of this section, all open sides, except where there is entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a standard toeboard wherever, beneath the open sides, persons can pass, or there is moving machinery, or there is equipment with which falling materials could create a hazard.

(2) Runways shall be guarded by a standard railing, or the equivalent as specified in paragraph (f) of this section, on all open sides, four (4) feet or more above the floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard shall also be provided on each exposed side.

(3) Runways used exclusively for special purposes may have the railing on one (1) side omitted where operating condition necessitate such omission, providing the falling hazard is minimized by using a runway not less than eighteen (18) inches wide.

(4) Where employees entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding shall be provided.

(5) Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards shall be guarded with a standard railing and toeboard.

(e) Stairway railings and guards. (1) Every flight of stairs having four (4) or more risers shall be equipped with standard stair railings or standard handrails as specified below, the width of the stair to be measured clear of all obstructions except handrails:

(i) On stairways less than forty-four (44) inches wide having both sides enclosed, at least one (1) handrail, preferably on the right side descending;

(ii) On stairways less than forty-four (44) inches wide having one (1) side open, at least one (1) stair railing on the open side;

(iii) On stairways less than forty-four (44) inches wide having both sides open, one (1) stair railing on each side;

(iv) On stairways more than forty-four (44) inches wide but less than eighty-eight (88) inches wide, one (1) handrail on each enclosed side, and one (1) intermediate stair railing located approximately midway of the width;

(v) On stairways eighty-eight (88) or more inches wide, one (1) handrail on each enclosed side, one (1) stair railing on each open side, and one (1) intermediate stair railing located approximately midway of the width.

(2) Winding stairs shall be equipped with a handrail offset to prevent walking on all portions of the treads having width less than six (6) inches.

(f) Standard specifications. (1) A standard railing shall consist of top rail, intermediate rail, toeboard and posts, and shall have a vertical height of approximately forty-two (42) inches from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth-surfaced throughout the length of the railing. The intermediate rail shall be halfway between the top rail in the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard. Minimum requirements for standard railings under various types of construction are specified in the following paragraphs:

(i) For wood railings, the posts shall be of at least two (2) inch x four (4) inch stock spaced not to exceed eight (8) feet; the top rail shall be of at least two (2) inch x four (4) inch stock; the intermediate rail shall be of at least one (1) inch x six (6) inch stock.

(ii) For pipe steel railings, post and top and intermediate railings shall be at least one and one-half (1 1/2) inches nominal diameter with posts spaced not more than eight (8) feet on centers.

(iii) For structural steel railings, posts and top and intermediate rails shall be of two (2) inch x two (2) inch by three-eighths (3/8) inch angles or other metal shapes of equivalent bending strength, with posts spaced not more than eight (8) feet on centers.

(iv) The anchoring of posts and framing of members for railings of all types shall be of such construction that the completed structure shall be capable of withstanding a load of at least two hundred (200) pounds applied in any direction at any point on the top rail, with a minimum of deflection.

(v) Railings receiving heavy stresses from employees trucking or handling materials shall be provided additional strength by the use of heavier stock, closer spacing of posts, bracing, or by other means.

(vi) Other types, sizes, and arrangements of railing construction are acceptable, provided they meet the following conditions:

(a) A smooth-surfaced top rail at a height above the floor, platform, runway, or ramp level of approximately forty-two (42) inches;

(b) A strength to withstand at least the minimum requirement of two hundred (200) pounds top rail pressure with a minimum of deflection;

(c) Protection between top rail and floor, platform, runway, ramp, or stair treads, equivalent at least to that afforded by a standard intermediate rail;

(d) Elimination of overhang of rail ends unless such overhang does not constitute a hazard.

(2) A stair railing shall be of construction similar to a standard railing, but the vertical height shall be not more than thirty-four (34) inches nor less than thirty (30) inches from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.

(3) (i) A standard toeboard shall be four (4) inches minimum in vertical height from its top edge to the level of the floor, platform, runway, or ramp. It shall be securely fastened in place and have not more than one-quarter (1/4) inch clearance above the floor level. It may be made of any substantial material, either solid, or with openings not over one (1) inch in greatest dimension.

(ii) Where material is piled to such height that a standard toeboard does not provide protection, paneling or screening from floor to intermediate rail or to top rail shall be provided.

(4) (i) A standard handrail shall be of construction similar to a standard railing except that it is mounted on a wall or partition, and does not include an intermediate rail. It shall have a smooth surface along the top and both sides of the handrail. The handrail shall have an adequate handhold for any one (1) grasping it to avoid falling. Ends of the handrail shall be constructed so as not to constitute a projection hazard.

(ii) The height of handrails shall be not more than thirty-four (34) inches nor less than thirty (30) inches from upper surface of handrail to surface of tread, in line with face of riser or to surface of ramp.

(iii) All handrails and railing shall be provided with a clearance of approximately three (3) inches between the handrail or railing and any other object.

(5) Floor opening covers shall be of any material that meets the following strength requirements:

(i) Conduits, trenches, and manhole covers and their supports, when located in roadways, and vehicular aisles, shall be designed to carry a truck rear-axle load of at least two (2) times the maximum intended load.

(ii) The floor opening cover shall be capable of supporting the maximum intended load and so installed as to prevent accidental displacement.

(6) Skylight openings that create a falling hazard shall be guarded with a standard railing, or covered in accordance with paragraph (5)(ii) of this paragraph.

(7) Wall opening protection shall meet the following requirements:

(i) Barriers shall be of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least two hundred (200) pounds applied in any direction (except upward), with a minimum of deflection at any point on the top rail or corresponding member.

(ii) Screens shall be of such construction and mounting that they are capable of withstanding a load of at least two hundred (200) pounds applied horizontally at any point on the near side of the screen. They may be of solid construction, of grill work with openings not more than four (4) inch wide with length unrestricted.

33.6. Guarding floor and wall openings and holes. (a) Wall hole. An opening less than thirty (30) inches but more than one (1) inch high, of unrestricted width, in any wall or partition; such as a ventilation hole or drainage scupper.

(b) Where there is a hazard of materials falling through a wall hole and the lower edge of the near side of the hole is less than four (4) inches above the floor, and the far side of the hole more than five (5) feet above the next lower level, the hole shall be protected by a standard toeboard, or an enclosing screen either of solid construction or as specified in this section.

33.7. Stairways. (a) On all structures, two (2) or more floors (twenty (20) feet or over) in height, stairways, ladders, or ramps shall be provided for employees during the construction period.

(b) Stairway railings and guardrails shall meet the requirements of Section 33.5., paragraphs (e) and (f) of these regulations.

(c) All parts of stairways shall be free of hazardous projections, such as protruding nails.

(d) Debris, and other loose materials, shall not be allowed on or under stairways.

(e) Slippery conditions on stairways shall be eliminated as soon as possible after they occur.

(f) Permanent steel or other metal stairways, and landings with hollow pan-type treads that are to be filled with concrete or other materials, when used during construction, shall be filled to the level of the nosing with solid material. The requirement shall not apply during the period of actual construction of the stairways themselves.

(g) Wooden treads for temporary service shall be full width.

(h) Metal landings shall be secured in place before filling.

(i) Temporary stairs shall have a landing not less than thirty (30) inches in the direction of travel at every twelve (12) feet of vertical rise.

(j) Stairs shall be installed at angles to the horizontal between thirty (30) degrees and fifty (50) degrees.

(k) Rise height and tread width shall be uniform throughout any flight of stairs including any foundation structure used as one (1) or more treads of the stairs.

(l) All stairs shall be lighted in accordance with this section.

(m) Spiral stairways shall not be permitted except for special limited usage and secondary access situations where it is not practical to provide a conventional stairway.

33.8. Definitions applicable to this subject. (a) "Floor Hole" an opening measuring less than twelve (12) inches but more than one (1) inch in its least dimension in any floor, roof, or platform through which materials but not persons may fall, such as belt hold, pipe opening, or slot opening.

(b) "Floor Opening" an opening measuring twelve (12) inches or more in its least dimension in any floor, roof, or platform through which persons may fall.

(c) "Handrail" a bar or pipe supported on brackets from a wall or partition, as on a stairway or ramp, to furnish persons with a handhold in case of tripping.

(d) "Nose, Nosing" that portion of a tread projecting beyond the face of the riser immediately below.

(e) "Platform" a working space for persons, elevated above the surrounding floor or ground, such as a balcony or platform for the operation of machinery and equipment.

(f) "Runway" a passageway for persons, elevated above the surrounding floor or ground level, such as a footwalk along shafting or a walkway between buildings.

(g) "Rise" the vertical distance from the top of a tread to the top of the next higher tread.

(h) "Stair Platform" an extended step or landing breaking a continuous run of stairs.

(i) "Stair Railing" a vertical barrier erected along exposed sides of a stairway to prevent falls of persons.

(j) "Stairs, Stairways" a series of steps leading from one (1) level or floor to another, or leading to platforms, pits, boiler rooms, crossovers, or around machinery, tanks, and other equipment that are used more or less continuously or routinely by employees or only occasionally by specific individuals. For the purpose of this subpart, a series of steps and landings having three (3) or more rises constitutes stairs or stairway.

(k) "Standard Railing" a vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls of persons.

(l) "Standard Strength and Construction" any construction of railings, covers, or other guards that meets the requirements of this subpart.

(m) "Toeboard" a vertical barrier at floor level erected along exposed edges of a floor opening, platform, runway, or ramp to prevent falls of materials.

(n) "Tread Width" the horizontal distance from front to back of tread, including nosing, when used.

(o) "Wall Opening" an opening at least thirty (30) inches high and eighteen (18) inches wide, in any wall or partition, through which persons may fall, such as a yardarm doorway or chute opening.

§36-23-34. Cranes, Derricks, Hoists, Elevators, and Conveyors.

34.1. Cranes and derricks. (a) General requirements. (1) The employer shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks.

When manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a qualified engineer competent in this field and such determinations will be appropriately documented and recorded. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.

(2) Rated load capacities, and recommended operating speeds, special hazard warnings, or instruction, shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator while he is at his control station.

(3) Hand signals to crane and derrick operators shall be those prescribed by the applicable ANSI standard for the type of crane in use. An illustration of the signals shall be posted at the job site.

(4) The employer shall designate a competent person who shall inspect all machinery and equipment each shift prior to each use, and during use, to make sure it is in safe operating condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use.

(5) A thorough, annual inspection of the hoisting machinery shall be made by a competent person, or by a private agency recognized by the United States Department of Labor. The employer shall maintain a record of the time and dates and results of each inspection for each hoisting machine and piece of equipment.

(6) Wire rope shall be taken out of service when any of the following conditions exist:

(i) In running ropes, six (6) randomly distributed broken wires or three (3) broken wires in one (1) lay;

(ii) Wear of one-third (1/3) the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;

(iii) Evidence of any heat damage from any cause;

(iv) Reductions from nominal diameter of more than one-sixty-fourth (1/64) inch for diameters up to and including five-sixteenths (5/16) inch, one-thirty-two (1/32) inches for diameters three-eighths (3/8) inch to and including one-half (1/2) inch, three-sixty-fourths (3/64) inch, for diameters nine-sixteenths (9/16) inch to and including three-fourths (3/4) inch, one-sixteenths (1/16) inch for diameters seven-eighths (7/8) inch to one and one-eighths (1 1/8) inches inclusive, three-thirty-two (3/32) inch for diameters one and one-quarter (1 1/4) to one and one-half (1 1/2) inches inclusive;

(v) In standing ropes, more than two (2) broken wires in one (1) lay in sections beyond end connections or more than one (1) broken wire at an end connection.

(vi) Wire rope safety factors shall be in accordance with American National Standards Institute B30.5-1968 or SAE J959-1966.

(7) Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or other moving parts or equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard. Guarding shall meet the requirements of the American National Standards Institute B15.1-1958 Rev. Safety code for Mechanical Power Transmission Apparatus.

(8) Accessible areas within the swing radius of the rear of the rotating superstructure of the crane, either permanently or temporarily mounted, shall be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.

(9) All exhaust pipes shall be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.

(10) Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests shall be made and recorded to see that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.

(11) All windows in cabs shall be of safety glass, or equivalent, that introduces no visible distortion that will interfere with the safe operation of the machine.

(12) (i) Where necessary for rigging or service requirements, a ladder, or steps, shall be provided to give access to a cab roof.

(ii) Guardrails, handholds, and steps shall be provided on cranes for each access to the car and cab, conforming to the ANSI B30.5.

(iii) Platforms and walkways shall have anti-skid surfaces.

(13) Fuel tank filler pipe shall be located in such a position, or protected in such a manner, as not to allow spill or overflow to run onto the engine, exhaust, or electrical equipment of any machine being fueled.

(i) An accessible fire extinguisher of 5BC rating, or higher, shall be available at all operator stations or cabs of equipment.

(ii) All fuels shall be transported, stored, and handled to meet the rules of Subpart F of this part. When fuel is transported by vehicles on public highways Department of Transportation rules contained in 49 CFR Parts 177 and 393 concerning such vehicular transportation are considered applicable.

(14) Except where electrical distribution and transmission lines have been de-energized and visibly grounded at point of work or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines, equipment or machines shall be operated proximate to power lines only in accordance with the following:

(i) For lines rated fifty (50)kV. or below, minimum clearance between the lines and any part of the crane or load shall be ten (10) feet;

(ii) For lines rated over fifty (50)kV., minimum clearance between the lines and any part of the crane or load shall be ten (10) feet plus four-tenths (0.4) inch for each one (1)kV. over fifty (50)kV., or twice the length of the line insulator, but never less than ten (10) feet;

(iii) In transit with no load and boom lowered, the equipment clearance shall be a minimum of four (4) feet for voltages, less than forty (40)kV., up to and including three hundred forty-five (345)kV. and sixteen (16) feet for voltages up to and including seven hundred fifty (750)kV;

(iv) A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means;

(v) Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes, but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation.

(vi) Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded;

(vii) Prior to work near transmitter towers where an electric charge can be induced in the equipment or materials begin handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages:

(a) The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom;

(b) Ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters. Crews shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load; and

(c) Combustible and flammable materials shall be removed from the immediate area prior to operation.

(15) No modifications or additions which affect the capacity or safe operation of the equipment shall be made by the employer without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation and maintenance instruction plates, tags, or decals, shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.

(16) The employer shall comply with Power Crane and Shovel Association Mobile Hydraulic Crane Standard No. 2.

(17) Sideboom cranes mounted on wheel or crawler tractors shall meet the requirements of SAE J743-1964.

(b) Crawler, locomotive and truck cranes. (1) All jibs shall have positive stops to prevent their movement of more than five (5) degrees above the straight line of the jib and boom on conventional type crane booms. The use of cable type belly slings does not constitute compliance with this rule.

(2) All crawler, truck or locomotive cranes in use shall meet the applicable requirements for design, inspection, construction, testing, maintenance and operation as prescribed in the ANSI B30.5-1968, Safety Code for Crawler Locomotives and Truck Cranes.

(c) Hammerhead tower cranes. (1) Adequate clearance shall be maintained between moving and rotating structures of the crane and fixed objects to allow the passage of employees without harm.

(2) Employees required to perform duties on the horizontal boom of hammerhead tower cranes shall be protected against falling by guardrails or by safety belts and lanyards attached to lifelines in conformance with this section.

(3) Buffers shall be provided at both ends of travel of the trolley.

(4) Cranes mounted on rail tracks shall be equipped with limit switches limiting the travel of the crane on the track and stops or buffers at each end of the tracks.

(5) All hammerhead tower cranes in use shall meet the applicable requirements for design, construction, installation, testing, maintenance, inspection and operation as prescribed by the manufacturer.

(d) Overhead and gantry cranes. (1) The rated load of the crane shall be plainly marked on each side of the crane, and if the crane has more than one (1) hoisting unit, each hoist shall have its rated load marked on it or its load block, and this marking shall be clearly legible from the ground or floor.

(2) Bridge trucks shall be equipped with sweeps which extend below the top of the rail and project in front of the truck wheels.

(3) Except for floor-operated cranes, a gong or other effective audible warning signal shall be provided for each crane equipped with a power traveling mechanism.

(4) All overhead and gantry cranes in use shall meet the applicable requirements for design, construction, installation, inspection, testing, maintenance, inspection, and operation as prescribed in the ANSI B30.2-1967, Safety Code for overhead and gantry cranes.

(e) Derricks. All derricks in use shall meet the applicable requirements for design, construction, installation, inspection, testing, maintenance, and operations as prescribed in ANSI B30.6-1969, Safety Code for derricks.

34.2 Material hoists, personnel hoists, and elevators. (a) General requirements.
(1) The employer shall comply with the manufacturer's specifications and limitations applicable to the operation of all

hoists and elevators. Where manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a professional engineer competent in the field.

(2) Rated load capacities, recommended operating speeds, and special hazard warnings or instructions shall be posted on cars and platforms.

(3) Wire rope shall be removed from service when any of the following conditions exists:

(i) In hoisting ropes, six (6) randomly broken wires in one (1) rope lay or three (3) broken wires in one (1) strand in one (1) rope lay;

(ii) Abrasion, scrubbing, flattening, or peening, causing loss of more than one-third (1/3) on the original diameter of the outside wires;

(iii) Evidence of any heat damage resulting from a torch or any damage caused by contact with electrical wires;

(iv) Reduction from nominal diameter of more than three-sixty-fourths (3/64) inch for diameters up to and including three-fourths (3/4) inch; one-sixteenth (1/16) inch for diameters seven-eighths (7/8) to one and one-eighths (1 1/8) inches; and three-thirty-seconds (3/32) inch for diameters one and one-quarter (1 1/4) to one and one-half (1 1/2).

(4) Hoisting ropes shall be installed in accordance with the wire rope manufacturer's recommendations.

(5) The installation of live booms on hoists is prohibited.

(6) The use of endless belt-type man-lifts on construction shall be prohibited.

(b) Material hoists. (1) (i) Operating rules shall be established and posted at the operator's station of the hoist. Such rules shall include signal system and allowable line speed for various loads. rules and notices shall be posted on a car frame or crosshead in a conspicuous location, including the statement "No riders Allowed."

(ii) No person shall be allowed to ride on material hoists except for the purposes of inspection and maintenance.

(2) All entrances of the hoistways shall be protected by substantial gates or bars which shall guard the full width of the landing entrance. All hoistway entrance bars and gates shall be painted with diagonal contrasting colors, such as black and yellow stripes.

(i) Bars shall be not less than two (2) inch x four (4) inch wooden bars or the equivalent, located two (2) feet from the hoistway line. Bars shall be located not less than thirty-six (36) inches nor more than forty-two (42) inches above the floor.

(ii) Gates or bars protecting the entrances to hoistways shall be equipped with a latching device.

(3) Overhead protective covering of two (2) inch planking. Three-quarter (3/4) inch plywood or other solid material of equivalent strength, shall be provided on the top of every material hoist cage or platform.

(4) The operator's station of a hoisting machine shall be provided with overhead protection equivalent to tight planking not less than two (2) inches thick. The support for the overhead protection shall be of equal strength.

(5) Hoist towers may be used with or without an enclosure on all sides. However, whichever alternative is chosen, the following applicable conditions shall be met:

(i) When a hoist tower is enclosed, it shall be enclosed on all sides for its entire height with a screen enclosure of one-half (1/2) inch mesh, No. 18 United States gauge wire or equivalent, except for landing access,

(ii) When a hoist tower is not enclosed, the hoist platform or car shall be totally enclosed (caged) on all sides for the full height between the floor and the overhead protective covering with one-half (1/2) inch mesh, No. 14 United States gauge wire or equivalent. The hoist platform enclosure shall include the required gates for loading and unloading. A six (6) foot high enclosure shall be provided on the unused sides of the hoist tower at ground level.

(6) Car arresting devices shall be installed to function in case of rope failure.

(7) All material hoist towers shall be designed by a licensed professional engineer.

(8) All material hoists shall conform to the requirements of ANSI A10.5-1969, Safety Requirements for material hoists.

(c) Personnel hoists. (1) Hoist towers outside the structure shall be enclosed for the full height of the side or sides used for entrance and exit to the structure. At the lowest landing, the enclosure on the sides not used for exit or entrance to the structure shall be enclosed to a height of at least ten (10) feet. Other sides of the tower adjacent to floors or scaffold platforms shall be enclosed to a height of ten (10) feet above the level of such floors or scaffolds.

(2) Towers inside of structures shall be enclosed on all four (4) sides throughout the full height.

(3) Towers shall be anchored to the structure at intervals not exceeding twenty-five (25) feet. In addition to tie-ins, a series of guys shall be installed. Where tie-ins are not practical the tower shall be anchored by means of guys made of wire rope at least one-half (1/2) inch in diameter, securely fastened to anchorage to ensure stability.

(4) Hoistway doors or gates shall be not less than six (6) foot six (6) inches high and shall be provided with mechanical locks which cannot be operated from the landing side, and shall be accessible only to persons on the car.

(5) Cars shall be permanently enclosed on all sides and the top, except sides used for entrance and exit which have car gates or doors.

(6) A door or gate shall be provided at each entrance to the car which shall protect the full width and height of the car entrance opening.

(7) Overhead protective covering of two (2) inch planking. Three-quarter (3/4) inch plywood or other solid material or equivalent strength shall be provided on the top of every personnel hoist.

(8) Doors or gates shall be provided with electric contacts which do not allow movement of the hoist when door or gate is open.

(9) Safeties shall be capable of stopping and holding the car and rated load when traveling at governor tripping speed.

(10) Cars shall be provided with a capacity and data plate secured in a conspicuous place on the car or crosshead.

- (11) Internal combustion engines shall not be permitted for direct drive.
- (12) Normal and final terminal stopping devices shall be provided.
- (13) An emergency stop switch shall be provided in the car and marked "Stop".
- (14) Ropes. (i) The minimum number of hoisting ropes shall be three (3) for traction hoists and two (2) for drum-type hoists.
- (ii) The minimum diameter of hoisting and counterweight wire ropes shall be one-half (1/2) inch.
- (iii) Safety factors: (See Table 46).
- (15) Following assembly and erection of hoists and before being put in service, an inspection and tests of all functions and safety devices shall be made under the supervision of a competent person. A similar inspection and test is required following major alteration of an existing installation. All hoists shall be inspected and tested at not more than three (3) month intervals. Records shall be maintained and kept on file for the duration of the job.
- (16) All personnel hoists used by employees shall be constructed of materials and components which meet the specifications for materials, construction, safety devices, assembly, and structural integrity as stated in the ANSI A10.4-1963; Safety Requirements for Workmen's Hoists. The requirements of this subparagraph (16) do not apply to cantilever type personnel hoists.
- (17) (i) Personnel hoists used in bridge tower construction shall be approved by a registered professional engineer and erected under the supervision of a qualified engineer competent in this field.
- (ii) When a hoist tower is not enclosed, the hoist platform or car shall be totally enclosed (caged) on all sides for the full height between the floor and the overhead protective covering with three-quarter (3/4) inch mesh of No. 14 United States gauge wire or equivalent. The hoist platform enclosure shall include the required gates for loading and unloading.
- (iii) These hoists shall be inspected and maintained on a weekly basis. Whenever the hoisting equipment is exposed to winds exceeding thirty-five (35) miles per hour it shall be inspected and put in operable condition before reuse.
- (iv) Wire rope shall be taken out of service when any of the following conditions exist:
- (a) In running ropes, six (6) randomly distributed broken wires in one (1) lay or three (3) broken wires in one (1) strand in one (1) lay;
- (b) Wear of one-third (1/3) the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;
- (c) Evidence of any heat damage from any cause;
- (d) Reductions from nominal diameter of more than three-sixtyfourths (3/64) inch for diameters to and including three-quarter (3/4) inch, one and one-sixteenth (1 1/16) inch for diameters seven-eighths (7/8) inch to one and one-eighths (1 1/8) inch inclusive, three-thirty-seconds (3/32) inch for diameters one and one-quarter (1 1/4) to one and one-half (1 1/2) inch inclusive;
- (e) In standing ropes, more than two (2) broken wires in one (1) lay in sections beyond end connections or more than one (1) broken wire at end connection.
- (f) Permanent elevators under the care of the employer and used by employees for work covered by this regulation, shall comply with the requirements of ANSI A17.1-1965 with addenda A17.1a-1967, A17.1b-1968, A16.1c-1969, A16.1d-1976, and inspected in accordance with A16.2-1960 with addenda A16.2a-1965, A17.2b-1967.

34.3. Base-mounted drum hoists. (a) General requirements. (1) Exposed moving parts such as gears, projecting screws, setscrews, chain, cables, chain sprockets, and reciprocating or rotating parts, which constitute a hazard, shall be guarded.

(2) All controls used during the normal operation cycle shall be located within easy reach of the operator's station.

(3) Electric motor operated hoists shall be provided with:

(i) A device to disconnect all motors from the line upon power failure and not permit any motor to be restarted until the controller handle is brought to the "Off" position;

(ii) Where applicable, an overspeed preventive device;

(iii) A means whereby remotely operated hoists stop when any control is ineffective.

(4) All base-mounted drum hoists in use shall meet the applicable requirements for design, construction, installation, testing, inspection, maintenance and operations, as prescribed by the manufacturer.

34.4. Overhead hoists. (1) The safe working load of the overhead hoist, as determined by the manufacture, shall be indicated on the hoist, and this safe working load shall not be exceeded.

(2) The supporting structure to which the hoist is attached shall have a safe working load equal to that of the hoist.

(3) The support shall be arranged so as to provide for free movement of the hoist and shall not restrict the hoist from lining itself up with the load.

(4) The hoist shall be installed only in locations that will permit the operator to stand clear of the load at all times.

(5) Air hoists shall be connected to an air supply of sufficient capacity and pressure to safely operate the hoist. All air hoses supplying air shall be positively connected to prevent their becoming disconnected during use.

(6) All overhead hoists in use shall meet the applicable requirements for construction, design, installation, testing, inspection, maintenance and operation, as prescribed by the manufacturer.

34.5. Conveyors. (a) General requirements. (1) Means for stopping the motor or engine shall be provided at the operator's station. Conveyor systems shall be equipped with an audible warning signal to be sounded immediately before starting up the conveyor.

- (2) If the operator's station is at a remote point, similar provisions for stopping the motor or engine shall be provided at the motor or engine location.
- (3) Emergency stop switches shall be arranged so that the conveyor cannot be started again until the actuating stop switch has been reset to running or "On" position.
- (4) Screw conveyors shall be guarded to prevent employee contact with turning flights.
- (5) Where a conveyor passes over work areas, aisles, or thoroughfares, suitable guards shall be provided to protect employees required to work below the conveyors.
- (6) All crossovers, aisles and passageways shall be conspicuously marked by suitable signs, as required in these rules and regulations.
- (7) Conveyors shall be locked out or otherwise rendered inoperable and tagged out with a "Do Not Operate" tag during repairs and when operation is hazardous to employees performing maintenance work.
- (8) All conveyors in use shall meet the applicable requirements for design, construction, inspection, testing, maintenance and operation, as prescribed in the ANSI B20.1-1957, Safety Code for conveyors, cableways and related equipment.

34.6. Aerial lifts. (a) General requirements. (1) Unless otherwise provided in this section, aerial lifts acquired for use on or after the effective date of this section shall be designed and constructed in conformance with the applicable requirements of the American National Standard for vehicle mounted elevating and rotating work platforms; ANSI A92.2-1969, including appendix. Aerial lifts acquired before the effective date of this section, which do not meet the requirements of ANSI A92.2-1969, may not be used after January 1, 1976, unless they shall have been modified so as to conform with the applicable design and construction requirements of ANSI A92.2-1969. Aerial lifts include the following types of vehicle-mounted aerial devices used to elevate personnel to job sites above the ground:

- (i) Extensible boom platform;
- (ii) Aerial ladders;
- (iii) Articulating boom platforms;
- (iv) Vertical towers; and
- (v) A combination of any of the above.

Aerial equipment may be made of metal, wood, fiberglass reinforced plastic, or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis.

(2) Aerial lifts may be "Field Modified" for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by any other equivalent entity, such as a nationally recognized testing laboratory to be in conformity with all applicable provisions of ANSI A92.2-1969 and this section, and to be at least as safe as the equipment was before modifications.

(b) Specific requirements. (1) Ladder trucks and tower trucks. Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

(2) Extensible and articulating boom platforms.

- (i) Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition;
- (ii) Only authorized persons shall operate an aerial lift;
- (iii) Belting off to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted;
- (iv) Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position;
- (v) A body belt shall be worn and a lanyard attached to the boom or basket when working from aerial lift;
- (vi) Boom and basket load limits specified by the manufacturer shall not be exceeded;
- (vii) The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface.

Wheel chocks shall be installed before using an aerial lift on an incline, provided they can be safely installed;

(viii) An aerial lift truck shall not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation in accordance with the provisions of subparagraphs (1) and (2) of paragraph (a) of this subsection;

(ix) Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platforms within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency;

(x) Climbers shall not be worn while performing work from an aerial lift;

(xi) The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value; and

(xii) Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position except as provided in subdivision (viii) of this subparagraph.

(3) Electrical tests. All electrical tests shall conform to the requirements of ANSI A92.2-1969, Section 5. However, equivalent D.C. voltage tests may be used in lieu of the A.C. voltage specified in A92.2-1969, D.C. voltage tests which are approved by the equipment manufacturer or equivalent entity shall be considered an equivalent test for the purpose of this subparagraph.

(4) Bursting safety factor. The provisions of the American National Standards Institute, Standard ANSI A92.2-1969, Section 4.9, Bursting Safety Factor shall apply to all critical hydraulic and pneumatic components are those in which a failure would result in a free fall or free rotation of the boom. All non-critical components shall have a bursting safety factor of at least two (2) to one (1).

(5) Welding standards. All welding shall conform to the following standards as applicable:

- (i) Standard qualification procedure, AWS B3.0-41;
- (ii) Recommended practices for automotive welding design, AWS D8.4-61;
- (iii) Standard qualifications of welding procedures and welders for piping and tubing, AWS D10.9-69; and
- (iv) Specifications for welding highway and railway bridges, AWS D2.0-69.

§36-23-35. Motor Vehicles, Mechanized Equipment, and Marine Operations.

35.1. Equipment. (a) General requirements. (1) All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors or barricades equipped with appropriate light or reflectors, to identify the location of the equipment.

(2) A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims, or rims equipped with locking rings or similar devices.

(3) (i) Heavy machinery, or parts thereof, which are suspended or held aloft by use of slings, hoists, or jacks shall be substantially blocked or cribbed to prevent falling or shifting before employees are permitted to work under or between them. Bulldozer and scraper blades, end-loader buckets, dump bodies, and similar equipment, shall be either fully lowered or blocked when being repaired or when not in use. All controls shall be in a neutral position, with the motors stopped and brakes set, unless work being performed requires otherwise.

(ii) Whenever the equipment is parked, the parking brake shall be set. Equipment parked on the line shall have the wheels chocked and the parking brake set.

(4) The use, care and charging of all batteries shall conform to the requirements of this section.

(5) All cab glass shall be safety glass, or equivalent, that introduces no visible distortion affecting the safe operation of any machine.

(6) All equipment covered by this subpart shall comply with the requirements of these regulations when working or being moved in the vicinity of power lines or energized transmitters.

35.2. Handling materials -- general. Rolling railroad cars. Derail and/or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact other cars being worked, enter a building, work or traffic area.

35.3. Air receivers. (a) General requirements. (1) Application. This section applies to compressed air receivers, and other equipment used in providing and utilizing compressed air for performing operation such as cleaning, drilling, hoisting and chipping. On the other hand, however, this section does not deal with the special problems created when men work in compressed air as in tunnels and caissons. This section is not intended to apply to compressed air machinery and equipment used on transportation vehicles such as steam railroad cars, electric railway cars, and automotive equipment.

(2) New and existing equipment.

(i) All new air receivers installed after the effective date of these regulations shall be constructed in accordance with the 1968 edition of the A.S.M.E. Boiler and Pressure Vessel Code, Section VIII.

(ii) All safety valves used shall be constructed, installed and maintained in accordance with the A.S.M.E. Boiler and Pressure Vessel Code, Section VIII, 1968 Edition.

(b) Installation and equipment requirements. (1) Installation. Air receivers shall be so installed that all drains, handholes, and manholes therein are easily accessible. Air receivers should be supported with sufficient clearance to permit a complete external inspection and to avoid corrosion of external surfaces. Under no circumstances shall an air receiver be buried underground or located in an inaccessible place. The receiver should be located as close to the compressor or aftercooler as is possible in order to keep the discharge pipe short.

(2) Drains and traps. A drain pipe and valve shall be installed at the lowest point of every air receiver to provide for the removal of accumulated oil and water. The drain valve on the air receiver shall be opened and the receiver completely drained frequently and at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver.

(3) Gauges and valves. (i) Every air receiver shall be equipped with an indicating pressure gauge (so located as to be readily visible) and one (1) or more spring-loaded safety valves. The total relieving capacity of such safety valves shall be such as to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than ten (10) percent.

(ii) No valve of any type shall be placed between the air receiver and its safety valve or valves.

(iii) Safety appliances, such as safety valves, indicating devices and controlling devices, shall be constructed, located and installed so that they cannot be readily rendered inoperative by any means, including the elements.

(iv) All safety valves shall be tested frequently and at regular intervals to determine whether they are in good operating condition.

35.4. Motor vehicles. (a) Coverage. Motor vehicles as covered by this part are those vehicles that operate within an off-highway job site, not open to public traffic. The requirements of this subsection do not apply to equipment for which rules are prescribed in these rules and regulations.

(b) General requirements. (1) All vehicles shall have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components and shall be maintained in operable condition.

(2) (i) Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two (2) headlights and two (2) taillights in operable condition.

(ii) All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions.

(3) All vehicles shall be equipped with an adequate audible warning device at the operator's station and in an operable condition.

(4) No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:

(i) The vehicle has a reverse signal alarm audible above the surrounding noise level; or

(ii) The vehicle is backed up only when an observer signals that it is safe to do so.

(5) All vehicles with cabs shall be equipped with windshields and powered wipers. Cracked and broken glass shall be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields shall be equipped with operable defogging or defrosting devices.

(6) All haulage vehicles, whose payload is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials.

(7) Tools and material shall be secured to prevent movement when transported in the same compartment with employees.

(8) Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried.

(9) Seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards) shall be installed in all motor vehicles.

(10) Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done.

(11) Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping the mechanism.

(12) Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear.

(13) (i) All rubber-tired motor vehicles shall be equipped with fenders.

(ii) Mud flaps may be used in lieu of fenders whenever motor vehicle equipment is not designed for fenders.

(14) All vehicles in use shall be checked at the beginning of each shift to assure that the following parts, equipment, and accessories are in safe operating condition, and free of apparent damage that could cause failure while in use: Service brakes, including trailer brake connections; parking system (hand brake); emergency stopping system (brakes); tires; horn; steering mechanism; coupling devices; seat belts; operating controls and safety devices. All defects shall be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.

35.5. Material handling equipment. (a) Earthmoving equipment; general. (1) These rules apply to the following types of earthmoving equipment; scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment. The promulgation of specific rules for compactors and rubber-tired "Skid-Steer" equipment is reserved pending consideration of standards currently being developed.

(2) Seat belts. (i) Seat belts shall be provided on all equipment covered by this section, and shall meet the requirements of the Society of Automotive Engineers J386-1969. Seat belts for Agricultural and Light Industrial Tractors shall meet the seat belt requirements of Society of Automotive Engineers J333A-1970: Operator protection for agricultural and light industrial tractors.

(ii) Seat belts need not be provided for equipment which is designed only for stand up operation.

(3) Access roadways and grades. (i) No employer shall move or cause to be moved construction equipment or vehicles upon any access roadway or grade unless the access roadway or grade is constructed and maintained to accommodate safely the movement of the equipment and vehicles involved.

(ii) Every emergency access ramp and berm used by an employer shall be constructed to restrain and control runaway vehicles.

(iii) Seat belts need not be provided for equipment which does not have roll-over protective structure (ROPS) or adequate canopy protection.

(4) Brakes. All earthmoving equipment mentioned in 35.5(a) shall have a service braking system capable of stopping and holding the equipment fully loaded, as specified in Society of Automotive Engineers SAE-J237, Loader Dozer-1971, J236, Graders-1971, and J319b, Scrapers-1971. Brake systems for self-propelled rubber-tired, off-highway equipment manufactured after January 1, 1972 shall meet the applicable minimum performance criteria set forth in the following Society of Automotive Engineers Recommended Practices:

Self-propelled scrapers	SAE, J319b-1971
Self-propelled graders	SAE, J236-1971
Trucks and wagons	SAE, J166-1971
Front end loaders and dozers	SAE, J237-1971

(5) Fenders. Pneumatic-tired earthmoving haulage equipment (trucks, scrapers, tractors and trailing units) whose maximum speed exceeds fifteen (15) miles per hour, shall be equipped with fenders on all wheels to meet the requirements of Society of Automotive Engineers SAE J321-A-1970, fenders for pneumatic-tired earthmoving haulage equipment.

(6) Rollover protective structures (ROPS). See subpart W of this part for requirements for rollover protective structures and overhead protection.

(7) Specific effective dates -- brakes and fenders. (i) Equipment mentioned in subparagraphs (4) and (5) of the paragraph, and manufactured after January 1, 1972, which is used by an employer after that date, shall comply with the applicable rules prescribed therein concerning brakes and fenders. Employers may request variations from the applicable brakes and fender standards required by this subpart. Employers wishing to seek variations from the applicable brakes and fenders rules may submit any requests for variations after the publication of this document. Any statements intending to meet the requirements should specify how the variation would protect the safety of the employees by providing for any compensating restrictions on the operations of equipment.

(8) Audible alarms. (i) All bi-directional machines, such as rollers, compactors, front-end loaders, bulldozers, and similar equipment, shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed when the machine is moving in either direction. The horn shall be maintained in an operative condition.

(ii) No employer shall permit earthmoving or compacting equipment which has an obstructed view to the rear to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so. Where equipment is operated in close proximity to employees, a signal man shall be designated to direct the operation of the equipment.

(9) Scissor points. Scissor points on all front-end loaders, which constitute a hazard to the operator during normal operation, shall be guarded.

(b) Excavating and other equipment. (1) Tractors covered in paragraph (a) of this section shall have seat belts as required for the operators when seated in the normal seating arrangement for tractor operation, even though back-hoes, breakers, or other similar attachments are used on these machines for excavating or other work.

(2) For the purposes of this subpart, the nomenclatures and descriptions for measurement of dimensions of machinery and attachments shall be as described in the Society of Automotive Engineers 1970 handbook, pages one thousand eighty-eight (1088) through one thousand one hundred three (1103).

(3) The safety requirements, ratios, or limitations applicable to machines or attachment usage covered in power crane and shovel association standards No. 1 and No. 2 of 1968, and No. 3 of 1969, shall be complied with, and shall apply to cranes, machines, and attachments under this section.

(c) Lifting and hauling equipment (other than equipment covered under this part). (1) Industrial trucks shall meet the following requirements:

(i) Lift trucks, stakers, etc., shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator. When auxiliary removable counterweights are provided by the manufacturer, corresponding alternate rated capacities also shall be clearly shown on the vehicle. These ratings shall not be exceeded.

(ii) No modifications or additions which affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval. If such notifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.

(iii) If a load is lifted by two (2) or more trucks working in unison, the proportion of the total load carried by any one (1) truck shall not exceed its capacity.

(iv) Steering or spinner knobs shall not be attached to the steering wheel unless the steering mechanism is of a type that prevents road reactions from causing the steering hand wheel to spin. The steering knob shall be mounted within the periphery of the wheel.

(v) All high lift rider industrial trucks shall be equipped with overhead guards which meet the configuration and structural requirements as defined in paragraph 421 of American National Standards Institute B56.1-1969, safety standards for powered industrial trucks.

(vi) All industrial trucks in use shall meet the applicable requirements of design, construction, stability, inspection, testing, maintenance, and operation as defined in American National Standards Institute B56.1-1969, safety standards for powered industrial trucks.

35.6. Pile driving equipment. (a) General requirements. (1) Boilers and piping systems which are a part of, or used with, pile driving equipment shall meet the applicable requirements of the American Society of Mechanical Engineers, Power boilers (Section 1).

(2) All pressure vessels which are a part of, or used with, pile driving equipment shall meet the applicable requirements of the American Society of Mechanical Engineers, Pressure Vessels (Section 8).

(3) Overhead protection, which will not obscure the vision of the operator and which meets the requirements of these regulations, shall be provided. Protection shall be the equivalent of two (2) inch planking or other solid material of equivalent strength.

(4) Stop blocks shall be provided for the leads to prevent the hammer from being raised against the head block.

(5) A blocking device, capable of safely supporting the weight of the hammer, shall be provided for placement in the leads under the hammer at all times while employees are working under the hammer.

(6) Guards shall be provided across the top of the head block to prevent the cable from jumping out of the sheaves.

(7) When the leads must be inclined in the driving of batter piles, provisions shall be made to stabilize the leads.

(8) Fixed leads shall be provided with ladder, and adequate rings, or similar attachment points, so that the loft worker may engage his safety belt lanyard to the leads. If the leads are provided with loft platform(s), such platform(s) shall be protected by standard guardrails.

(9) Steam hose leading to a steam hammer or jet pipe shall be securely attached to the hammer with an adequate length of at least one-quarter (1/4) inch diameter chain or cable to prevent whipping in the event the hoist at the hammer is broken. Air hammer hoses shall be provided with the same protection as required for steam lines.

(10) Safety chains, or equivalent means, shall be provided for each hose connection to prevent the line from thrashing around in case the coupling becomes disconnected.

(11) Steam line controls shall consist of two (2) shutoff valves, one (1) of which shall be a quick-acting lever type within easy reach of the hammer operator.

(12) Guys, outriggers, thrustouts, or counter-balances shall be provided as necessary to maintain stability of pile driver rigs.

(b) Pile driving from barges and floats. Barges or floats supporting pile driving operations shall meet the applicable requirements of these regulations.

(c) Pile driving equipment. (1) Engineers and winchmen shall accept signals only from the designated signalmen.

(2) All employees shall be kept clear when piling is being hoisted into the leads.

(3) When piles are being driven in an excavated pit, the walls of the pit shall be sloped to the angle of repose or sheet-piled and braced.

(4) When steel tube piles are being "Blown Out", employees shall be kept well beyond the range of falling materials.

(5) When it is necessary to cut off the tops of driven piles, pile driving operations shall be suspended except where the cutting operations are located at least twice the length of the longest pile from the driver.

(6) When driving jacked piles, all access pits shall be provided with ladders and bulkhead curbs to prevent material from falling into the pit.

§36-23-36. Excavations, Trenching, and Shoring.

36.1. General protection requirements. (a) Walkways, runways, and sidewalks shall be kept clear of excavated material or other obstructions and no sidewalks shall be undermined unless shored to carry a minimum live load of one hundred and twenty-five (125) pounds per square foot.

(b) If planks are used for raised walkways, runways, or sidewalks, they shall be laid parallel to the length of the walk and fastened together against displacement.

(c) Planks shall be uniform in thickness and all exposed ends shall be provided with beveled cleats to prevent tripping.

(d) Raised walkways, runways, and sidewalks shall be provided with plank steps on strong stringers. Ramps, used in lieu of steps, shall be provided with cleats to insure a safe walking surface.

(e) All employees shall be provided with and protected with personal protective equipment for the protection of the head, eyes, respiratory organs, hands, feet and other parts of the body.

(f) Employees exposed to vehicular traffic shall be provided with and shall be instructed to wear warning vests marked with or made of reflective or high visibility material.

(g) Employees subjected to hazardous dusts, gases, fumes, mists, or atmospheres deficient in oxygen, shall be provided with and protected with approved respiratory protection.

(h) No person shall be permitted under loads handled by power shovels, derricks, or hoists. to avoid any spillage employees shall be required to stand away from any vehicle being loaded.

(i) Daily inspections of excavations shall be made at the beginning of and periodically during each shift by a certified and competent person. If evidence of possible cave-ins or slides is apparent, all work in the excavation shall cease until the necessary precautions have been taken to safeguard the employees.

36.2. Specific excavation requirements. (a) Prior to opening and excavation, effort shall be made to determine whether underground installations; i.e., sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.

(b) Trees, boulders, and other surface encumbrances, located so as to create a hazard to employees involved in excavation work or in the vicinity thereof at any time during operations, shall be removed or made safe before excavating is begun.

(c) The walls and faces of all excavations in which employees are exposed to danger from moving ground shall be guarded by a shoring system, sloping of the ground, or some other equivalent means.

(d) Excavations shall be inspected by a competent and certified person after every rainstorm or other hazard-increasing occurrence, and the protection against slides and cave-ins shall be increased if necessary.

(e) The determination of the angle of repose and design of the supporting system shall be based on careful evaluation of pertinent factors such as:

Depth or cut; anticipated changes in materials from exposure to air, sun, water, or freezing; loading imposed by structures, equipment, overlying material, or stored material; and vibration from equipment, blasting, traffic, or other sources.

(f) supporting systems; i.e., piling, cribbing, shoring, etc., shall be designed by a qualified person and meet accepted engineering requirements. When tie rods are used to restrain the top of the sheeting or other retaining systems, the rods shall be securely anchored well back of the angle of repose. When tight sheeting or sheet piling is used, full loading due to groundwater table shall be assumed, unless prevented by weep holes or drains or other means. Additional stringers, ties, and bracing shall be provided to allow for any necessary temporary removal of individual supports.

(g) All slopes shall be excavated to at least the angle of repose except for areas where solid rock allows for line drilling or pre-splitting.

(h) The angle of repose shall be flattened when an excavation has water conditions, silty materials, loose boulders, and areas where erosion, deep frost action, and slide planes appear.

(i) (1) In excavations which employees may be required to enter, excavated or other material shall effectively be stored and retained at least two (2) feet or more from the edge of the excavation.

(2) As an alternative to the clearance prescribed in subparagraph (1) of this paragraph, the employer may use effective barriers or other retaining devices in lieu thereof in order to prevent excavated or other materials from falling into the excavation.

(j) Sides, slopes, and faces of all excavations shall meet accepted engineering requirements by scaling, benching, barricading, rock bolting, wire meshing, or other equally effective means. Special attention shall be given to slopes which may be adversely affected by weather or moisture content.

(k) Support systems shall be planned and designed by a qualified person when excavation is in excess of twenty (20) feet in depth, adjacent to structures or improvements, or subject to vibration or ground water.

(l) Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition, and timbers shall be sound, free from large or loose knots, and of proper dimensions.

(m) Special precautions shall be taken in sloping or shoring the sides of excavations adjacent to a previously back-filled excavation or a fill, particularly when the separation is less than the depth of the excavation. Particular attention also shall be paid to joints and seams of material comprising a face and the slope of such seams and joints.

(n) Except in hard rock, excavations below the level of the base of footing of any foundation or retaining wall shall not be permitted, unless the wall is underpinned and all other precautions taken to insure the stability of the adjacent walls for the protection of employees involved in excavation work or in the vicinity thereof.

(o) If the stability of adjoining buildings or walls is endangered by excavations, shoring, bracing, or underpinning shall be provided as necessary to insure their safety. Such shoring, bracing, or underpinning shall be inspected daily or more often, as conditions warrant, by a competent person and the protection effectively maintained.

(p) Diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water shall not be allowed to accumulate in an excavation.

(q) It is necessary to place or operate power shovels, derricks, trucks, materials, or other heavy objects on a level above and near an excavation, the side of the excavation shall be sheet-piled, shored, and braced as necessary to resist the extra pressure due to such superimposed loads.

(r) Blasting and the use of explosives shall be performed in accordance with these rules and regulations.

(s) When mobile equipment is utilized or allowed adjacent to excavations, substantial stop logs or barricades shall be installed. If possible, the grade should be away from the excavation.

(t) Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary wells, pits, shafts, etc., shall be back-filled.

(u) If possible, dust conditions shall be kept to a minimum by the use of water, salt, calcium chloride, oil, or other means.

(v) In locations where oxygen deficiency or gaseous conditions are possible, air in the excavation shall be tested, immediately prior to working entering such area; at least every two (2) hours and as often as necessary to protect the safety of the workers. Controls, as set forth in these regulations, shall be established to assure acceptable atmospheric conditions.

When flammable gases are present, adequate ventilation shall be provided or sources of ignition shall be eliminated. Attended emergency rescue equipment, such as breathing apparatus, a safety harness and line, basket stretcher, etc., shall be readily available where adverse atmospheric conditions may exist or develop in an excavation.

(w) Where employees or equipment are required or permitted to cross over excavations, walkways or bridges with standard guardrails shall be provided.

(x) Where ramps are used for employees or equipment, they shall be designed and constructed by qualified persons in accordance with accepted engineering requirements.

(y) All ladders used on excavation operations shall be in accordance with the requirements of these regulations.

36.3. Specific trenching requirements. (a) Banks more than five (5) feet high shall be shored, laid back to a stable slope, or some other equivalent means of protection shall be provided where employees may be exposed to moving ground or cave-ins. Refer to Table 47 as a guide in sloping of banks. Trenches less than five (5) feet in depth shall also be effectively protected when examination of the ground indicates hazardous ground movement may be expected.

(b) Sides of trenches is unstable or soft material, five (5) feet or more in depth, shall be shored, sheeted, braced, sloped, or otherwise supported by means of sufficient strength to protect the employees working within them. See Tables 47 and 48.

(c) Sides of trenches in hard or compact soil, including embankments, shall be shored or otherwise supported when the trench is more than five (5) feet in depth and eight (8) feet or more in length. In lieu of shoring, the sides of the trench above the five (5) foot level may be sloped to preclude collapse, but shall not be steeper than a one (1) foot rise to each one-half () foot horizontal. When the outside diameter of a pipe is greater than six (6) feet, a bench of four (4) foot minimum shall be provided at the toe of the sloped portion.

(d) Materials used for sheeting and sheet piling, bracing, shoring, and underpinning, shall be in good serviceable condition, and timbers used shall be sound and free from large or loose knots, and shall be designed and installed so as to be effective to the bottom of the excavation.

(e) Additional precautions by way of shoring and bracing shall be taken to prevent slides or cave-ins when excavations or trenches are made in locations adjacent to backfilled excavations, or where excavations are subjected to vibrations from railroad or highway traffic, the operation of machinery, or any other source.

(f) Employees entering bell-bottom pier holes shall be protected by the installation of a removable-type casing of sufficient strength to resist shifting of the surrounding earth. Such temporary protection shall be provided for the full depth of that part of each pier hole which is above the bell. A lifeline, suitable for instant rescue and securely fastened to a shoulder harness, shall be worn by each employee entering the shafts. This lifeline shall be individually manned and separate from any line used to remove materials excavated from the bell footing.

(g) (1) Minimum requirements for trench timbering shall be in accordance with Table 48.

(2) Braces and diagonal shores in a wood shoring system shall not be subjected to compressive stress in excess of values given by the following formula: $S = 1300 - 20 L/D$ Maximum ratio $L/D = 50$

Where:

L = Length, unsupported, in inches

D = Least side of the timber, in inches

S = Allowable stress in pounds per square inch of cross-section

(h) When employees are required to be in trenches four (4) feet deep or more, an adequate means of exit, such as a ladder or steps, shall be provided and located so as to require no more than twenty-five (25) feet of lateral travel.

(i) Bracing or shoring of trenches shall be carried along with the excavation.

(j) Cross braces or trench jacks shall be placed in true horizontal position, be spaced vertically, and be secured to prevent sliding, falling, or kickouts.

(k) Portable trench boxes or sliding trench shield may be used for the protection of personnel in lieu of a shoring system or sloping. Where such trench boxes or shields are used, they shall be designed, constructed, and maintained in a manner which will provide protection equal to or greater than the sheeting or shoring required for the trench.

(l) Backfilling and removal of trench supports shall progress together from the bottom of the trench. Jacks or braces shall be released slowly and, in unstable soil, ropes shall be used to pull out the jacks or braces from above after employees have cleared the trench.

36.4. Definitions applicable to this subsection. (a) "Accepted Engineering Requirements (or Practice)" Those requirements or practices which are compatible with standards required by a registered architect, a registered professional engineer, or other duly licensed or recognized authority.

(b) "Angle of Repose" the greatest angle above the horizontal plane at which a material will lie without sliding.

(c) "Bank" A mass of soil rising above a digging level.

(d) "Belled Excavation" A part of a shaft or footing excavation, usually near the bottom and bell-shaped; i.d., an enlargement of the cross section above.

(e) "Braces (Trench)" The horizontal members of the shoring system whose ends bear against the uprights or stringers.

(f) "Excavation" Any manmade cavity or depression in the earth's surface, including its sides, walls, or faces, formed by earth removal and producing unsupported earth conditions by reasons of the excavation. If installed forms or similar structures reduce the depth-to-width relationship, an excavation may become a trench.

(g) "Faces" See paragraph (k) of this section.

(h) "Hard compact Soil" All earth materials not classified as running or unstable.

(i) "Kickouts" Accidental release or failure of a shore or brace.

(j) "Sheet Pile" A pile, or sheeting, that may form one (1) of a continuous interlocking line, or a row of timber, concrete, or steel piles, driven in close contact to provide a tight wall to resist the lateral pressure of water, adjacent earth, or other materials.

(k) "Sides," "Walls," or "Faces" The vertical or inclined earth surfaces formed as a result of excavation work.

(l) "Slope" The angle with the horizontal at which a particular earth material will stand indefinitely without movement.

(m) "Stringers (Wales)" the horizontal members of a shoring system whose sides beat against the uprights or earth.

(n) "Trench" A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than fifteen (15) feet.

- (o) "Trench Jack" Screw or hydraulic type jacks used as cross bracing in a trench shoring system.
- (p) "Trench Shield" A shoring system composed of steel plates and bracing, welded or bolted together, which support the walls of a trench from the ground level to the trench bottom and which can be moved along as work progresses.
- (q) "Unstable Soil" Earth material, other than running, that because of its nature or the influence of related conditions, cannot be depended upon to remain in place without extra support, such as would be furnished by a system of shoring.
- (r) "Uprights" The vertical members of a shoring system.
- (s) "Wales" See paragraph (m) of this section.
- (t) "Walls" See paragraph (k) of this section.

§36-23-37. Concrete, Concrete forms, and Shoring.

37.1. General provisions. (a) General. All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements for design, construction, inspection, testing, maintenance and operations, as prescribed in ANSI A10.9-1970, safety requirements for concrete construction and masonry work.

(b) Reinforcing steel. (1) Employees working more than six (6) feet above any adjacent working surfaces, placing and tying reinforcing steel in walls, piers, columns, etc., shall be provided with a safety belt, or equivalent device.

(2) Employees shall not be permitted to work above vertically protruding reinforcing steel unless it has been protected to eliminate the hazard of impalement.

(3) Guying: Reinforcing steel for walls, piers, columns, and similar vertical structures shall be guyed and supported to prevent collapse.

(4) Wiremesh rolls: Wire mesh rolls shall be secured at each end to prevent dangerous recoiling action.

(c) Bulk concrete handling. Bulk storage bins, containers, or silos shall have conical or tapered bottoms with mechanical or pneumatic means of starting the flow of material.

(d) Concrete placement. (1) Concrete mixers. Concrete mixers equipped with one (1) yard or larger loading skips shall be equipped with a mechanical device to clear the skip of material.

(2) Guardrails. Mixers of one (1) year capacity or greater shall be equipped with protective guardrails installed on each side of the skip.

(3) Bull floats. Handles on bull floats, used where they may contact energized electrical conductors, shall be constructed of non-conductive material, or insulated with non-conductive sheath whose electrical and mechanical characteristics provide the equivalent protection of a handle constructed of non-conductive material.

(4) Powered concrete trowels. Powered and rotating-type concrete troweling machines that are manually guided shall be equipped with a control switch that will automatically shut off the power whenever the operator removes his hands from the equipment handles.

(5) Concrete buggies. Handles of buggies shall not extend beyond the wheels on either side of the buggy. Installation of knuckle guards on buggy handles is recommended.

(6) Pumpcrete systems. Pumpcrete or similar systems using discharge pipes shall be provided with pipe supports designed for one hundred (100) percent overload. compressed air hose in such systems shall be provided with positive fail safe joint connectors to prevent separation of sections when pressurized.

(7) Concrete buckets. (i) Concrete buckets equipped with hydraulic or pneumatically operated gates shall have positive safety latches or similar safety devices installed to prevent aggregate and loose material from accumulating on the top and sides of the bucket.

(ii) Riding of concrete buckets for any purpose shall be prohibited, and vibrator crews and all other persons shall be kept out from under concrete buckets suspended from cranes or cableways.

(8) When discharging on a slope, the wheels of a ready-mix truck shall be blocked and the brakes set to prevent movement.

(9) Nozzle men applying a cement, sand, and water mixture through a pneumatic hose shall be required to wear protective head and face equipment.

(e) Vertical shoring. (1) General requirements. (i) When temporary storage of reinforcing rods, material, or equipment on top of formwork becomes necessary, these areas shall be strengthened to meet the intended loads.

(ii) the sills or shoring shall be sound, rigid, and capable of carrying the maximum intended load.

(iii) All shoring equipment shall be inspected prior to erection to determine that it is as specified in the shoring layout. Any equipment found to be damaged shall not be used for shoring.

(iv) Erected shoring equipment shall be inspected immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged or weakened shall be immediately reinforced or reshored.

(v) Reshoring shall be provided when necessary to safely support slabs and beams after stripping, or where such members are subjected to super-imposed loads due to construction work done.

(2) Tubular welded frame shoring. (i) Metal tubular frames used for shoring shall not be loaded beyond the safe working load recommended by the manufacturer.

(ii) All locking devices on frames and braces shall be in good working order; coupling pins shall align the frame or panel legs; pivoted cross bracers shall have their center pivot in place; and all components shall be in a condition similar to that of original manufacturer.

(iii) When checking the erected shoring frames with the shoring layout, the spacing between towers and cross brace spacing shall not exceed that shown on the layout, and all locking devices shall be in the closed position.

(iv) Devices for attaching the external lateral stability bracing shall be securely fastened to the legs of the shoring frames.

(v) All base plates, shore heads, extension devices, or adjustment screws shall be in firm contact with the footing sill and the form.

37.2. Forms and shoring. (a) General provisions. (1) Formwork and shoring shall be designed, erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads that may be imposed upon it during placement of concrete.

(2) Drawings or plans showing the jack layout, formwork, shoring, working decks, and scaffolding, shall be available at the job site.

(3) Stripped forms and shoring shall be removed and stockpiled promptly after stripping, in all areas in which persons are required to work or pass. Protruding nails, wire ties, and other form accessories not necessary to subsequent work shall be pulled, cut, or other means taken to eliminate the hazard.

(4) Imposition of any construction loads on the partially completed structure shall not be permitted unless such loading has been considered in the design and approved by the engineer-architect.

(b) Vertical slip forms. (1) The steel rods or pipe on which the jacks climb or by which the forms are lifted shall be specifically designed for the purpose. Such rods shall be adequately braced where not encased in concrete.

(2) Jacks and vertical supports shall be positioned in such a manner that the vertical loads are distributed equally and do not exceed the capacity of the jacks.

(3) The jacks or other lifting devices shall be provided with mechanical dogs or other automatic holding devices to provide protection in case of failure of the power supply or the lifting mechanism.

(4) Lifting shall proceed steadily and uniformly and shall not exceed the predetermined safe rate of lift.

(5) Lateral and diagonal bracing of the forms shall be provided to prevent excessive distortion of the structure during the jacking operation.

(6) During jacking operations, the form structure shall be maintained in line and plumb.

(7) All vertical lift forms shall be provided with scaffolding or work platforms completely encircling the area of placement.

(c) Tube and coupler shoring. (1) Couplers (clamps) shall not be used if they are deformed, broken, or have defective or missing threads on bolts, or other defects.

(2) The material used for the couplers (clamps) shall be of a structural type such as drop-forged steel, malleable iron, or structural grade aluminum. Gray cast iron shall not be used.

(3) When checking the erected shoring towers with the shoring layout, the spacing between posts shall not exceed that shown on the layout, and all interlocking of tubular members and tightness of couples shall be checked.

(4) All base plates, shore heads, extension devices, or adjustment screws shall be in firm contact with the footing sill and the form material and shall be snug against the posts.

(d) Single post shores. (1) For stability, single post shores shall be horizontally braced in both the longitudinal and transverse directions, and diagonal bracing shall also be installed. Such bracing shall be installed as the shores are being erected.

(2) All base-plates or shore heads of single post shores shall be in firm contact with the footing sill and the form materials.

(3) Whenever single post shores are used in more than one (1) tier, the layout shall be designed and inspected by structural engineer.

(4) When formwork is at an angle, or sloping, or when the surfaces shored is sloping, the shoring shall be designed for such loading.

(5) Adjustment of single post shores to raise formwork shall not be made after concrete is in place.

(6) Fabricated single post shores shall not be used if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects. If they contain timber, they shall not be used if the timber is split, cut, has sections removed, is rotted, or otherwise structurally damaged.

(7) All timber and adjusting devices to be used for adjustable timber single post shores shall be inspected before erection.

(8) Timber shall not be used if it is split, cut, has sections removed, is rotted, or is otherwise structurally damaged.

(9) Adjusting devices shall not be used if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects.

(10) All nails used to secure bracing or adjustable timber single post shores shall be driven home and the point of the nail bent over if possible.

37.3. Definitions applicable to this subsection. (a) "Bull Float" A tool used to spread out and smooth the concrete.

(b) "Formwork" or Falsework" The total system of support for freshly placed concrete, including the mold sheathing which contacts the concrete as well as all supporting members, hardware, and necessary bracing.

(c) "Guy" A line that steadies a high piece or structure by pulling against an off-center load.

(d) "Shore" A supporting member that resists a compressive force imposed by a load.

(e) "Vertical Slip Forms" forms which are jacked vertically and continuously during placing of the concrete.

§36-23-38. Steel Erection.

38.1. Flooring requirements. (a) Permanent flooring -- skeleton steel construction in tiered buildings. (1) The permanent floors shall be installed as the erection of structural members progresses, and there shall be not more than eight (8) stories between the erection floor and the uppermost permanent floor, except where the structural integrity is maintained as a result of the design.

(2) At no time shall there be more than four (4) floors or forty-eight (48) feet of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

(b) Temporary flooring. Skeleton steel construction in tiered buildings. (1) (i) The derrick or erection floor shall be solidly planked or decked over its entire surface except for access openings. Planking or decking of equivalent strength, shall be of proper thickness to carry the working load. Planking shall be not less than two (2) inches thick full size undressed, and shall be laid tight and secured to prevent movement.

(ii) On buildings or structures not adaptable to temporary floors, and where scaffolds are not used, safety nets shall be installed and maintained whenever the potential fall distance exceeds two (2) stories or thirty (30) feet. The nests shall be hung with sufficient clearance to prevent contacts with the surface of structures below.

(iii) Floor periphery -- safety railing. A safety railing of one-half (1/2) inch wire rope or equal shall be installed approximately forty-two (42) inches high, around the periphery of all temporary-planked or temporary metal-decked floors of tier buildings and other structural steel assembly.

(2) (i) Where skeleton steel erection is being done, a tightly planked and substantial floor shall be maintained within two (2) stories or thirty (30) feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed, except when gathering and stacking temporary floor planks on a lower floor, in preparation for transferring such planks for use on an upper floor. Where such a floor is not practicable, paragraph (b)(1)(ii) of this section applies.

(ii) When gathering and stacking temporary floor planks, the planks shall be removed successively, working toward the last panel of the temporary floor so that the work is always done from the planked floor.

(iii) When gathering and stacking temporary floor planks from the last panel, the employees assigned to such work shall be protected by safety belts with safety lines attached to a catenary line or other substantial anchorage.

(c) Flooring. Other construction. (1) In the erection of a building having double wood floor construction, the rough flooring shall be completed as the building progresses, including the tier below the one on which floor hoists are being installed.

(2) For single wood floor or other flooring systems, the floor immediately below the story where the floor hoists are being installed shall be kept planked or decked over.

38.2. Structural steel assembly. (a) During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than two (2) bolts, or the equivalent at each connection and drawn of wrench tight.

(b) Open web steel hoists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.

(c) (1) In steel framing, where bar hoists are utilized, and columns are not framed in at least two (2) directions with structural steel members, a bar hoist shall be field-bolted at columns to provide lateral stability during construction.

(2) Where long span hoists or trusses, forty (40) feet or longer, are used, a center row of bolted bridging shall be installed to provide lateral stability during construction prior to slacking of hoisting line.

(3) No load shall be placed on open web steel hoists until these security requirements are met.

38.3. Bolting, riveting, fitting-up, and plumbing-up. (a) General requirements. (1) Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.

(2) Pneumatic hand tools shall be disconnected from the power source, and pressure in hose lines shall be released, before any adjustments or repairs are made.

(3) Air line hose sections shall be tied together except when quick disconnect couplers are used to join sections.

(4) Eye protection shall be provided in accordance with these regulations.

(b) Bolting. (1) When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.

(2) Impact wrenches shall be provided with a locking device for retaining the socket.

(c) Riveting. (1) Riveting shall not be done in the vicinity of combustible material unless precautions are taken to prevent fire.

(2) When rivet heads are knocked off, or backed out, means shall be provided to keep them from falling.

(3) A safety wire shall be properly installed on the snap and on the handle of the pneumatic riveting hammer and shall be used at all times. The wire size shall be not less than No. 9 (B & S gauge), leaving the handle and annealed No. 14 on the snap, or equivalent.

(d) Plumbing-up. (1) Connections of the equipment used in plumbing-up shall be properly secured.

(2) The turnbuckles shall be secured to prevent unwinding while under stress.

(3) Plumbing-up guys related equipment shall be placed so that employees can get at the connection points.

(4) Plumbing-up guys shall be removed only under the supervision of a competent person.

(e) Wood planking shall be of proper thickness to carry the working load, but shall be not less than two (2) inches thick full size undressed, exterior grade plywood, at least three-quarter (3/4) inch thick, or equivalent material.

(f) Metal decking of sufficient strength shall be laid tight and secured to prevent movement.

- (g) Planks shall overlap the bearing on each end by a minimum of twelve (12) inches.
- (h) Wire mesh, exterior plywood, or equivalent, shall be used around columns where planks do not fit tightly.
- (i) Provisions shall be made to secure temporary flooring against displacement.
- (j) All unused openings in floors, temporary or permanent, shall be completely planked over or guarded.
- (k) Employees shall be provided with safety belts when they are working on float scaffolds.

§36-23-39. Demolition.

39.1. Preparatory operations. (a) Prior to permitting employees to start demolition operations, an engineering survey shall be made by a competent person of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structure where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed.

(b) When employees are required to work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, the walls or floor shall be shored or braced.

(c) All electric, gas, water, steam, sewer and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company which is involved shall be notified in advance.

(d) If it is necessary to maintain any power, water or other utilities during the demolition, such lines shall be temporarily relocated, as necessary, and protected.

(e) It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.

(f) Where a hazard exists from fragmentation of glass, such hazards shall be removed.

(g) Where a hazard exists to employees falling through wall openings, the opening shall be protected to a height of approximately forty-two (42) inches.

(h) When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than forty-two (42) inches high and not less than six (6) feet back from the projected edge of the opening above. Signs, warning of the hazard of falling materials shall be posted at each level and all areas shall be guarded against entry. Removal shall not be permitted in this lower area until debris handling ceases above.

(i) All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

(j) Except for the cutting of holes in floors for chutes, holes through which to drop materials, preparation of storage space, and similar necessary preparatory work, the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.

(k) Employee entrances to multi-story structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of eight (8) feet. All such canopies shall be at least two (2) feet wider than the building entrances or openings (one (1) foot wider on each side thereof), and shall be capable of sustaining a load of one hundred fifty (150) pounds per square foot.

39.2. Stairs, passageways, and ladders. (a) Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used. Other access ways shall be entirely closed at all times.

(b) All stairs, passageways, ladders and incidental equipment thereto, which are covered by this section shall be periodically inspected during each shift and maintained in a clean safe condition.

(c) In a multi-story building, when a stairwell is being used, it shall be properly illuminated by either natural or artificial means, and completely and substantially covered over at a point not less than two (2) floors below the floor on which work is being performed, and access to the floor where the work is in progress shall be through a properly lighted, protected, and separate passageway.

39.3. Chutes. (a) No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected.

(b) All material chutes, or sections thereof, at an angle of more than forty-five (45) degrees from the horizontal, shall be entirely enclosed, except for openings equipped with closures at or about floor level for the insertion of materials. The openings shall not exceed forty-eight (48) inches in height measured along the wall of the chute. At all stories below the top floor, such openings shall be kept closed when not in use.

(c) A substantial gate shall be installed in each chute at or near the discharge end. A competent employee shall be assigned to control the operation of the gate, and the backing and loading of trucks.

(d) When operations are not in progress, the area surrounding the discharge end of the chute shall be securely closed off.

(e) Any chute opening, into which workmen dump debris, shall be protected by a substantial guardrail approximately forty-two (42) inches above the floor or other surface on which the men stand to dump the material. Any space between the chute and the edge of openings in the floors through which it passes shall be solidly covered over.

(f) Where the material is dumped from mechanical equipment or wheelbarrows a securely attached toeboard or bumper, not less than four (4) inches thick and six (6) inches high, shall be provided at each chute opening.

(g) Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials or debris loaded therein.

39.4. Removal of materials through floor openings. Any openings cut in a floor for the disposal of materials shall be no larger in size than twenty-five (25) percent of the aggregate of the total floor area, unless the lateral supports of the removed flooring remain in place. Floors weakened or otherwise made unsafe by demolition operations shall be shored to carry safely the intended imposed load from demolition operations.

39.5. Removal of walls, masonry sections, and chimneys. (a) Masonry walls, or other sections of masonry, shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacities of the floors.

(b) No wall section, which is more than one (1) story in height, shall be permitted to stand alone without lateral bracing, unless such wall was originally designed and constructed to stand without such lateral support, and is in a condition safe enough to be self-supporting. All walls shall be left in a stable condition at the end of each shift.

(c) Employees shall not be permitted to work on the top of a wall when weather conditions constitute a hazard.

(d) Structural or load-supporting members on any floor shall not be cut or removed until all stories above such a floor have been demolished and removed. This provision shall not prohibit the cutting of floor beams for the disposal of materials or for the installation of equipment, provided that the requirements of Section 39.4 and 39.6 of these regulations are complied with.

(e) Floor openings within ten (10) feet of any wall being demolished shall be planked solid, except when employees are kept out of the area below.

(f) In buildings of "Skeleton-Steel" construction, the steel framing may be left in place during the demolition of masonry. Where this is done, all steel beams, girders, and similar structural supports shall be cleared of all loose material as the masonry demolition progresses downward.

(g) Walkways or ladders shall be provided to enable employees to safely reach or leave any scaffold or wall.

(h) Walls, which serve as retaining walls to support earth or adjoining structures, shall not be demolished until such earth has been properly braced or adjoining structures have been properly underpinned.

(i) Walls which are to serve as retaining walls against which debris will be piled, shall not be so used unless capable of safely supporting the imposed load.

39.6. Manual removal of floors. (a) Openings cut in a floor shall extend the full span of the arch between supports.

(b) Before demolishing any floor arch, debris and other material shall be removed from such arch and other adjacent floor area. Planks not less than two (2) inches x ten (10) inches in cross section, full size undressed, shall be provided for, and shall be used by employees to stand on while breaking down floor arches between beams. Such planks shall be so located as to provide a safe support for the workmen should the arch between the beams collapse. The open space between planks shall not exceed sixteen (16) inches.

(c) Safe walkways, not less than eighteen (18) inches wide, formed of planks not less than two (2) inches thick if wood, or of equivalent strength if metal, shall be provided and used by workmen when necessary to enable them to reach any point without walking upon exposed beams.

(d) Stringers of ample strength shall be installed to support the flooring planks, and the ends of such stringers shall be supported by floor beams or girders, and not be floor arches alone.

(e) Planks shall be laid together over solid bearings with the ends overlapping at least one (1) foot.

(f) When floor arches are being removed, employees shall not be allowed in the area directly underneath, and such an area shall be barricaded to prevent access to it.

(g) Demolition of floor arches shall not be started until they, and the surrounding floor area for a distance of twenty (20) feet, have been cleared of debris and any other necessary materials.

39.7. Removal of walls, floors, and material with equipment. (a) Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.

(b) Floor openings shall have curbs or stop-logs to prevent equipment from running over the edge.

(c) Mechanical equipment used shall meet the requirements specified in these rules and regulations.

39.8. Storage. (a) The storage of waste material and debris on any floor shall not exceed the allowable floor loads.

(b) In buildings having wooden floor construction, the flooring boards may be removed from not more than one (1) floor above grade to provide storage space for debris, providing falling material is not permitted to endanger the stability of the structure.

(c) When wood floor beams serve to brace interior walls or freestanding exterior walls, such beams shall be left in place until other equivalent support can be installed to replace them.

(d) Floor arches to an elevation not more than twenty-five (25) feet above grade, may be removed to provide storage area for debris; Provided, that such removal does not endanger the stability of the structure.

(e) Storage space into which material is dumped shall be blocked off, except for openings necessary for the removal of material. Such openings shall be kept closed at all times when material is not being removed.

39.9. Removal of steel construction. (a) When floor arches have been removed, planking shall be provided for the workers engaged in razing the steel framing.

(b) Cranes, derricks, and other hoisting equipment used shall meet the requirements specified in these rules and regulations.

(c) Steel construction shall be dismantled column length by column length, and tier by tier (columns may be in two (2) story lengths).

(d) Any structural member being dismembered shall not be overstressed.

39.10. Mechanical demolition. (a) No workers shall be permitted in any area, which can be adversely affected by demolition operations, when balling or clamming is being performed. Only those workers necessary for the performance of the operations shall be permitted in this area at any other time.

(b) The weight of the demolition ball shall not exceed fifty (50) percent of the crane's rated load, based on the length of the boom and the maximum angle of operation at which the demolition ball will be used, or it shall not exceed twenty-five (25) percent of the nominal breaking strength of the line by which it is suspended, whichever results in a lesser value.

(c) The crane boom and loadline shall be as short as possible.

(d) The ball shall be attached to the loadline with a swivel-type connection to prevent twisting of the loadline, and shall be attached by positive means in such a manner that the weight cannot become accidentally disconnected.

(e) When pulling over walls or portions thereof, all steel members affected shall have been previously cut free.

(f) All roof cornices or other such ornamental stonework shall be removed prior to pulling walls over.

(g) During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

39.11. Selective demolition by explosives. Selective demolition by explosives shall be conducted in accordance with Section 40 of these regulations.

§36-23-40. Blasting and The Use of Explosives.

40.1. General provisions. (a) After the effective date of the certified surface blasters rules and regulations, all persons performing blasting operations on construction projects shall be certified. The employer shall permit only authorized and qualified persons to handle and use explosives.

(b) Smoking, firearms, matches, open flame lamps, and other fires, flame or heat producing devices and sparks shall be prohibited in or near explosive magazines or while explosives are being handled, transported or used.

(c) No person shall be allowed to handle or use explosives while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.

(d) All explosives shall be accounted for at all times. Explosives not being used shall be kept in a locked magazine, unavailable to persons not authorized to handle them. The employer shall maintain an inventory and use records of all explosives. Appropriate authorities shall be notified of any loss, theft, or unauthorized entry into a magazine.

(e) No explosives or blasting agents shall be abandoned.

(f) No fire shall be fought where the fire is in imminent danger of contact with explosives. All employees shall be removed to a safe area and the fire area guarded against intruders.

(g) Original containers, or Class 2 magazine, shall be used for taking detonators and other explosives from storage magazines to the blasting area.

(h) When blasting is done in congested areas or in proximity to a structure, railway, or highway, or any other installation that may be damaged, the blaster shall take special precautions in the loading, delaying, initiation, and confinement of each blast with mats or other methods so as to control the throw of fragments, and thus prevent bodily injury to employees.

(i) Employees authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution including, but not limited to visual and audible warning signals, flags, or barricades, to ensure employee safety.

(j) Insofar as possible, blasting operations above ground shall be conducted between sunup and sundown.

(k) Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous electricity. These precautions shall include:

(1) Detonators shall be short-circuited in holes which have been primed and shunted until wired into the blasting circuit;

(2) The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm;

(3) (i) The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within one thousand (1,000) feet of blasting operations. Whenever adherence to the one thousand (1,000) foot distance would create an operational handicap, a competent person shall be consulted to evaluate the particular situation, and alternative provisions may be made which are adequately designed to prevent any premature firing of electric blasting caps. A description of any such alternatives shall be reduced to writing and shall be certified as meeting the purposes of this subdivision by the competent person consulted. The description shall be maintained at the construction site during the duration of the work and shall be available for inspection by representatives of the Secretary of Labor.

(ii) Specimens of signs which would meet the requirements of subdivision (i) of this subparagraph (3) are the following (See Table 49):

(4) Ensuring that mobile radio transmitters which are less than one hundred (100) feet away from electric blasting caps, in other than original containers shall be de-energized and effectively locked.

(5) Compliance with the recommendations of the Institute of the Makers of Explosives with regard to blasting in the vicinity of radio transmitters as stipulated in radio frequency energy-a potential hazard in the use of electric blasting caps, IME publication No. 20, March, 1971.

(l) Empty boxes and paper and fiber packing materials, which have previously contained high explosives, shall not be used again for any purpose, but shall be destroyed by burning at an approved location.

(m) Explosives, blasting agents, and blasting supplies that are obviously deteriorated or damaged shall not be used.

(n) Delivery and issue of explosives shall only be made by and to authorized persons and into authorized magazines or approved temporary storage or handling areas.

(o) Blasting operations in the proximity of overhead power lines, communication lines, utility services, or other services and structures shall not be carried on until the operators and/or owners have been notified and measures for safe control have been taken.

(p) The use of black powder shall be prohibited.

(q) All loading and firing shall be directed and directly supervised by a competent persons thorough experienced in this field.

(r) All blasts shall be fired electrically with an electric blasting machine or properly designed electric power source, except as provided in paragraphs (a) and (p) of Section 40.8 of these regulations.

40.2. Explosives and blasting agents. (a) Buildings used for the mixing of blasting agents shall conform to the requirements of this section.

(b) Buildings shall be of noncombustible construction or sheet metal on wood studs.

(c) Floors in a mixing plant shall be of concrete or other nonabsorbent materials.

(d) All fuel oil storage facilities shall be separated from the mixing plant and located in such a manner that in case of tank rupture, the oil will drain away from the mixing plant building.

(e) The building shall be well ventilated.

(f) Heating units which do not depend on combustion processes, when properly designed and located, may be used in the building. All direct sources of heat shall be provided exclusively from units located outside the mixing building.

(g) All internal-combustion engines used for electric power generation shall be located outside the mixing plant building, or shall be properly ventilated and isolated by a fire wall. The exhaust systems on all such engines shall be located so any spark emission cannot be a hazard to any materials in or adjacent to the plant.

(h) Buildings used for the mixing of water gels shall conform to the requirements of this subdivision.

(i) Buildings shall be of noncombustible construction or sheet metal on wood stubs.

(j) Floors in a mixing plant shall be of concrete or of other nonabsorbent materials.

(k) Where fuel oil is used all fuel oil storage facilities shall be separated from the mixing plant and located in such a manner that in case of tank rupture, the oil will drain away from the mixing plant building.

(l) The building shall be well ventilated.

(m) Heating units that do not depend on combustion processes, when properly designed and located, may be used in the building. All direct sources of heat shall be provided exclusively from units located outside of the mixing building.

(n) All internal-combustion engines used for electric power generation shall be located outside the mixing plant building, or shall be properly ventilated and isolated by a fire wall. the exhaust systems on all such engines shall be located so any spark emission cannot be a hazard to any materials in or adjacent to the plant.

40.3. Blaster qualifications. (a) A blaster shall be able to understand and given written and oral orders.

(b) A blaster shall be in good physical condition and not be addicted to narcotics, intoxicants, or similar types of drugs.

(c) A blaster shall be qualified, by training, knowledge, and experience, in the field of transporting, storing, handling, and use of explosives, and have a working knowledge of State and local laws and regulations which pertain to explosives.

(d) Blasters shall be required to furnish satisfactory evidence of competency in handling explosives and performing in a safe manner the type of blasting that will be required.

(e) The blaster shall be knowledgeable and competent in the use of each type of blasting method used.

40.4. Surface transportation of explosives. (a) Transportation of explosives shall meet the provisions of the department of transportation's regulations contained in 14 CFR Part 103, air transportation; 46 CFR Parts 146-149, water carriers; 49 CFR Parts 171-179, highways and railways; 49 CFR Part 180, pipelines; and 49 CFR Parts 390-397, motor carriers. Motor vehicles or conveyances transporting explosives shall only be driven by, and be in charge of, a licensed driver who is physically fit. He shall be familiar with the local, State, and federal regulations governing the transportation of explosives.

(b) No person shall smoke, or carry matches or any other flame-producing device, nor shall firearms or loaded cartridges be carried while in or near a motor vehicle or conveyance transporting explosives.

(c) Explosives, blasting agents, and blasting supplies shall not be transported with other materials or cargoes. Blasting caps (including electric) shall not be transported in the same vehicle with other explosives.

(d) Vehicles used for transporting explosives shall be strong enough to carry the load without difficulty, and shall be in good mechanical condition.

(e) When explosives are transported by a vehicle with an open body, a Class 2 magazine or original manufacturer's container shall be securely mounted on the bed to contain the cargo.

(f) All vehicles used for the transportation of explosives shall have tight floors and any exposed spark-producing metal on the inside of the body shall be covered with wood, or other non-sparking material, to prevent contact with containers of explosives.

(g) Every motor vehicle or conveyance used for transporting explosives shall be marked or placarded on both sides, the front, and the rear with the word "Explosives" in red letters, not less than four (4) inches in height, in white background. In addition to such marking or placarding, the motor vehicle or conveyance may display, in such a manner that it will be readily visible from all directions, a red flag eighteen (18) inches x thirty (30) inches, with the word "Explosives" painted, stamped, or sewed thereon, in white letters, at least six (6) inches in height.

(h) Each vehicle used for transportation of explosives shall be equipped with a fully charged fire extinguisher, in good condition. An approved extinguisher of not less than ten (10) ABC rating will meet the minimum requirement. The driver shall be trained in the use of the extinguisher on his vehicle.

(i) Motor vehicles or conveyances carrying explosives, blasting agents, or blasting supplies, shall not be taken inside a garage or shop for repairs or servicing.

(j) No motor vehicle transporting explosives shall be left unattended.

40.5. Storage of explosives and blasting agents. (a) Explosives and related materials shall be stored in approved facilities required under the applicable provisions of the internal revenue service regulations contained in 26 CFR 181, commerce in explosives.

(b) Blasting caps, electric blasting caps, detonating primers, and primed cartridges shall not be stored in the same magazine with other explosives or blasting agents.

(c) Smoking and open flames shall not be permitted within fifty (50) feet of explosives and detonator storage magazines.

40.6. Loading of explosives or blasting agents. (a) Procedures that permit safe and efficient loading shall be established before loading is started.

(b) All drill holes shall be sufficiently large to admit freely the insertion of the cartridges of explosives.

(c) Tamping shall be done only with wood rods or plastic tamping poles without exposed metal parts, but non-sparking metal connectors may be used for jointed poles. Violent tamping shall be avoided. The primer shall never be tamped.

(d) No holes shall be loaded except those to be fired in the next round of blasting. After loading, all remaining explosives and detonators shall be immediately returned to an authorized magazine.

(e) Drilling shall not be started until all remaining butts of old holes are examined for unexploded charges, and if any are found, they shall be refired before work proceeds.

(f) No person shall be allowed to deepen drill holes which have contained explosives or blasting agents.

(g) No explosives or blasting agents shall be left unattended at the blast site.

(h) Machines and all tools not used for loading explosives into bore holes shall be removed from the immediate location of holes before explosives are delivered. Equipment shall not be operated within fifty (50) feet of loaded holes.

(i) No activity of any nature other than that which is required for loading holes with explosives shall be permitted in a blast area.

(j) Power lines and portable electric cables for equipment being used shall be kept a safe distance from explosives or blasting agents being loaded into drill holes. Cables in the proximity of the blast area shall be de-energized and locked out by the blaster.

(k) Holes shall be checked prior to loading to determine depth and conditions. Where a hole has been loaded with explosives but the explosives have failed to detonate, there shall be no drilling within fifty (50) feet of the hole.

(l) When loading a long line of holes with more than one (1) loading crew, the crews shall be separated by practical distance consistent with efficient operation and supervision of crews.

(m) No explosives shall be loaded or used underground in the presence of combustible gases or combustible dusts.

(n) No explosives other than those in fume Class 1 shall be used; however, explosives complying with the requirements of fume Class 2 and fume Class 3 may be used if adequate ventilation has been provided.

(o) All blast holes in openwork shall be stemmed to the collar or to a point which will confine the charge.

(p) Warning signs, indicating a blast area, shall be maintained at all approaches to the blast area. The warning sign lettering shall be not less than four (4) inches in height on a contrasting background.

(q) A bore hole shall never be sprung when it is adjacent to or near a hole that is loaded. Flashlight batteries shall not be used for springing holes.

(r) Drill holes which have been sprung or chambered, and which are not water filled, shall be allowed to cool before explosives are loaded.

(s) No loaded holes shall be left unattended or unprotected.

(t) The blaster shall keep an accurate, up-to-date record of explosives, blasting agents, and blasting supplies used in a blast and shall keep an accurate running inventory of all explosives and blasting agents stored on the operation.

40.7. Explosives and blasting agents. (a) Semi-conductive hose. Semi-conductive hose a hose with an electrical resistance high enough to limit flow of stray electric currents to safe levels, yet not so high as to prevent drainage of static electric charges to ground; hose of not more than two (2) megohms resistance over its length and of not less than five thousand (5,000) ohms per foot meets the requirements.

(b) When loading blasting agents pneumatically over electric blasting caps, semi-conductive delivery hose shall be used and the equipment shall be bonded and grounded.

40.8. Initiation of explosive charges--electric blasting. (a) Electric blasting caps shall not be used where sources of extraneous electricity make the use of electric blasting caps dangerous. Blasting cap leg wires shall be kept short-circuited (shunted) until they are connected into the circuit for firing.

(b) Before adopting any system of electrical firing, the blaster shall conduct a thorough survey for extraneous currents, and all dangerous currents shall be eliminated before any holes are loaded.

(c) In any single blast using electric blasting caps, all caps shall be of the same style or function, and of the same manufacture.

(d) Electric blasting shall be carried out by using blasting circuits or power circuits in accordance with the electric blasting cap manufacturer's recommendations, or an approved contractor or his designated representative.

(e) When firing a circuit of electric blasting caps, care must be exercised to ensure that an adequate quantity of delivered current is available, in accordance with the manufacturer's recommendations.

(f) Connecting wires and lead wires shall be insulated single solid wires of sufficient current-carrying capacity.

(g) Bus wires shall be solid single wires of sufficient current-carrying capacity.

(h) When firing electrically, the insulation on all firing lines shall be adequate and in good condition.

(i) A power circuit used for firing electric blasting caps shall not be grounded.

(j) When firing from a power circuit, the firing switch shall be locked in the open or "Off" position at all times, except when firing. It shall be so designed that the firing lines to the cap circuit are automatically short circuited when the switch is in the "Off" position. Keys to this switch shall be entrusted only to the blaster.

(k) Blasting machines shall be in good condition and the efficiency of the machine shall be tested periodically to make certain that it can deliver power at its rated capacity.

(l) When firing with blasting machines, the connections shall be made as recommended by the manufacturer of the electric blasting caps used.

(m) The number of electric blasting caps connected to a blasting machine shall not be in excess of its rated capacity. Furthermore, in primary blasting, a series circuit shall contain no more caps than the limits recommended by the manufacturer of the electric blasting caps in use.

(n) The blaster shall be in charge of the blasting machines, and no other person shall connect the leading wires to the machine.

(o) Blasters, when testing circuits to charged holes, shall use only blasting galvanometers equipped with a silver chloride cell especially designed for this purpose.

(p) Whenever the possibility exists that a leading line or blasting wire might be thrown over a live power line by the force of an explosion, care shall be taken to see that the total length of wires are kept too short to hit the lines, or that the wires are securely anchored to the ground. If neither of these requirements can be satisfied, a non-electric system shall be used.

(q) In electrical firing, only the man making leading wire connections shall fire the shot. All connections shall be made from the bore hole back to the source of firing current, and the leading wires shall remain shorted and not be connected to the blasting machine or other source of current until the charge is to be fired.

(r) After firing an electric blast from a blasting machine, the leading wires shall be immediately disconnected from the machine and short-circuited.

40.9. Use of safety fuse. (a) Safety fuse shall only be used where sources of extraneous electricity make the use of electric blasting caps dangerous. The use of a fuse that has been hammered or injured in any way shall be forbidden.

(b) The handling of a fuse on nails or other projections which will cause a sharp bend to be formed in the fuse is prohibited.

(c) Before capping safety fuse, a short length shall be cut from the end of the supply reel so as to assure a fresh cut end in each blasting cap.

(d) Only a cap crimper of approved design shall be used for attaching blasting caps to safety fuse. Crimpers shall be kept in good repair and accessible for use.

(e) No unused cap or short capped fuse shall be placed in any hole to be blasted; such unused detonators shall be removed from the working place and destroyed.

(f) No fuse shall be capped, or primers made up, in any magazine or near any possible source of ignition.

(g) No one shall be permitted to carry detonators or primers of any kind on his person.

(h) The minimum length of safety fuse to be used in blasting shall be as required by state law, but shall not be less than thirty (30) inches.

(i) At least two (2) men shall be present when multiple cap and fuse blasting is done by hand lighting methods.

(j) Not more than twelve (12) fuses shall be lighted by each blaster when hand lighting devices are used. However, when two (2) or more safety fuses in a group are lighted as one (1) by means of igniter cord, or other similar fuse-lighting devices, they may be considered as one (1) fuse.

(k) The so-called "Drop Fuse" method of dropping or pushing a primer or any explosive with a lighted fuse attached is forbidden.

(l) Cap and fuse shall not be used for firing mudcap charges unless charges are separated sufficiently to prevent one (1) charge from dislodging other shots in the blast.

(m) When blasting with safety fuses, consideration shall be given to the length and burning rate of the fuse. Sufficient time, with a margin of safety, shall always be provided for the blaster to reach a place of safety.

40.10. Use of detonating cord. (a) Care shall be taken to select a detonating cord consistent with the type and physical condition of the bore hole and stemming and the type of explosives used.

(b) Detonating cord shall be handled and used with the same respect and care given other explosives.

(c) The line of detonating cord extending out of a bore hole or from a charge shall be cut from supply spool before loading the remainder of the bore hole or placing additional charges.

(d) Detonating cord shall be handled and used with care to avoid damaging or severing the cord during and after loading and hooking up.

(e) Detonating cord connections shall be competent and positive in accordance with approved and recommended methods. Knot-type or other cord-to-cord connections shall be made only with detonating cord, in which the explosive cord is dry.

(f) All detonating cord trunk lines and branch lines shall be free of loops, sharp kinks, or angles that direct the cord back toward the oncoming line of detonation.

(g) All detonating cord connections shall be inspected before firing the blast.

(h) When detonating cord millisecond-delay connectors or short-interval-delay electric blasting caps are used with detonating cord, the practice shall conform strictly to the manufacturer's recommendations.

(i) When connecting a blasting cap or an electric blasting cap to detonating cord, the cap shall be taped or otherwise attached securely along the side or the end of the detonating cord, with the end of the cap containing the explosive charge pointed in the direction in which the detonation is to proceed.

(j) Detonators for firing the trunk line shall not be brought to the loading area nor attached to the detonating cord until everything else is in readiness for the blast.

40.11. Firing the blast. (a) A code of blasting signals shall be posted on one (1) or more conspicuous places at the operation, and all employees shall be required to familiarize themselves with the code and conform to it. Danger signs shall be placed at suitable locations.

(b) Before a blast is fired, a loud warning signal shall be given by the certified blaster in charge, who has made certain that all surplus explosives are in a safe place and all employees, vehicles, and equipment are at a safe distance, or under sufficient cover.

(c) Flagmen shall be safely stationed on highways which pass through the danger zone so as to stop traffic during blasting operations.

(d) It shall be the duty of the blaster to fix the time of blasting.

(e) Before firing an underground blast, warning shall be given, and all possible entries into the blasting area, and any entrances to any working place where a drift, raise, or other opening is about to hole through, shall be carefully guarded. The blaster shall make sure that all employees are out of the blast area before firing a blast.

TABLE U-1

Warning Signal - A 1-minute series of long blasts 5 minutes prior to blast signal.

Blast Signal - A series of short blasts 1 minute prior to the shot.

All Clear Signal - A prolonged blast following the inspection of blast area.

40.12 Inspection after blasting. (a) Immediately after the blast has been fired, the firing line shall be disconnected from the blasting machine, or where power switches are used, they shall be locked open or in the off position.

(b) Sufficient time shall be allowed, not less than fifteen (15) minutes in tunnels, for the smoke and fumes to leave the blasted area before returning to the shot. An inspection of the area and the surrounding rubble shall be made by the certified blaster to determine if all charges have been exploded before employees are allowed to return to the operation, and in tunnels, after the muck pile has been wetted down.

40.13. Misfires. (a) If a misfire is found, the blaster shall provide proper safeguards for excluding all employees from the danger zone.

(b) No other work shall be done except that necessary to remove the hazard of the misfire and only those employees necessary to do the work shall remain in the danger zone.

(c) No attempt shall be made to extract explosives from any charged or misfired hole; a new primer shall be put in and the hole reblasted. If misfiring of the misfired hole presents a hazard, the explosives may be removed by washing out with water, or, where the misfire is under water, blown out with air.

(d) If there are any misfires while using cap and fuse, all employees shall remain away from the charge for at least one (1) hour. Misfires shall be handled under the direction of the person in charge of the blasting. All wires shall be carefully traced and a search made for unexploded charges.

(e) No drilling, digging, or picking shall be permitted until all missed holes have been detonated or the authorized representative has approved that work can proceed.

40.14. Definitions applicable to this subsection. (a) "Approved Storage Facility" a facility for the storage of explosive material conforming to the requirements of this subpart and covered by a license or permit.

(b) "Blast Area" the area in which explosive loading and blasting operations are being conducted.

(c) "Blaster" the person or persons authorized to use explosives for blasting purposes and meeting the qualifications in these rules and regulations.

(d) "Blasting Agent" a blasting agent is any material or mixture consisting of a fuel and oxidizer used for blasting, but not classified an explosive and in which none of the ingredients is classified as an explosive provided the furnished (mixed) product cannot be detonated with a No. 8 test blasting cap when confined. A common blasting agent presently in use is a mixture of ammonia nitrate (NH₄ N₀₃) and carbonaceous combustibles, such as fuel oil or coal, and may either be procured, premixed and packaged from explosive companies or mixed in the field.

(e) "Blasting Cap" a metallic tube closed at one (1) end, containing a charge of one (1) or more detonating compounds, and designed for and capable of detonation from the sparks or flame from a safety fuse inserted and crimped into the open end.

(f) "Block Holing" the breaking of boulders or blasting agents by firing a charge of explosives that has been loaded in a drill hole.

(g) "Conveyance" any unit for transporting explosives or blasting agents, including but not limited to trucks, trailers, rail cars, barges and vessels.

(h) "Detonating Cord" a flexible cord containing a center core of high explosives which when detonated, will have sufficient strength to detonate other cap-sensitive explosives with which it is in contact.

(i) "Detonator" blasting caps, electric blasting caps, delay electric blasting caps, and non-electric delay blasting caps.

(j) "Electric Blasting Cap" a blasting cap designed for and capable of detonation by means of an electric current.

(k) "Electric Blasting Circuitry" (1) Bus wire. An expandable wire, used in parallel or series, in parallel circuits, to which are connected the leg wires of electric blasting caps.

(2) Connecting wire. An insulated expendable wire used between electric blasting caps and the leading wires or between the bus wire and the leading wires.

(3) Leading wire. An insulated wire used between the electric power source and the electric blasting cap circuit.

(4) Permanent blasting wire. A permanently mounted insulated wire used between the electric power source and the electric blasting circuit.

(l) "Electric Delay Blasting Caps" caps designed to detonate at a predetermined period of time after energy is applied to the ignition system.

(m) "Explosives" (1) Any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion; that is, with substantially instantaneous release of gas and heat.

(2) All material which is classified as Class A, Class B, and Class C explosives by the West Virginia department of mines.

(3) Classification of explosives by the West Virginia department of mines is as follows:

Class A explosives. Possessing detonating hazard, such as dynamite, nitroglycerin, picric acid, lead azide, fulminate of mercury, black powder, blasting caps, and detonating primers.

Class B explosives. Possessing flammable hazard, such as propellant explosives, including some smokeless propellants.

Class C explosives. Include certain types of manufactured articles which contain Class A or Class B explosives, or both, as components, but in restricted quantities.

(n) "Fuse Lighters" special devices for the purpose of igniting safety fuse.

(o) "Magazine" any building or structure, other than an explosives manufacturing building, used for the storage of explosives.

(p) "Misfire" an explosive charge which failed to detonate.

(q) "Mud-capping" (sometimes known as bulldozing, adobe blasting, or adobying). The blasting of boulders by placing a quantity of explosives in a drill hole.

(r) "Non-electric Delay Blasting Cap" a blasting cap with an integral delay element in conjunction with and capable of being detonated by a detonation impulse or signal from miniaturized detonating cord.

(s) Primary Blasting" the blasting operation by which the original rock formation is dislodged from its natural location.

(t) "Primer" a cartridge or container of explosives into which a detonator or detonating cord is inserted or attached.

(u) "Safety Fuse" a flexible cord containing an integral burning medium by which fire is conveyed at a continuous and uniform rate for the purpose of firing blasting caps.

(v) "Secondary Blasting" the reduction of oversize material by the use of explosives to the dimension required for handling, including mud-capping and blockholding.

(w) "Stemming" a suitable inert incombustible material or device used to confine or separate explosives in a drill hole, or to cover explosives in mud-capping.

(x) "Springing" the creation of a pocket in the bottom of a drill hole by the use of a moderate quantity of explosives in order that larger quantities of explosives may be inserted therein.

(y) "Water Gels, or Slurry Explosives" a wide variety of materials used for blasting. They all contain substantial proportions of water and high proportions of ammonium nitrate, some of which is in solution in the water.

Two (2) broad classes of water gels are:

- (1) those which are sensitized by a material classed as a explosive, such as TNT or smokeless powder; and
- (2) those which contain no ingredient classified as an explosive; these are sensitized with metals such as aluminum or with other fuels. Water gels may be premixed at an explosive plant or mixed at the site immediately before delivery into the bore hole.

§36-23-41. Rollover Protective Structures; Overhead Protection.

41.1. Rollover protective structures (ROPS) for material handling equipment. All such equipment shall be equipped with rollover protective structures which meet the minimum performance standards prescribed in MSHA Safety and Health Regulations for Construction, 1926.1000.

TITLE 36 SERIES 24

RECORD KEEPING OF ALL CERTIFIED PERSONS EMPLOYED IN ALL MINES

§36-24-1 General.

1.1 Scope. Rules and Regulations Governing the Record Keeping of All Certified Persons Employed in All Mines Throughout the State of West Virginia.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. April 22, 1983

1.4 Effective Date. June 5, 1983

1.5 Findings and Conclusions. (a) Finding of Facts. (1) Certification of miners employed in coal mines in West Virginia is required by Chapter 22A of the West Virginia Code to insure that only competent qualified persons are employed to act as underground or surface miners or in specific miner occupations.

(2) Since 1980 there have been at least ten civil and criminal prosecutions of persons in the coal industry purporting to be certified by the State as miners or for particular miner occupations who either possess bogus certificates or do not possess certificates for these occupations.

(3) Persons acting as miners or in particular miner occupations who are not properly certified as required by law create a safety hazard in the mines because such persons have not demonstrated their competency or qualifications under State law for these occupations.

(4) In order for the Department of Energy to know at any given time the certifications of persons working in the mines, a current listing is needed at each mine location of persons employed at that location and their certifications, if any.

(5) Such records can be made most readily and efficiently available through the employers of persons holding State certifications, since the employers have access to and knowledge of those persons who work for them.

(b) Conclusions of Law. (1) Therefore, the Board of Coal Mine Health and Safety promulgates the following regulation to require all employers of persons certified pursuant to Chapter 22A and currently employed in West Virginia mines to set up and maintain records on these persons and their certifications.

(2) The regulation is consistent with the requirements of Code 22A-1A-21 that operators of coal mines shall maintain such records, make such reports and provide such information as the Director may reasonably require from time to time to enable him to perform his functions under law.

(3) The regulation will not reduce the level of safety or protection afforded miners below the level of safety or protection afforded by Chapter 22A.

(4) The regulation is necessary and proper to effectuate the purpose of Chapter 22A and to prevent the circumvention and evasion thereof.

§36-24-2. Effect Of Regulations.

2.1. These rules and regulations shall have effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rule and regulations.

§36-24-3. Definitions.

All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

(a) Code: The term "Code" when following a reference to a specific section, article, chapter, shall mean the West Virginia Code of 1931, as amended.

(b) Miner's certification: The term "Miner's certification" shall mean any, and all types of certification mandated and required for any occupation at the present time, or may become mandated in the future, by the West Virginia Department of Energy.

(c) Parties Responsible for Record Keeping: The term "Parties responsible for record keeping" shall mean all coal mine operators in the mining industry, construction companies, shaft operators, manufacturing companies, private consultants, and, or any other company, persons, or firms associated with the mining industry, who have in their employ persons who are certified in accordance with Chapter 22A of the Code.

§36-24-4. System For Record Keeping.

4.1. Six (6) months after the effective date of these rules and regulations, parties responsible for record keeping, except as otherwise provided in Section 4.2, shall maintain a file on the state certifications of all current employees on

their payroll. The file shall contain the name, social security number, current certification and certification number for each individual employee possessing a state certification.

4.2. New mines opened after the effective date of this regulation and temporarily inactive mines, shall maintain such records within six (6) months of the date on which such mines are activated and/or reactivated.

§36-24-5. Availability Of Records.

5.1. Unless otherwise approved by the Director of the Department of Energy, all records required in Section 4.1 of these rules and regulations shall be made available to the Director of the Department of Energy, or his authorized representative, and to designated auditors of the Department of Energy for compliance audit purposes, within five (5) days after a request is made for the need of such records.

§36-24-6. Individual Responsibility.

6.1. After the effective date of these rules and regulations, any person employed by parties responsible for record keeping shall, upon request, provide to the parties responsible for record keeping, all necessary information pertaining to state certifications and all types of certifications that they hold.

6.2. All persons possessing miner certifications and employed by parties responsible for record keeping shall provide in writing to the parties responsible for record keeping any change in the information required in section 4 of these rules and regulations, including additional miner certifications, within four (4) days subsequent to such change.

**TITLE 36 SERIES 25
OPERATION OF TRACK HAULAGE LOCOMOTIVES**

§36-25-1. General.

- 1.1. Scope. Rules and regulations Governing Operation of Track Haulage Locomotives.
- 1.2. Authority. W. Va. Code 22-6-4.
- 1.3. File Date. April 3, 2002.
- 1.4. Effective Date. August 15, 2002.

§36-25-2. Track Haulage Locomotives.

2.1. No persons other than those necessary to operate a trip or car shall ride on any loaded car or on the outside of any car. Locomotives shall operate within the limits of its design capabilities and at speeds consistent with the conditions of the haulage road. Trailing locomotives shall be required on all trips except in instances where other equivalent means are approved by the Director. In instances where trailing locomotives are not used and approved equivalent measures exist, the locomotive operator shall have an assistant to assist him in his duties at all times. Where assistants are provided, safe riding facilities will be provided on the locomotive. In determining the approval for other equivalent means, the Director shall consider a plan certified by a registered engineer which specifies:

- (a) Size/weight of locomotives utilized,
- (b) Percent and distance of ascending grades,
- (c) Use of derails or other equivalent safeguards,
- (d) The trailing load transported and number of cars in a trip.

The Director may rescind the approval of any haulage plan for just cause. The approved equivalent means shall be posted on the mine bulletin board.

**TITLE 36 SERIES 26
CONSTRUCTION AND REHABILITATION OPERATIONS IN UNDERGROUND MINES**

§36-26-1. General.

- 1.1. Scope. Rules and Regulations Governing Construction and Rehabilitation Operations in Underground Mines.
- 1.2. Authority. W. Va. Code 22-6-4.
- 1.3. Filing Date. May 25, 1984.
- 1.4. Effective Date. July 1, 1984.

§36-26-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law, and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22A, Article 1A of the West Virginia Code relative to enforcement of these rules and regulations.

§36-26-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22 A, Article 1A, Section 1 of the West Virginia Code.

§36-26-4. On-shift Examination of Construction and Rehabilitation Work Areas.

4.1. In addition to the pre-shift examination, an on-shift examination shall be made of all construction and rehabilitation work areas between the third and fifth hours while persons are working, and such examination shall be recorded in a book prescribed for such purposes, and located on the surface.

§36-26-5. Automated Temporary Roof Support (ATRS) Systems on Roof Bolting Machines used for Construction and Rehabilitation.

5.1. Where required by the Director of the Department of Energy, roof bolting machines used for construction or for rehabilitation work shall be equipped with an approved automated temporary roof support (ATRS) system. However, when spot bolting is done on track haulage roads, machines shall not be required to have ATRS.

5.2. In determining where such ATRS system is needed, the Director shall consider the following: (a) whether the use of ATRS would pose a greater hazard than not using it; (b) whether the technology of ATRS exists to allow compliance with these requirements; and (c) the conditions at the construction or rehabilitation site.

5.3. Minimum requirements for machines using, or used as, ATRS. All machines using, or used as, an automated temporary roof support system in accordance with this section shall comply with the minimum requirements for ATRS as specified in West Virginia Board of Coal Mine Health and Safety, Series 10, Section 10.

**TITLE 36 SERIES 27
SURFACE AREAS**

§36-27-1. General.

1.1. Scope. Rules and Regulations Governing Surface Areas

1.2. Authority. W. Va. Code 22-6-4.

1.3. Filing Date. August 15, 1995.

1.4. Effective Date. October 1, 1995.

1.5. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1, Chapter 22 of the Code, relative to enforcement, are applicable to the enforcement of these rules and regulations.

§36-27-2. Definitions.

2.1. "High voltage powerline" means any uninsulated suspended power conductor carrying high voltage.

2.2. "Lanyard" means a rope, suitable for supporting one person. One end is fastened to a safety belt or harness and the other end is secured to a substantial object or a safety line.

2.3. "Lifeline" means a rope, suitable for supporting one person, to which a lanyard or safety belt (or harness) is attached.

2.4. "Safety belt" means a device, usually worn around the waist, which, by reason of its attachment to a lanyard and lifeline for a structure, will prevent a worker from falling.

2.5. All other terms used in these rules and regulations, not defined herein, shall have the means set forth in Section 1, Article 1, Chapter 22 of the Code.

§36-27-3. Operating Equipment With Suspended Material.

3.1. All persons remain a safe distance from any supplies or materials while being raised, lowered or in transit, by a forklift, crane, or other equipment: Provided, that whenever it is necessary to have persons other than the equipment operator in the immediate vicinity of any such supplies, the loads shall be securely fastened by a chain or other device to the equipment handling the load in order to prevent the load from slipping or falling off the equipment.

§36-27-4. Protection From Falls From Elevated Areas.

4.1. Safety protection such as safety belts, lifelines, or lanyards to prevent a person from falling shall be provided at all times where the potential fall distance exceeds fifteen (15) feet, except that safety belts shall not be used where they are impractical or would pose a greater hazard.

4.2. Safety nets shall be provided when work places are more than twenty-five (25) feet above the ground where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts are impractical.

§36-27-5. Safety Precautions on Coal Stockpiles.

5.1. The following requirements shall apply to all surface coal stockpiles with draw-off tunnel feeders underneath the coal storage area of the stockpile which discharge onto a conveyor belt:

(a) No person shall travel on foot or operate equipment on a coal stockpile or coal storage area directly over areas where underlying coal feeders are in place without a plan approving such activity by the Director, or his authorized representative. The Plan shall be submitted by the operator or the independent contractor performing the work, and shall be reviewed with all persons prior to work being done, and a record kept of such review.

(b) The Plan shall outline procedures to protect the health and safety of those who may have to travel on foot or operate equipment on a coal stockpile or coal storage area directly over areas where underlying coal feeders are in place. The minimum criteria for approval of the plan shall include:

(1) The equipment shall be equipped with an enclosed cab and doors and windows shall be closed and secured at all times the equipment is in operation. Beginning January 1, 2001 all mobile equipment manually operated on coal stockpiles, where there is a potential of the equipment falling into a cavity, shall be equipped with an enclosed cab fitted with chemically tempered glass and a window support system; provided however, that glass certified to withstand 40 psi may be installed without a window support system, provided that such glass is installed in a substantial frame. The Director of the Office of Miners' Health, Safety and Training will approve all enclosed cabs pursuant to this section. The Director of the Office of Miners' Health, Safety and Training may approve other types of glass and window frames or support system provided that an equal or greater amount of protection is afforded.

(2) The equipment shall have two-way communications and a back up communication system supplied on an independent power source.

(3) The equipment operator shall be provided with two self-contained self-rescuers.

(4) A remote control device capable of stopping the flow of coal from the feeder and stop the coal coming onto the stockpile. Such device shall be tested weekly.

(5) A means of providing emergency lighting to the mobile equipment operator.

(6) Warning signs shall be posted at the entrances to all coal stockpiles with underlying coal feeders.

(7) No person shall travel on foot, except on an emergency basis, and only under direct supervision; they shall be secured by an overhead lifeline; and feeders shall be locked and tagged out.

(c) The operator shall establish rules for the safe procedures for breaking through cavities and for marking the feeder areas on the surface. A copy of the rules shall be submitted to the Director, Office of Miners' Health, Safety and Training for approval. A copy of the approved rules shall be posted at the mine site, and all persons to perform such work shall be instructed in these procedures.

(d) Telephone or equivalent two-way communications shall be established between equipment operators working on stockpiles and those persons who are operating conveyors, feeders, and hoppers at storage piles (where more than one person performs these duties), in order to keep such equipment operators advised of the possibility of bridged material over a cavity in the stockpile.

§36-27-6. Working Around High-Voltage Powerlines.

6.1. Location of high-voltage powerlines. High-voltage powerlines located above surface work areas, driveways, haulageways, and railroad tracks shall be installed no less than fifteen (15) feet above ground.

6.2. Operation of equipment, minimum distance from high voltage lines. (1) Equipment or machinery operated on the surface of any coal mine shall not be operated within ten (10) feet of an overhead powerline unless the line is de-energized and visibly grounded at the point of work, or unless insulating barriers not part of or an attachment to, the equipment have been erected to prevent physical contact with the lines. Where the voltage of overhead powerlines is sixty-nine thousand (69,000) volts or more, the minimum clearance between the lines and part of the equipment or load shall be: (Please see Table 36-27a).

(2) A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.

6.3. Movement of equipment; minimum distance for high voltage lines. When any part of any equipment operated on the surface of any coal mine is required to pass under or by any energized high-voltage powerline and the clearance between such equipment and powerline is less than that specified above, such powerlines shall be de-energized or other precautions shall be taken to prevent contact with the powerlines.

6.4. De-energization of powerlines. Any overhead wire shall be considered to be an energized line unless and until the person owning such line or electrical utility authorities verifies that it is not an energized line and it has been visibly grounded.

§36-27-7. Tires and Repairs.

7.1 A safety tire rack, cage or equivalent protection shall be provided when inflating tires during installation on split rings or rims equipped with locking rings or similar devices. Tires shall be deflated before repairs on them are started, and means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation. Different types and sizes of wheel rims in the same location shall be stored separate from each other.

§36-27-8. Crushers, Feeders, and Rotary Breakers.

8.1. No person shall be permitted to perform any work within the confines of the cargo space of a crusher, feeder, or rotary breaker unless such equipment has been de-energized and locked out.

§36-27-9. Machines with Movable Parts.

9.1. Ninety (90) days after the effective date of this section, machines with movable parts used at surface mines or surface areas of underground mines, which are capable of coming into contact with its operating controls or is capable of pinning the operator between the movable part and its controls, shall be equipped with a panic bar or suitable mechanical means to prevent such contact, or pinning of the operator.

§36-27-10. Seat Belts.

10.1. Each employee working in a surface coal mine or in the surface areas of an underground coal mine shall be required to wear seat belts in a vehicle where there is a danger of overturning and where roll protection is provided.

10.2. Seat belts shall be worn by all drivers of trucks, 5-ton or greater, while operating their trucks on surface mines and surface areas of underground mines.

§36-27-11. Transporting Compressed Gas Cylinders.

11.1. When tanks and cylinders are not used and they are being transported, they shall be securely mounted with regulators removed, cylinder valves closed and protective valve caps replaced, except in conformance with the following requirements:

(a) Cylinders shall remain in a substantially constructed compartment while the gauges are attached and shall be secured against movement.

(b) The substantially constructed compartment shall be designed specifically for the mine maintenance vehicles carrying it; the cylinders shall be secured against movement and be placed at no greater than a 45 degree angle.

(c) The cylinder regulators, if not in enclosed compartments, shall be adequately covered to provide protection when regulators are left attached to cylinders.

(d) The substantially constructed compartments shall be secured to the mine maintenance vehicle in such a manner to prevent the entire compartment from overturning at any time.

(e) If the cylinders are being transported in closed compartments, the compartments shall be adequately ventilated, and all doors on the substantially constructed compartments shall be closed and secured when not in use.

(f) Cylinders, gauges, hoses, connectors, valve stems, and torches shall be checked for damage and proper fit by a qualified person immediately following transportation and prior to use.

(g) The cylinder valves shall be in a shut-off position, and the hoses relieved of pressure when not in use and when being transported.

(h) All substantially constructed compartments shall be approved by the Director or his authorized representative prior to initial use.

§36-27-12. Mirrors on Surface Operated Equipment.

12.1. When required by an authorized representative of the Director to enhance safe operation, adequate mirror(s) will be provided on surface mine equipment that operates at surface mines, surface areas of underground mines, preparation plants and loadouts.

Mirror(s) provided on equipment by manufacturers of said equipment shall be deemed adequate and in compliance with the regulations.

§36-27-13. Safety Devices on Surface Haulage Equipment.

13.1. Sixty (60) days after the effective date of this section all surface mines, surface areas of underground mines, which utilize or operate vehicles capable of carrying 100-tons or greater, which operate in close proximity of smaller vehicles, as identified in Section 13.1(a), shall implement the following enhancements in order to maximize the visibility of operators and coordination of equipment.

(a) All maintenance, service, foreman or other utility vehicles shall be equipped with strobe lights and/or whip antennas, or other suitable devices as approved by the Director, or to be escorted by a vehicle equipped with such devices. This requirement excludes employee vehicles that are traveling on designated access road(s) to and from work.

(b) Equipment operators of haulage vehicles capable of carrying 100-tons or greater shall conduct a complete walk around of the equipment before it is placed in operation at the beginning of the shift and anytime the operator dismounts the machine.

(c) Equipment operators of haulage vehicles capable of carrying 100-tons or greater shall sound an audible warning device three times before the machine is placed in operation, and after the machine has set idle while in operation for periods that exceed normal cycle times.

(d) Reflective numbers or other clearly distinguishable identification markers, at a minimum of at least five (5) inches in height or as approved by the Director or his authorized representative, shall be installed, in conspicuous places, on all four sides of all vehicles capable of carrying 100-tons or greater.

(e) All vehicles capable of carrying 100-tons or greater shall be equipped with two-way communications.

(f) At no time shall a smaller vehicle travel into a blind spot of a vehicle over 100-ton capacity without communicating with the operator of the larger vehicle and receiving positive confirmation from that operator that it is safe to approach.

All employees of the mine shall receive a briefing of these procedures within thirty (30) days of the effective date of this rule and these procedures shall be included in the employees annual retraining, newly hired miner training, and hazard training.

13.2. Within one hundred and eighty (180) days after the effective date of this section all trucks with a 230-ton capacity or greater on or around a surface mine or surface area of an underground mine will be equipped with a camera, approved by the Director or other devices approved by the Director and the Technical Review Committee, at the rear of the truck to reduce blind spot hazards.

13.3. Within one year after the effective date of this section the West Virginia Board of Coal Mine Health and Safety will review the effectiveness of the cameras on the rear of the 230-ton capacity or greater off road haulage vehicles.

Nominal powerline voltage (in 1,000 volts)	Minimum distance (in feet)
69 to 114	12
115 to 229	15
230 to 344	20
345 to 499	25
500 or more	35

**TITLE 36 SERIES 28
COAL AND ROCK OUTBURSTS**

§ 36-28-1. General.

- 1.1. Scope. Rules and Regulations Governing Coal and Rock Outbursts.
- 1.2. Authority. W. Va. Code 22-6-4.
- 1.3. Filing Date. May 25, 1984.
- 1.4. Effective Date. July 1, 1984.

§36-28-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law, and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22 A, Article 1A, of the West Virginia Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-28-3. Definitions.

3.1 Outburst. The term "outburst" shall mean the sudden expulsion of coal and/or rock from one or more pillars or faces, accompanied by a violent release of energy.

3.2 All other terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22 A, Article 1 A, Section 1 of the West Virginia Code.

§36-28-4. Notification of Outbursts.

4.1 Whenever an outburst of coal and/or rock occurs in any coal mine, the operator shall immediately report the occurrence of the outburst to the Director of the Department of Energy or the district inspector of the district in which the outburst occurs.

4.2 An authorized representative of the Department of Energy shall go to the scene of the outburst, and shall have the authority to make such requirements relative to the outburst as may be deemed necessary for the safety of persons in the mine.

§36-28-5. Plan for Controlling Outbursts.

5.1. Whenever the Director of the Department of Energy or his authorized representative determines that conditions in a mine are conducive to the occurrence of outbursts, the Director or his authorized representative shall require that the operator develop a plan for pillar recovery which is designed to minimize the possibility of outbursts. Such plan shall be submitted for approval and included in the roof control plan.

**TITLE 36 SERIES 29
COUPLING AND UNCOUPLING OF MINE CARS**

§36-29-1. General.

- 1.1. Scope. Rules and Regulations Governing Coupling and Uncoupling of Mine Cars.
- 1.2. Authority. W. Va. Code 22-6-4.
- 1.3. Filing Date. May 25, 1984.
- 1.4. Effective Date. July 1, 1984.

§36-29-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1 A, Chapter 22 A, of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-29-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1 A, Chapter 22 A of the Code.

§36-29-4. Coupling and Uncoupling of Mine Cars.

4.1. All track haulage cars which are regularly coupled and uncoupled shall be equipped with automatic couplers or other device approved by the Director which provides an equal or greater level of safety, which couple or uncouple without the necessity of persons going between the ends of such cars.

4.2. Mine cars shall be coupled or uncoupled in such a manner that will not require standing between the ends of such cars while coupling or uncoupling.

4.3. Persons shall not cross between moving mine cars.

**TITLE 36 SERIES 30
OPERATION OF SECTION HAULAGE EQUIPMENT**

§36-30-1. General.

- 1.1. Scope. Rules and Regulations Governing Operation of Section Haulage Equipment.
- 1.2. Authority. W. Va. Code 22-6-4
- 1.3. Filing Date. October 11, 1984
- 1.4. Effective Date. December 1, 1984

§36-30-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation law and so cited with the same effect as law. All provisions of Article 1 A, Chapter 22 A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-30-3. Definitions.

3.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1 A, Chapter 22 A of the Code.

§36-30-4. Operation of Section Haulage Equipment.

4.1. Roadways on which section haulage equipment travels shall be maintained in a safe condition and free of hazards.

4.2. Prior to operating section haulage equipment, the equipment operator shall examine the roadway to be traveled, and shall report any hazards present to the immediate supervisor before the equipment is put into operation.

4.3. Section haulage equipment shall be operated in a safe manner, consistent with the conditions of the roadway.

4.4. No person shall start a piece of self-propelled section haulage equipment until they are in the normal operating position of such equipment.

4.5. Parking brakes shall be set on all self-propelled section haulage equipment by the equipment operator before the operator leaves the normal operating position of such equipment. Where the parking brake is not provided, or where it is necessary to perform maintenance on the equipment which requires that the park brake not be set, other methods shall be used to prevent accidental movement of the equipment.

4.6. Persons operating self-propelled section haulage equipment shall see that all persons are a safe distance away from the equipment, and out of the equipment's expected path of travel, before the equipment is started.

§36-30-5. Cleaning of Equipment.

5.1. Equipment cleaning shall not be done on self-propelled section haulage equipment, unless the power circuits on the equipment are de-energized.

**TITLE 36 SERIES 31
PREVENTION OF INJURIES DUE TO HANDLING MATERIALS**

§36-31-1. General.

1.1. Scope. Rules and Regulations Governing Prevention of Injuries Due to Handling Materials.

1.2. Authority. W. Va. Code 22-6-4

1.3. Filing Date. May 25, 1984

1.4. Effective Date. July 1, 1984

1.5. Effect of Regulations-These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-31-2. Definitions.

2.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

§36-31-3. Prevention Of Injuries Due To Handling Of Materials.

3.1. Whenever the Director of the Department of Energy determines that a mine has experienced a substantial number of injuries due to materials handling, he shall require the mine operator to include a component in the mine's comprehensive safety program which identifies procedures for reducing such injuries.

**TITLE 36 SERIES 32
HOUSEKEEPING PRACTICES IN UNDERGROUND MINES AND SURFACE AREAS OF
UNDERGROUND MINES**

§36-32-1. General.

1.1. Scope. Rules and Regulations Governing Housekeeping Practices in Underground Mines and Surface Areas of Underground Mines.

1.2. Authority. W. Va. Code 22-6-4

1.3. Filing Date. May 25, 1984

1.4. Effective Date. July 1, 1984

1.5. Effect of Regulation-These rules and regulations shall have the effect of law and violations shall be deemed as a violation of law and so cited with the same effect as law. All provisions of Article 1A, Chapter 22A of the Code relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-32-2. Definitions.

2.1. All terms used in these rules and regulations, not defined herein, shall have the meaning set forth in Section 1, Article 1A, chapter 22A of the Code.

§36-32-3. Housekeeping Practices.

3.1 Good housekeeping shall be practiced in all areas of underground mines, and in and around mine buildings and yards. Such practices shall include cleanliness, orderly storage of materials, and removal of possible sources of injury, such as stumbling hazards, protruding nails, and broken glass.

**TITLE 36 SERIES 33
UNDERGROUND MINE CAR LOADING POINTS**

§36-33-1. General.

1.1. Scope. This legislative rule establishes safety requirements for mine car loading points in underground coal mines.

1.2. Authority. W. Va. Code 22-6-4

1.3. Filing Date. April 11, 1988

1.4. Effective Date. April 11, 1988

§36-33-2. Definitions.

2.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22, Article 1, Section 1 of the West Virginia Code.

§36-33-3. Underground Mine Car Loading Points.

3.1. Six (6) months after the effective date of this regulation, skids shall not be placed on mine rails adjacent to the wheels of moving mine cars, unless remote means can be used to place the skids without getting underneath or between the cars.

3.2. There shall be no unnecessary visual obstructions in the immediate working areas of the underground mine car loading point operator.

3.3. These requirements shall be conspicuously posted at the underground mine car loading point, along with any other operation instructions for that facility.

§36-33-4. Designated Areas Of Safety.

4.1. When in the vicinity of a switch, all persons shall get into an area of safety, either in a shelter hole or a crosscut, when trips are approaching.

**TITLE 36 SERIES 34
UNDERGROUND MINING EQUIPMENT TO CONFORM WITH HEIGHT OF SEAM**

§36-34-1. General.

1.1. Scope. This legislative rule establishes requirements for construction and operation of equipment to insure conformity with the height of the seam being mined, and identifies procedures for refusing to operate that does not meet these requirements.

1.2. Authority. W. Va. Code 22-6-4

1.3. Filing Date. July 18, 1985

1.4. Effective Date. August 30, 1985

§36-34-2. Definitions.

2.1. All terms in these rules and regulations, not defined herein, shall the meanings set forth in Section 2, Article 1A, Chapter 22A.

§36-34-3. General Requirements.

3.1. The use of underground mining equipment that does not conform to the height of the seam being mined, which creates unsafe working conditions for the miners operating the equipment or others, is prohibited.

3.2. Mining equipment shall be operated safely, taking into consideration the condition of the haulage road, limit of visibility, height of the coal seam, and the size of the equipment.

3.3. No modifications to haulage equipment which limits visibility to a degree which poses a hazard to persons in the vicinity of such equipment shall be permitted.

§36-34-4. Correction Of Unsafe Conditions.

4.1. Where haulage equipment causes damage to the roof support system or creates unsafe working conditions to miners, action shall be taken to correct such condition.

4.2. Prior to the start of self-propelled mobile equipment, an audible alarm shall be sounded.

§36-34-5. Procedures For Refusing To Operate Unsafe Equipment.

5.1. When an operator of equipment believes in good faith that a hazardous condition exists relative to the conformity of the equipment to the height of the coal seam, the equipment operator shall follow the procedures in West Virginia Board of Coal Mine Health and Safety, Series 8, "Right of a Miner to Refuse to Operate Unsafe Equipment."

TITLE 36 SERIES 35
AUGER-TYPE CONTINUOUS MINING MACHINES

§36-35-1. General.

1.1 Scope. This legislative rule establishes safety requirements for auger-type continuous mining machines used in underground coal mines.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. October 15, 1986

1.4 Effective Date. November 14, 1986

§36-35-2. Definitions.

2.1. All terms used in this rule, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1A, Section 1 of the West Virginia Code.

§36-35-3. Auger-Type Continuous Mining Machines.

3.1. After the effective date of these regulations, all auger-type continuous miners used in a working place in a coal mine, which utilize manually-set jacks to advance the mining machine, shall be equipped with jacks which can be remotely set without proceeding inby roof support. This requirement shall be implemented according to the following schedule:

New machines purchased or leased directly from manufacturer	Immediately after effective date
Used and rebuilt machines, and machines purchased or leased from source other than the manufacturer	Six (6) months after effective date
All other machines	Twenty-four (24) months after effective date

3.2. A waiver may be granted by the Director where it has been demonstrated by the operator and determined during an investigation by an authorized representative of the Director that the use of a remotely set jack would cause a greater hazard than the method presently being employed or proposed by the operator to advance the machine.

TITLE 36 SERIES 36
TROLLEY POLE SWING LIMITERS

§36-36-1. General.

1.1 Scope. This regulation revises W V Code 22A-2-37(a) relating to trolley pole swing limiters in underground coal mines.

1.2 Authority. These regulations are promulgated under the authority of W. Va. Code 22-6-4(c).

1.3 Filing Date. August 10, 1987

1.4 Effective Date. August 10, 1987

§36-36-2. Trolley Pole Swing Limiters.

2.1. On or before the first (1st) day of January, one thousand nine hundred eighty seven (1987), all open-type track mounted equipment shall be equipped with a trolley pole swing limiter.

TITLE 36 SERIES 37
RULEMAKING PROCEDURES FOR THE BOARD OF COAL MINE HEALTH AND SAFETY

§36-37-1. General.

1.1 Scope. This administrative rule establishes procedures to be followed by the Board of Coal Mines and Safety in carrying out its rulemaking responsibilities by West Virginia Code 22-6-4 and 22-6-4a.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. January 21, 1987

1.4 Effective Date. February 21, 1987

§36-37-2. Definitions.

2.1. All terms used in these rules and regulations, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1, Section 1 of the West Virginia Code.

§36-37-3. General Rulemaking Procedures.

3.1. Priorities. (a) The Board shall consider issues in the following order of priority:

- (1) Causes of fatal injuries (occurring after the effective date of this regulation)
- (2) Major causes of non-fatal injuries (occurring since the calendar year immediately prior to the effective date of this regulation)
- (3) General health and safety issues

(b) Notwithstanding any code provision to the contrary, the Board may consider issues from more than one (1) of the above categories at the same time.

3.2. Use of committees. (a) Committees may be established upon approval of two-thirds (2/3) of the quorum present. Committees shall be established solely to develop issues and advise the full Board on matters before the Board. All Committees shall be comprised of one (1) operator representative and one (1) miners representative, who shall be appointed by the Chairman, by the two (2) public members at their option, and by the Chairman at his option.

§36-37-4. Procedures for Promulgating Regulations in Response to Fatalities.

4.1. The Commissioner of the Department of Energy shall provide the Board with all available reports regarding each coal mine fatality within sixty (60) days of the accident.

4.2. The Administrator shall submit a report to the Board which analyzes each coal mine fatality within ninety (90) days of the accident. The report shall summarize the relevant facts concerning the accident, including:

- (a) Cause of accident
- (b) Contributing factors to the accident
- (c) Notices of violation issued
- (d) Recommendations made by the investigating team
- (e) Follow up to the recommendations, if any
- (f) Existing laws, regulations, and policies relevant to the cause of the accident.

4.3. Within one hundred twenty (120) days of the review of the available reports, the Board shall take the following actions on each fatality reviewed:

- (a) The Board shall direct the Administrator to prepare findings of fact and conclusions of law.
- (b) The Board shall formally vote on whether to approve the findings of fact and conclusions of law.
- (c) The Chairman shall call for a formal vote on whether the promulgation of rules and regulations by the Board could assist in preventing the recurrence of the specific type of fatality. A majority of the quorum present must vote against having additional regulations in order for this motion to fail.

(d) If the Board determines that no rules or regulations would assist in preventing the specific type of fatality in question, the Board must publish, within a reasonable time, its findings and conclusions, as provided for in Section 4.3(b), and the reasons for its determination that no additional regulations are needed. These findings and conclusions shall be maintained at the Department of Energy office in Charleston, and be made available to interested persons for inspection or copies.

(e) If the Board determines that the promulgation of rules and regulations would assist in preventing the specific type of fatality, it shall take the following actions:

(1) The Board shall direct the Administrator to prepare proposed regulations consistent with the findings of fact and conclusions of law approved by the Board.

(2) The Board shall formally vote on whether to promulgate the proposed regulations. The Board may make such proposed regulations available for comment by interested persons in accordance with Code 22-6-4, provided such action can be completed and final action taken on the regulation within the one hundred twenty (120) day period.

(3) If the Board decides to promulgate the regulation as is or with modifications, provided such modifications are supported by factual findings developed by the Board, the regulation shall be filed in the Secretary of State's office, and a notice of final rulemaking and a copy of the final regulation shall be sent to all affected operators and other interested persons.

(4) If the Board determines that no regulation can be developed to be consistent with the findings and conclusions, it shall direct the Administrator to prepare amended findings and conclusions stating the reason for such determination. Upon approval, the Board shall, within a reasonable time, publish these findings and conclusions and shall maintain them at the Department of Energy office in Charleston to be available to interested persons for inspection or copies.

§36-37-5. Procedures for Promulgating Regulations in Response to Major Causes of Injuries.

5.1. As soon as practicable after the first day of January of each year, the Administrator shall submit a report to the Board on each major cause of injury. The report shall summarize the relevant facts concerning each major cause of injury, including:

(a) Circumstances surrounding the injuries, including: cause of injuries; activity of victim at time of injury; object, substance, or machine involved in injuries; nature of injury; and location in mine where injury occurred.

(b) Existing laws, regulations, and policies relevant to the cause of the accident.

5.2. Between the first day of January and the first day of July of each year, the Board shall review in detail the major causes of coal mining injuries during the previous calendar year, taking into account both frequency and severity of injury.

5.3. Prior to the first day of July of each year, the Board shall take the following action on each major cause of injury reviewed:

(a) The Board shall direct the Administrator to prepare findings of fact and conclusions of law.

(b) The Board shall formally vote on whether to approve the findings of fact and conclusions of law.

(c) The Chairman shall call for a formal vote on whether the promulgation of rules and regulations by the Board could assist in preventing the recurrence of the specific type of injury. A majority of the quorum present must vote against having additional regulations in order for this motion to fail.

(d) If the Board determines that no rules or regulations would assist in preventing the recurrence of the specific type of injury in question, the Board must publish, within a reasonable time, its findings and conclusions as provided for in Section 5.3(b), and the reasons for its determination that no additional regulations are needed. These findings and

conclusions shall be maintained at the Department of Energy office in Charleston, and be made available to interested persons for inspection or copies.

(e) If the Board determines that the promulgation of rules and regulations would assist in preventing the recurrence of specific types of injuries, it shall take the following actions:

(1) The Board shall direct the Administrator to prepare proposed regulations consistent with and based upon the findings of fact and conclusions of law developed pursuant to Section 5.3(b).

(2) The Board shall formally vote on whether to promulgate the proposed regulations. The Board may make such proposed regulations available for comment by interested persons in accordance with the provisions of Code 22-6-4, provided that such action can be completed and final action taken on the regulation by July first.

(3) If the Board decides to promulgate the regulation as is or with modifications, provided that such modifications are supported by factual findings developed by the Board, the regulation shall be filed in the Secretary of State's office, and a notice of final rulemaking and a copy of the final regulation be sent to all affected operators and other interested persons.

(4) If the Board determines that no regulation can be developed to be consistent with the findings and conclusions, it shall direct the Administrator to prepare amended findings and conclusions stating the reasons for such determination. Upon approval, the Board shall, within a reasonable time, publish these findings and conclusions and shall maintain them at the Department of Energy office in Charleston to be available to interested persons for inspection or copies.

§36-37-6. Procedures for Promulgating Regulations in Response to Suggestions by Board Members or Administrator.

6.1. Any Board member or the Administrator may suggest subjects for the Board to investigate. Suggestions shall be submitted to the Administrator, and may be submitted either at a Board meeting or at any other time. Whenever possible, suggestions shall be submitted in writing on a form provided by the Administrator, and shall include a brief statement of the problem to be addressed.

6.2. The Administrator shall submit a report to the Board at the next regular scheduled Board meeting of all suggestions which have been submitted during and after the last Board meeting. The Administrator shall maintain a list of all suggestions submitted, and each suggestion shall be considered by the Board in the order it was submitted, unless a majority of the Board determines that a particular suggestion should receive priority attention.

6.3. The Administrator shall prepare a report which outlines the issues to be addressed under each suggestions, and shall submit the report to the Board during the meeting at which the suggestion will be taken up for consideration. The Administrator's report shall include the following:

(a) Definition of the problem.

(b) Technical evidence available -general information, including any injuries or fatalities, which is available or which needs to be developed.

(c) Staff time required -general estimate of the amount of time the Administrator will require to prepare technical evidence for Board review.

(d) Legal authority -determination of whether consideration of an action on this issue is within the Board's statutory authority.

(e) Description of findings of fact and conclusions of law -identification of the findings and conclusions which the Board must make if it decides to propose regulations.

(f) Existing laws, regulations, and policies relevant to the suggestion.

6.4. Upon receipt of the Administrator's report, the Board shall review the issues raised in the report, and take one (1) of the following actions:

(a) Accept the report, and proceed with Step 6.5.

(b) Direct the Administrator to undertake further research necessary for Board consideration of this issue, and direct the Administrator to prepare a revised report which identifies the issues discussed, materials reviewed, results of any additional research, and preliminary findings and conclusions.

6.5. Following such time that adequate or sufficient information has been generated through compliance with 6.3 (a-f), the Board shall take up the Administrator's report or revised report for consideration. The Board shall take the following action within a reasonable time:

(a) The Board shall formally vote on whether to approve the preliminary findings of fact and conclusions of law.

(b) The Chairman shall call for a formal vote on the need for additional regulations or existing regulations to be amended or revised based on the suggestion submitted and the problem(s) to be addressed.

(c) If the Board determines that no regulations are needed, it must publish, within a reasonable time, its reasons, in the form of findings of fact and conclusions of law, for such determination. These findings and conclusions shall be maintained at the Department of Energy office in Charleston, and be made available to interested persons for inspection or copies.

(d) If the Board determines that regulations are needed, it shall direct the Administrator to prepare proposed regulations for review and approval by the Board, and upon approval shall make them available for public comment in accordance with the provisions of Code 22-6-4.

6.6. For all proposed regulations, the Board shall take the following actions:

(a) A notice of proposed rulemaking and a copy of the proposed regulation shall be delivered to each affected mine operator and other interested persons. The notice of proposed rulemaking shall contain a summary explaining the preliminary findings of fact and conclusions of law, and the effect of the proposed regulation.

(b) A minimum of thirty (30) days from the date the notice and proposed regulations are mailed out shall be provided for persons to submit written comments. All written comments postmarked on or before the last day of the comment period shall be accepted for Board consideration.

(c) If a public hearing is requested by any interested person during the comment period, the Board shall immediately after the close of the comment period publish a notice specifying the regulation to which objections have been raised and setting the date for the public hearing.

(d) Hold a public hearing on the proposed regulation if so requested, or if previously agreed by the Board members.

(e) Review all comments received, and direct the Administrator to prepare final findings of fact and conclusions of law. The Board's response to all comments received shall be made a matter of record.

(f) Vote on final findings of fact and conclusions of law within sixty (60) days after the public hearing, and make such findings and conclusions available at the Department of Energy office in Charleston to interested persons for inspection or copies.

(g) Vote on whether to promulgate the regulation as is or with modifications, or remove from further consideration.

(h) If the Board decides to promulgate the regulation as is, or with minor changes, the regulation shall be filed in the Secretary of State's office, and a notice of final rulemaking and a copy of the final regulations shall be sent to all affected operators and other interested persons.

(i) If the Board determines that major changes to the proposed regulations are needed, it shall resubmit the proposed regulations as amended for public comment in accordance with the provisions of this section and Code 22-6-4.

(j) If the Board decides to remove the proposed regulation from further consideration, a notice shall be sent to all persons who received the proposed regulation, advising them of this action and why it was taken.

§36-37-7. Agenda for Board Meetings.

7.1. Prior to adjournment of each meeting, the Board will set the agenda for the next regular scheduled meeting.

7.2. The agenda for each regular scheduled meeting will be structured in the following sequence:

(a) Approval of minutes

(b) Administrator's report on new suggestions submitted

(c) Review of fatal accidents

(d) Review of non-fatal accidents (when scheduled)

(e) Suggestions from the list of suggestions maintained by the Administrator, taken in order of priority, unless a majority of the Board agrees to move a suggestion up on the list

(f) Other business

7.3. The order in which items on the agenda are considered shall not be changed except by approval of a majority of the Board.

TITLE 36 SERIES 38 PERSONAL PROTECTIVE EQUIPMENT

§36-38-1. General.

1.1 Scope. This administrative rule establishes safety and requirements relating to personal equipment used in and around coal mining areas.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. April 6, 1990

1.4 Effective Date. April 6, 1990

§36-38-2. Definitions.

2.1. All terms used in this rule, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1, Section 1 of the West Virginia Code.

§36-38-3. Requirements For Safety-Toed Shoes With Metatarsal Guards.

3.1. Within twelve (12) months of the effective date of these regulations, safety-toed shoes equipped with metatarsal guards shall be worn by all persons while in or around a mine.

§36-38-4. Requirements For Approved Eye Protection.

4.1. Within six months of the effective dates of these regulations, approved eye protection shall be worn by all persons while in or around a mine, and shall be provided by the operator. Suitable eye protection and cleaning materials shall be made available at each mine site.

§36-38-5. Requirements for Safety Gloves.

5.1. Dry leather, cloth, or rubber type gloves, in good condition, shall be worn by all persons removing or attaching a trolley pole to an energized trolley wire.

**TITLE 36 SERIES 39
CAR DROPPING**

§36-39-1. General.

1.1 Scope. This administrative rule establishes safety requirements relating to car dropping in and around coal mining areas.

1.2 Authority. W. Va. Code 22-6-4.

1.3 Filing Date. April 11, 1988

1.4 Effective Date. April 11, 1988

§36-39-2. Definitions.

2.1. All terms used in this rule, not defined herein, shall have the meanings set forth in Chapter 22A, Article 1, Section 1 of the West Virginia Code.

§36-39-3. Car Dropping Requirements.

3.1. Within ninety (90) days after the effective date of these regulations, the operator of any coal mine which engages in the practice of manually dropping railroad cars shall develop a site-specific plan governing such activity. In formulating such plan, the length, complexity and general condition of the rail system, including the severity of incline, shall be considered. The plan shall include the number of loaded and empty coal cars that can be safely dropped, along with a method for storing cars. Equipment operating speeds shall be consistent with conditions of the roadways, grades, clearance, visibility, traffic, and the type of equipment used.

3.2. The plan shall be submitted to the Director and must meet the following minimum requirements for approval.

(a) No person shall ride the drawhead or coupler of a railroad car. No person other than the car dropper or experienced person(s), and only those necessary to operate the trip, shall ride cars. No person shall ride the head end of a front car at any time.

(b) Employees handling railroad cars shall have access to, and use an approved distinct audible signaling device to give warning when cars are in motion. A car dropper shall, only in case of emergency, get on or off a moving car.

(c) Railroad cars shall be trimmed properly when they have been loaded higher than the confines of their cargo space.

(d) A minimum of thirty (30) inches continuous clearance from the farthest projection of moving railroad equipment shall be provided on at least one side of the tracks; all places where it is not possible to provide thirty (30) inches clearance shall be marked conspicuously.

(e) Roadbeds, rails, joints, switches, frogs, and other elements on railroads shall be designed, installed and maintained in a safe manner consistent with the speed and type of haulage.

(f) Positive-acting stopblocks, derail devices, track skates, or other adequate means shall be installed wherever necessary to protect persons from runaway railroad equipment.

(g) Switch throws shall be installed so as to provide adequate clearance for switchmen.

(h) Where necessary, bumper blocks or the equivalent shall be provided at all track dead ends.

(i) Cars shall be inspected for broken steps, platforms and brake wheels, and for defective brakes before dropping. Persons finding cars with defective brakes shall notify their supervisor immediately after precautions have been made to secure the car. The supervisor in charge shall place a red tag on the brake wheel of the defective car. A description of the defective brake condition shall be written on the red tag. The operator shall also include the defective car's serial number and a description of the defective condition on the Bill of Lading to be sent to the railroad company.

(j) Safety belts shall be worn and properly attached by all car droppers handling railroad cars. All such belts shall be of a design to allow maximum safety to provide for immediate uncoupling.

(k) The procedures outlined in this section shall be explained thoroughly to all car droppers and new employees.

**TITLE 36 SERIES 40
THE USE OF LIFTING JACKS**

§36-40-1. General.

1.1 Scope. These regulations are promulgated to require the use of lifting jacks on working sections at all times.

1.2 Authority. W. Va. Code 22-6-4.

1.3 Filing Date. July 1, 1988.

1.4 Effective Date. July 1, 1988

§36-40-2. Definitions.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Chapter 22, Article 1 of the Code, relative to enforcement, are applicable to the enforcement of these rules and regulations.

§36-40-3. Requirements For Lifting Jacks.

3.1. A ten (10) ton lifting jack compatible with the seam height, or other equivalent lifting device in working condition, shall be stored within eight hundred (800) feet of the working face at a specified location on each underground working section at all times when miners are working on such sections. All section employees shall be informed of such location.

TITLE 36 SERIES 41
SHEATHED EXPLOSIVE UNITS

§36-41-1 General.

1.1 Scope. Rules And Regulations Governing The Use Of Sheath Explosive Units For Underground Coal Mining In The State Of West Virginia.

1.2 Authority. WV Code 22-6-4

1.3 Filing Date. May 2, 1991.

1.4 Effective Date. May 2, 1991.

§36-41-2. Effect of Regulations.

2.1. These rules and regulations shall have the effect of law and violations shall be deemed a violation of the law and so cited with the same effect as law. All provision of W. Va. Code 22A-1A, relative to enforcement are applicable to the enforcement of the rules and regulations.

§36-41-3. Definitions.

3.1. All terms used in these rules and regulation, not defined herein, shall have the meanings set forth in W. Va. Code 22A-1A-1.

§36-41-4. Preparation Of Shots; Blasting Practices And Requirements For Sheathed Explosive Units.

4.1. Only a certified "shot firer" designated by mine management shall be permitted to handle explosives and do blasting. Only electric detonators of proper strength fired with permissible shot firing units shall be used except under special permits as hereinafter provided, and drillholes shall be stemmed with at least twenty-four inches on incombustible material, or at least one half of the length of the hole shall be stemmed if the hole is less than four feet in depth, unless other permissible stemming devices or methods are used. Drillholes shall not be drilled beyond the limits of the cut, and as far as practicable, cuttings and dust shall be cleaned from the holes before the charge is inserted. Charges of explosives exceeding one and one half pounds, but not exceeding three pounds, shall be used only if drillholes are six feet or more in depth. Ample warning shall be given before shots are fired, and care shall be taken to determine that all persons are in the cleat before firing. Miners shall be removed from adjoining places and other places when there is danger of shots blowing through. Shots shall be fired in any place known to liberate explosive gas, until such place has been properly examined by a competent person who is designated by mine management for that purpose, and no shots shall be fired in any place where gas is detected with a permissible flame safety lamp until such gas has been removed by means of ventilation. After firing any shot, or shots, the person firing the same shall not return to the working face until the smoke has been cleared away and then he shall make a careful examination of the working face before leaving the place or before performing any other work in the place.

4.2. Multiple shooting in coal or rock or both is authorized only under permit issued by the director. Permission to shoot more than ten shots simultaneously may be granted by the director only after consultation with interested person, and the deputy director of safety, health and training, and such shooting will be performed by special methods and under precautions prescribed by the director. All multiple shooting in bottom or roof rock shall be performed in intake air, except by special permit from the director, after consultation with interested persons and the deputy director of safety, health and training, as hereto provided. Multiple blasting of more than ten shots performed under any permit granted by the director under this section shall be done only on non-coal producing shifts or idle days, except as may be provided as a condition of the permit granted.

4.3. Regular or short-interval delay detonators may be used for blasting purposes with written permission from the director after consultation with the deputy director of safety, health and training. Regular delay detonators shall not be used for blasting coal, but may be used for grading above or below coal seams and during shaft, slope, tunnel work and in faults or wants. Where short-interval delay detonators are permitted by said directors to be used, the shot firing circuit must be tested with a blasting galvanometer before firing, and the leg wires connected in series. No instantaneous, regular, or zero-delay detonators are to be fired in conjunction with short-interval delay detonators. The delay interval between dependant rows must not be less than twenty-five milliseconds or more than one hundred milliseconds, and the entire series on any one round shall not provide a delay of more than five hundred milliseconds between the first and last shot. The total number of charged holes to be fired during one round must not exceed the limit permitted by the director. Misfires must be tested with a blasting galvanometer before removing.

4.4. Electrical equipment shall not be operated in the face areas, and only work in connection with timbering and general safety shall be performed in connection with timbering and general safety shall be performed while boreholes are being charged. Shots shall be fired promptly after charging. Mudcaps (adobes) or any other unconfined shots shall not be permitted in any coal mine. No solid shooting shall be permitted without written permission of the division.

4.5. Blasting cables shall be well insulated and shall be as long as may be necessary to permit persons authorized to fire shots to get in a safe place out of the line of fire. The cable, when new, shall be at least one hundred twenty-five feet in length and never less than one hundred feet. Shooting cables shall be kept away from power wires and all other sources of electric current, connected to the leg wires by the person who fires the shot, staggered as to length or well separated at the detonator leg wires, and shunted at the battery until ready to connect to the blasting unit.

§36-41-5. Requirements For The Use Of Sheathed Explosives In Underground Mining.

5.1. Notwithstanding W. Va. Code 22A-2-33(d), sheathed explosives that are approved by the U.S. Bureau of Mines shall be permitted for use in West Virginia coal mines, provided however that they are used in accordance with subsection (a, b, c, d, e, f, g, h) as stated.

5.2. Sheathed explosives units shall be primed and placed in a position for firing and detonated by a certified shot firer designated by mine management. To prime a sheathed explosive unit, the entire detonator shall be inserted into the well of the unit and be held securely in place.

5.3. A separate instantaneous detonator shall be used to fire each sheathed explosive unit.

5.4. Use of transportation of handling and storage of sheath explosives shall be in accordance with the manufacturers specifications and applicable to State and Federal Law.

5.5. Sheathed explosive units shall not be primed until immediately before units are placed where they are to be fired. A sheathed explosive unit shall not be primed if it is damaged or deteriorated.

5.6. No more than three sheathed explosive units shall be fired at one time.

5.7. No sheathed explosive unit shall be fired in contact with another sheathed explosive unit.

5.8. Certified shot firers and all persons responsible for the use, transportation and handling of sheathed blasting explosives shall be trained in the care and use of sheathed explosives.

TITLE 36 SERIES 42

SEALING PERMANENTLY CLOSED OR ABANDONED MINES

Editor's Note: This regulation is declared null and void by Civil Action No. 95-Misc-565 in the Circuit Court of Kanawha County.

TITLE 36 SERIES 43

REMOTE CONTROLLED EXTENDED OR DEEP-CUT MINING OPERATIONS

§36-43-1. General.

1.1 Scope. These rules and regulations apply to all working sections of underground coal mines utilizing remote controlled continuous mining machines, mining extended cuts or deep-cuts to a depth of face penetration which exceeds a normal cut. These rules and regulations do not apply to working sections wherein the continuous mining machine is remotely operated and taking normal cuts nor are they applicable at underground mining operations utilizing full face or partial face extraction methods wherein the mine roof is permanently supported as the mining machine advances beyond a normal cut.

1.2 Authority. WV Code 22-6-4c.

1.3 Filing Date. June 7, 1991.

1.4 Effective Date. July 8, 1991.

§36-43-2. Definition.

2.1. For purposes of these rules and regulations a normal cut is hereby defined as the projected depth of face penetration or coal extraction by a continuous mining machine, measured from the furthestmost point of the machine cutting drum to the machine operating controls.

§36-43-3. Requirements for Remote Controlled Extended or Deep-Cut Mining Operations; Special Consideration of Roof Control and Mine Ventilation Plans; Roof Bolting Procedures; Additional Precautions for Increased Worker Safety.

3.1. Required Roof Control and Methane and Dust Control Plans and the compatibility of each system shall be applied on a mine-by-mine basis.

3.2. During mining and place changing with remote control miners, all persons shall be positioned in an area that will afford protection to themselves and others from unsupported roof and moving equipment. The remote control unit shall not be placed on top of the mining machine and operated from this position.

3.3. All persons shall remain under permanently supported top at all times during the mining operations. While the continuous miner is in operation extracting coal, no person shall proceed inby the next to last row of permanent supports, provided however, that the inby edge of the canopy of manned face haulage equipment or the manned continuous miner may be advanced to the last row of permanent supports.

3.4. No person shall be inby the continuous miner operator's work position while coal is being mined unless he notifies the operator and can be located in a safe position. Exception: Equipment operator's transporting the material being cut/loaded.

3.5. In the event of a continuous miner breakdown that requires persons to go inby existing permanent roof support to make repairs, the unsupported area where practical, will be permanently supported and the remaining unsupported roof supported with temporary supports set on 5-foot centers lengthwise and crosswise where miners are present or working. However, to reset the continuous miner breaker, a minimum of two rows of temporary supports on five foot centers to the breaker will be required, unless the side of the machine where the breaker is located is five feet or less from the rib, one row of temporary supports located not more than five feet from the rib will be acceptable. The installation of temporary supports required by this section shall be performed under the direct supervision of a certified foreman.

3.6. A conspicuous reference mark or some other visual means shall be provided for the workers to determine when the maximum depth of cut is attained. (Chalk marks are not acceptable)

3.7. An approved ATRS System will be maintained and used during bolting operations.

3.8. When a side cut is planned to be turned from any mine entry, permanent roof supports shall be installed inby

the projected inby rib of the proposed side cut for a distance of ten feet or totally supported if the distance is less.

3.9. Roof supports shall be installed in sequence and spacing specified in the approved roof control plan.

3.10. All openings of unsupported crosscuts shall be supported with at least two rows of temporary supports on 4-foot center (crosswise) across the openings prior to work or travel in the intersection. This does not prevent preshift and on shift examination.

3.11. When crosscuts, in excess of a normal cut are developed on a working section, no more than two open, unsupported adjacent crosscuts in direct line with one another shall be permitted.

3.12. Where adverse roof conditions are encountered, the depth of the cuts shall be reduced to a depth sufficient to effectively control the mine roof.

3.13. During the mining of a final push-out only those persons necessary shall be allowed in the area of the immediate intersection.

3.14. All remote control continuous miners shall be equipped with a strobe light or equivalent device to give warning when methane gas concentrations reach one percent of more. In addition, a device to remotely activate the fire suppression system and the water supply shall be provided on the remote control panel (unit) or at another remote location under supported roof.

3.15. Methane examinations shall be made according to the requirements of WV Code 22A-2-43.

3.16 (a) Face ventilation shall be established according to the approved ventilation plan and WV Code 22A-2-4. Air quality measurements to determine compliance with this requirement may be taken at the end of the line brattice or tubing.

(b) Notwithstanding WV Code 22A-2-4(f), during remote control deep-cut mining operations, crosscuts for air shall be made not more than 120 feet apart and working places shall not be advanced more than 50 feet inby the projected crosscut prior to its completion.

3.17. When the roof bolting cycle is started, the line brattice may be removed a sufficient distance to provide a safe work area and will be advanced as permanent supports are installed.

3.18. When flooded-bed scrubbers are used in conjunction with deep cut, remote mining, the scrubber screens shall be examined at least once each shift and cleaned if necessary. In addition, the entire scrubber will be examined after twenty four (24) production hours and cleaned if necessary.

TITLE 36 SERIES 44 MINE RESCUE REQUIREMENTS FOR THE OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

§36-44-1. General

1.1 Scope. This rule governs mine rescue requirements for the Office of Miners' Health, Safety and Training. This rule in no way should be construed as relieving mine operators from their requirement to either have their own mine rescue team or contract coverage.

1.2 Authority. WV Code 22-6-4.

1.3 Filing Date. June 13, 2006

1.4 Effective Date. July 13, 2006

§36-44-2. Mine Rescue Requirements for the Office of Miners' Health, Safety and Training.

2.1 The Director shall develop a mine emergency operation plan for the mine rescue teams that represent the Office of Miners' Health, Safety and Training that would include but is not limited to the following criteria:

(a) Establish and maintain 2 mine rescue stations within the OMHS&T; one located in the Northern area of the state, and one located in the Southern area of the state, at locations determined by the Director.

(b) To establish one (1) fully trained mine rescue team per each OMHS&T's regional office.

(c) The members assigned to the mine rescue and recovery work may be inspectors, instructors or other qualified employees of the office as the director deems necessary. The director shall employ additional employees as he deems necessary to fulfill the requirement of this section.

(d) To provide the necessary fully equipped mine rescue vehicles for each OMHS&T mine rescue station that would include but is not limited to cell phones, satellite telephone, landline telephones (teleconferencing), on-site radios and fax/copy machines, computers with mine mapping software (CAD) and modems; and any other equipment deemed necessary by the Director.

(e) To purchase new additional mine rescue equipment including but is not limited to mask mounted radio connections and permissible radios for underground wireless communications; new lifeline/communications reels with a "down hole" speaker microphone system; new additional handheld gas detectors and infra-red and electrochemical gas monitoring equipment, gas sampling tubing, satellite telephones and four channels of seismic inputs (geophones); and any other equipment as deemed necessary by the Director.

2.2 As used in this section, mine rescue teams shall be considered available where teams are capable of presenting themselves at the mine site(s) within a reasonable time after notification of an occurrence which might require their services. Rescue team members will be considered available even though performing regular work duties or while in an off-duty capacity.

(a) In the event of a fire, explosion, or recovery operations in or about any mine, the director is hereby authorized to assign any mine rescue team to said mine to protect and preserve life and property. The director may also assign mine

rescue and recovery work to inspectors, instructors or other qualified employees of the office as he or she deems necessary.

(b) The agency's mine rescue team members shall be considered "duly qualified emergency service worker" as defined in WV Code § 15-5-11.

(c) Each mine rescue team shall consist of five members and one alternate, who are fully qualified, trained and equipped for providing emergency mine rescue service. Each mine rescue team shall be trained by a state certified mine rescue instructor.

(d) Each member of a mine rescue team must have been employed in an underground mine for a minimum of one year. For the purpose of mine rescue work only, miners who are employed on the surface but work regularly underground meet the experience requirement. The underground experience requirement is waived for those members of a mine rescue team on the effective date of this statute.

(e) An applicant for initial agency mine rescue training shall pass, on at least an annual basis, a physical examination by a licensed physician certifying his or her fitness to perform mine rescue work. A record that such examination was taken, together with pertinent data relating thereto, shall be kept on file by the director.

(f) Upon completion of the initial training, all agency's mine rescue team members shall receive at least ninety-six (96) hours of refresher training annually.

§36-44-3. Physical Requirements.

3.1 (a) Any person making application to participate in initial agency mine rescue training shall have had an examination by a physician, who shall certify that such applicant is physically fit to perform mine rescue and recovery work while wearing a self-contained oxygen breathing apparatus. The physical examination shall be completed within thirty (30) days prior to scheduled initial training.

(b) A physician shall fill out a form prescribed by the Director, and such form shall be presented to the Mine Rescue Training Instructor five (5) days prior to scheduled initial training.

§36-44-4. Agency Mine Rescue Team Members Compensation; Worker's Compensation.

4.1 (a) Agency mine rescue team members are to be paid a minimum of \$250 per month, with the rate thereafter to be determined annually by the Director.

(b) When engaged in rescue work required by an explosion, fire or other emergency at a mine, all members of the agency's mine rescue teams assigned to rescue operations shall, during the period of their rescue work, be employees of the operator of the mine where the emergency exists, and shall be compensated by the operator at the rate established in the area for such work. In no case shall this rate be less than the prevailing wage rate in the industry for the most skilled class of inside mine labor and paid according to the following criteria:

Time and half – when on standby at hotel/home

Double time - when available on the surface

Triple time – when under apparatus underground

The Director will invoice the operator and ensure proper distribution to the individual agency mine rescue team members.

(c) During the period of their emergency employment, members of mine rescue teams shall be protected by the workers' compensation subscription of such emergency employer.

TITLE 36 SERIES 45

THE USE OF A SOLID TRIANGULAR TOW BAR TO TRANSPORT DISABLED UNDERGROUND RUBBER-TIRED MINING EQUIPMENT

§36-45-1. General.

1.1 Scope. Rules and Regulations Governing the use of a Solid Triangular Tow Bar to Transport Disabled Underground Rubber Tired Mining Equipment.

1.2 Authority. W. Va. Code 22-6-4.

1.3 Filing Date. December 12, 1991.

1.4 Effective Date. January 27, 1992.

§36-45-2. Effect of Regulations.

2.1. These rules and regulations shall have the same effect of law and violations shall be deemed a violation of the law and so cited with the same effect as law. All provisions of W. Va. Code 22-1A relative to enforcement are applicable to the enforcement of these rules and regulations.

§36-45-3. Definitions.

3.1. All terms used in these rules and regulations, shall have the same meaning set forth in W. Va. Code 22A-1A-1A.

§36-45-4. Transportation of Disabled Underground Rubber-Tired Mining Equipment.

4.1. Ninety (90) days after the effective date of these rules and regulations a solid triangular tow bar or suitable device approved by the director shall be used to tow disabled underground rubber tired mining equipment in all areas of the mine outby working sections, provided however, other means of towing disabled equipment may be used if it is necessary to transport such disabled equipment short distances to the nearest location where a solid triangular tow bar or other device approved by the director can be safely affixed to the disabled equipment.

4.2. No person shall be permitted to ride in disabled underground rubber tired mining equipment while it is being towed using a solid triangular tow bar unless the towed vehicle is equipped with operative brakes and steering functions and controls and a protective canopy.

4.3. Pushing a disabled vehicle will not be allowed unless it becomes necessary to move such disabled vehicle out of the road of travel or to enable access to the use of a solid triangular tow bar.

4.4. No person shall be allowed to push a disabled vehicle from the operators deck end.

**TITLE 37 SERIES 1
MINE BOARD OF APPEALS
PROCEDURES AND PRACTICE BEFORE THE BOARD OF APPEALS**

§37-1-1. General.

1.1 Scope. (a) The procedures and rules of practice set forth herein shall govern and apply to proceedings before the Board of Appeals generally or Hearings Examiners appointed as authorized by law, including proceedings for the withdrawal of certification pursuant to W. Va. Code 29-1A-22A.

(b) In any proceeding initiated prior to the effective date of these rules, the provisions hereof shall govern and apply to all activities in such proceedings conducted after the effective date of these rules. Except when ordered by the Board, no re-issuance of any pleadings, documents or requests shall be required in such a proceeding.

(c) These rules shall be liberally construed to secure the just, prompt and inexpensive conduct and determination of all proceedings before the Board consistent with adequate consideration of the issues involved.

(d) On any procedural question not regulated by these rules, the pertinent provisions of the Administrative Procedure Act shall apply. On any matter not regulated by these rules and for which there is no pertinent provision in the Administrative Procedure Act, the provisions of the West Virginia Rules of Civil Procedure or the rules of evidence and privilege applicable in the courts of general jurisdiction of this State, as appropriate, shall apply.

1.2 Authority. W. Va. Code 22-1 and 29A-3.

1.3 Filing Date. April 12, 1982.

1.4 Effective Date. May 13, 1982.

1.5 Definitions.

(a) All terms used in these rules, not defined herein, shall have the meanings set forth in W. Va. Code 22A-1A-1.

(b) "Board of Appeals" means the Board created pursuant to W. Va. Code 22-5-1.

(c) "Code," when following a reference to a specific section, article and chapter, means the West Virginia Code of 1931, as amended.

(d) "Hearing Examiner" means any person authorized by the Board of Appeals pursuant to W. Va. Code 22-1A-29 or any other provision of the Code to conduct hearings required or authorized under the laws of this state to be conducted by the Board of Appeals.

(e) "Representative of Miners" means a person or organization designated by a group of miners to act as their representative before the Board of Appeals.

(f) "Preliminary Motion" means a motion made pursuant to Section 1.11 of these rules prior to the conclusion of evidentiary hearings.

(g) "Applicant" means a person filing a petition pursuant to W. Va. Code 22A-1A-20(b).

(h) "Charging Party" means a person filing a charge of breach of duty under W. Va. Code 22A-1A-29.

(i) "Charged Party" means a certified person charged with a breach of duty pursuant to W. Va. Code 22A-1A-29.

(j) "Charge" means a petition, complaint or any written document which plainly states a neglect or failure to perform any duty mandated by W. Va. Code 22a-1a-1 et. seq. or 22a-2-1 et seq., and complies with the requirements of 20A-1A-29(a).

(k) "Any Interested Person of Record" means any person in attendance at any hearing who has: (1) An interest in the outcome of the proceeding before the Board or Hearing Examiner, and (2) information or evidence which can be presented that could assist the Board or Hearing Examiner in performing its fact finding function, or if no hearing is held any person who meets the requirements of (1) and (2), and who may submit documents or materials to the Board for its consideration in the matter before it, or a person of record with the Board who meets above.

(l) "Chairman" means that person selected by the members of the Board of Appeals according to requirements of W. Va. Code 22-5-1.

1.6. Parties. (a) In a proceeding for withdrawal of certification under W. Va. Code 22a-1a-29, the parties shall be:

(1) The charging party;

(2) The charged party;

(3) The Commissioner of the Department of Energy; and

(4) Any interested person of record allowed to intervene under Section 1.7 of these rules or any other person so allowed to intervene.

1.7. Intervention. (a) Any person claiming a right of participation in a proceeding on the basis that the person has an interest in the outcome of the proceeding or any person otherwise seeking to intervene in a proceeding may become a party to a proceeding upon the Board's granting of such person's petition to intervene.

(b) A petition seeking intervention must be written, setting forth the interest of the petitioner in the proceedings, containing a showing that petitioner's participation will assist in the determination of the issues in question, and such petition must be served, contemporaneously with the filing, on the Commissioner who shall serve such petition on all other parties to the proceeding.

(c) Any party may file objections to a petition for intervention within fifteen (15) days after service of the petition on the party.

(d) A petition for leave to intervene may be filed at any stage of a proceeding before the commencement of a hearing. After the commencement of a hearing, a petition for leave to intervene may be filed only with the waiver by all parties or upon a showing by the petitioner of good cause for the delay in seeking intervention.

(e) The Board may grant or deny petitions for intervention or may permit intervention limited to a particular state of the proceeding.

1.8. Form of documents. (a) Caption. The documents filed in any proceeding conducted under these rules shall be captioned in the name of the person or persons charged with a violation or seeking relief from the Board and may contain or include other information appropriate for the identification of the proceedings, including any docket number assigned to the case.

(b) Title. After the caption, each such document shall contain a title which shall be descriptive of the document and which shall identify the party by whom the document is submitted.

(c) Signature. The original of each document filed, shall be signed at the end by the party submitting the document, or, if the party is represented by an attorney, by such attorney. The address and telephone number of the party or the attorney shall appear beneath the signature.

1.9. Filing and service of pleadings and other documents. (a) Where to file. All pleadings, forms and documents in a proceeding described in these rules shall be filed with the Chairman, Board of Appeals, 1615 Washington Street, East, Charleston, West Virginia 25311.

(b) Number of copies. Except as otherwise provided in these rules or by the Chairman, a party shall furnish an original and three (3) copies of all pleadings and other documents required or permitted to be filed with the Board.

(c) How to file. All filing may be accomplished by personal delivery or first class mail.

(d) When filing effected. In the case of mailing by first class mail, filing is effective upon mailing. In the case of personal delivery, filing is effective upon delivery.

(e) Copies to be served. Copies of all pleadings and other documents filed in any proceeding described in these rules and copies of all notices pertinent to such proceedings shall be served upon all other parties to the proceedings as described in Section 1.6 of these rules and companion sections.

(f) Method of service. Documents by which any proceeding is initiated shall be served on each individual party personally or by registered or certified mail, return receipt requested. All subsequent documents may be served personally or by first class mail. Service by mail is complete upon mailing.

(g) Once the Board of Appeals has agreed to hear the petition or claim, all pleadings and other documents filed in any proceeding described in these rules shall contain a written certification of the date and manner of service. Such certification shall be in the form of an affidavit of the person making the service or of the written representation of the person's attorney. No pleading or document shall be considered filed for any purpose in the absence of such written certification.

(h) Service of attorney. Whenever a party is represented by an attorney who has signed any document filed on behalf of such party or otherwise entered an appearance on behalf of such party service thereafter may be made upon the attorney without additionally serving the individual party or parties. In any event once an attorney is of record in a proceeding under the rules, service shall be made on the attorney before service is complete.

1.10. Amendments. (a) The strict formal requirements in pleadings are not required to be observed in documents, answers or any other papers filed with the Board; and amendments or supplemental statements may be made and filed at any time prior to a scheduled hearing as long as the documents are filed and served as called for under these rules at least ten (10) days prior to the scheduled hearing date. If a party desires to file amended or supplemental statements less than ten (10) days before the scheduled hearing of the matter, the party or his representative shall make a written request to the Chairman of the Board to file those amendments along with the amendments. Said request will set forth with particularity the reason for the need to file such documents at the late date. The Chairman of the Board will then allow or disallow the filing based solely in his discretion as justice might require.

(b) A further and better statement of any cause or ground of complaint or defense, a further and better particulars of any matter stated, in any document, may in any case be ordered at the discretion of the Chairman or Hearing Examiner.

1.11. Motions. (a) Unless made during a hearing, all motions shall be in writing, contain a short and plain statement of the grounds on which it is based, and set forth the relief sought. Motions may be accompanied by appropriate supporting material or discussion of the reasons for granting the motion.

(b) A statement in opposition to a motion may be filed by any party within ten (10) days after the date of the service.

(c) Any motion, including motions made during the hearing and except for motions related to jurisdiction or directed verdict or for a motion for reconsideration of the final decision of the Board, made less than ten (10) days before

the commencement of an evidentiary hearing shall contain a showing of good cause for the motion not having been filed prior to the ten (10) day period.

(d) Unless ordered by the Board, oral argument on motions will not be heard.

1.12. Consolidation of proceedings. The Chairman of the Board may at any time order a proceeding described in these rules consolidated with any other such proceeding then pending before the Board, if such a consolidation is, in the opinion of the Board, a more efficient and expeditious manner of taking evidence, as long as all parties to the proceeding are afforded due process of law and a fair opportunity to present and make a record of evidence.

1.13. Hearings. All hearings shall be conducted by the Board itself, with the Chairman having the primary responsibility for conducting the hearing, or by a Hearing Examiner, pursuant to the direction of the Board, in those cases as authorized by the Code and consistent with the requirements of these rules. All hearings shall be conducted in a fair and impartial manner, be conducted in accordance with the provisions of Part 2 of these rules, and be open to the public.

1.14. Public access to board records. (a) Subject to reasonable regulation by the Board, all Board records relating to reviewing charges to withdraw certification, and review of alleged discharges, discrimination or failure to compensate shall be open for public inspection.

(b) The Board shall make available for public inspection, all final orders, decisions and opinions in the adjudication of cases under the provisions of these rules.

1.15. Time. (a) In computing any period of time prescribed or allowed by these rules, the day of the act, event or default from which the designated period of time begins to run shall not be included. The last day of the period so computed shall be included, unless it is a Saturday, a Sunday or a legal holiday when the offices of the government of this State are closed, in which event the period runs until the end of the next day which is not a Saturday, a Sunday or a legal holiday when the offices of the government of this State are closed.

(b) When by these rules or by a notice given thereunder, an act is required or allowed to be done at or within a specified time, the Board may extend such time for good cause shown. If the motion for extension is made after the expiration of the prescribed time or any earlier granted extension, the extension shall be granted only upon the further showing that the failure to act was the result of excusable neglect.

(c) Whenever any party has the right or is required to do some act or undertake some proceedings within a prescribed period after service of a notice or other document upon him and the notice or document is served upon the party by mail, three (3) days shall be added to the prescribed period.

1.16. Action by the Board. A vacancy in the Board shall not impair the right of the remaining two (2) members to exercise all of the powers of the Board. Two (2) members of the Board, at all times, shall constitute a quorum of the Board. Only those members of the Board attending a hearing held in a proceeding shall participate in the decision in a proceeding arising out of such hearing. In any matter where only two (2) members of the Board attend the hearing held therein, action by the Board to grant the relief requested by the person initiating the proceeding shall require the concurrence of both of these members of the Board.

1.17. Discovery. (a) Discovery shall be completed within thirty (30) days after commencement of a proceeding. For good cause shown, the Board may permit the time for discovery to be extended.

(b) Parties may obtain discovery of any relevant matter, not privileged, that is admissible evidence or appears reasonably calculated to lead to the discovery of admissible evidence.

(c) Upon application by a party or by the person from whom discovery is sought or upon its own motion, the Board may, for good cause shown, make any order limiting discovery to prevent undue delay or to protect a party or person from annoyance, oppression or undue burden or expense.

(d) Upon application to the Board, any party may take the testimony of any person, including a party, by deposition upon oral examination or written interrogatories. The time, place and manner of taking depositions shall be governed by the order of the Board.

(e) Upon receiving approval by the Board, any party may serve written interrogatories or requests for admission upon another party. A party served with written interrogatories or a request for admission shall answer such interrogatories or requests within fifteen (15) days of service unless the proponent of the interrogatories or request agrees to a longer time, or unless the Board by order specifies a different time or excuses the party from answering on good cause shown. Interrogatories shall be answered under oath. For good cause shown, the Board may order a party to produce and permit inspection, copying or photographing of designated documents or objects.

1.18. Ex parte communications. (a) No individual, partnership, corporation, association or other entity outside of this Board, its staff or its agents shall make or knowingly cause to be made any prohibited ex parte communication to the Board, its staff or its agents as to the merits of any proceeding before the Board which has not been concluded.

(b) No member of the Board, its staff or its agents shall request any prohibited ex parte communications or make or knowingly cause to be made any prohibited ex parte communications to any individual, partnership, corporation, association or other entity outside of this Board, its staff or its agents as to the merits of any proceeding before the Board which has not been concluded.

(c) "Ex Parte Communication" means an oral or written communication not on the public record with respect to which reasonable prior notice is not given to all parties as provided for in this rule.

(d) The ex parte communications prohibited by this rule include:

(1) Such communications, when written, if copies thereof are not contemporaneously served by the communicator on all parties to the proceedings; and

(2) Such communications, when oral, unless advance notice thereof is given by the communicator to all parties to the proceeding and adequate opportunity afforded to them to be present.

(e) The ex parte communications prohibited by this rule shall not include:

(1) oral or written requests for information solely with respect to the status of a proceeding; and

(2) oral or written communications which all the parties to the proceeding agree, or which the Board formally rules, may be made on an ex parte basis.

(f) All ex parte communications made in violation of this rule shall be placed on the public record of the proceeding to which it relates.

(g) In the event an ex parte communication in violation of this rule occurs, the Board may make such orders or take such action as to the interests of justice require. Upon notice and hearing, the Board may determine that the interests of justice require that the claim or interest in the proceeding involving a party who knowingly makes a prohibited ex parte communication or knowingly causes a prohibited ex parte communication to be made be dismissed, denied or otherwise disregarded on account of such violation. Upon notice and hearing, the Board may censure, suspend, otherwise discipline or revoke the privilege of practice before the Board of any person who knowingly makes or causes the making of a prohibited ex parte communication.

1.19. Hearing examiners. (a) In matters where authorized by the Code, the Board may appoint a Hearing Examiner. Anyone appointed to act as a Hearing Examiner must not have had any connection at any time with the coal industry or an organization representing miners, unless all parties to the proceeding consent to such a person's appointment. A reference to a hearing examiner shall be the exception and not the rule.

(b) The order of reference to the Hearing Examiner may specify or limit his powers and may direct him to report only upon particular issues or to do or perform particular acts or to receive and report evidence only and may fix the time and place for beginning and closing the hearings and for the filing of the Hearing Examiner's report. Subject to the specifications and limitations stated in the order, the Hearing Examiner has and shall exercise the power to regulate all proceedings in every hearing before him and to do all acts and take all measures necessary or proper for the efficient performance of his duties under the order. He may require the production before him of evidence upon all matters embraced in the reference through subpoenas issued by the Board. He may rule upon the admissibility of evidence unless otherwise directed by the order of reference and has the authority to put witnesses on oath and may himself examine them and may call the parties to the action and examine them upon oath. The Hearing Examiner shall make a record of the evidence offered and excluded in the same manner and subject to the same limitations as provided for hearings before the Board.

(c) When a reference is made, the clerk of the Board shall forthwith furnish the hearing examiner with a copy of the order of reference. It is the duty of the hearing examiner to proceed with all reasonable diligence. Either party, on notice to the parties and hearing examiner, may apply to the Board for an order requiring the hearing examiner to speed the proceedings and to make his report. If a party fails to appear at the time and place appointed, the hearing examiner may proceed ex parte or, in his discretion, adjourn the proceedings to a future day, giving notice to the absent party of the adjournment.

(d) The parties may procure the attendance of witnesses before the hearing examiner by the issuance and service of subpoenas through the Board. If without adequate excuse a witness fails to appear or give evidence, he may be punished as for a contempt and be subjected to the consequences, penalties and remedies as if the witness failed to appear or give evidence before the Board.

(e) The Hearing Examiner shall prepare a report upon the matters submitted to him by the order of reference and shall set forth his findings of fact and conclusions of law in the report. He shall file the report with the Board and shall file with it a transcript of the proceedings and of the evidence and the original exhibits. The Board shall forthwith mail to all parties notice of the filing.

(f) The Board shall accept the Hearing Examiner's findings of fact unless clearly erroneous. Within ten (10) days after being served with notice of the filing of the report, any party may file with the Board and serve written objections thereto upon the other parties. Application to the Board for action upon the report and upon objections thereto shall be by motion and upon notice to the other parties. The Board, after hearing, may adopt the report or may modify it or may reject it in whole or in part or may receive further evidence or may recommit it with instructions.

(g) Before filing his report, a Hearing Examiner may submit a draft thereof to counsel for all parties for the purpose of receiving their suggestions.

§37-1-2. Hearings.

2.1. Scope. Unless otherwise specified in these or other rules and regulations, the rules in this section shall govern and apply to hearings conducted by the Chairman or a Hearing Examiner pursuant to the authority provided in the laws of this State or Rules and Regulations pursuant thereto.

2.2. Conduct of hearings. The Chairman or a Hearing Examiner appointed by the Board in those proceedings, as authorized by the Code, shall conduct every hearing.

2.3. Powers of the Board and Hearing Examiners. (a) In all proceedings before the Board or during the time of reference of a proceedings to a Hearing Examiner in matters authorized by the Code, the Board or the Hearing Examiner in such respective matters shall have the authority and power to:

(1) Administer oaths and affirmations;

(2) Rule upon offers of proof and receive relevant evidence;

- (3) Take such action regarding discovery as required in any proceedings and as specified in these rules;
- (4) Regulate the course of the hearing;
- (5) Dispose of procedural requests or similar matters;
- (6) Hold conferences for the settlement or simplification of the issues with the consent of the affected parties;
- (7) Deny any continuance except for good cause shown;
- (8) Request the Director to investigate the charge filed in a decertification proceeding and report the results of the investigation within ten (10) days of his receipt of the request;
- (9) Adopt any other method for the gathering of sworn evidence which affords the Director and all parties due process of law and fair opportunity to present and make a record of evidence; and
- (10) Take any other action in connection with proceedings as authorized by law.

(b) In all proceedings, whether before the Board of a Hearing Examiner, the Board shall be responsible to subpoena witnesses and require the production of any books, papers, records or other documents relevant or material to the proceedings.

2.4 Notice of hearing: Contents of notice. (a) Unless otherwise specified in the rules, no hearing shall be conducted under the rules or otherwise unless the parties to the proceeding shall have received at least ten (10) days written notice.

(b) Each written notice of the hearing, or notice of denial of the hearing for failure to state a charge, shall contain the date, time and place of the hearing; notice of the hearing and a copy of the charge shall be mailed by certified mail, return receipt requested, to the charging party, the charged party, the Director, the representative of the miner or miners affected and to any interested person of record, and, such notice shall contain the date, time and place of the hearing; and a short and plain statement of matters which are to be the subject of or asserted at the hearing. Such notice shall be provided in accordance with the provisions of W. Va. Code 29A-7-2.

2.5 Date, time and place of hearing. The date, time and place of each hearing shall be determined by the Board or the Hearing Examiner who is to conduct the hearing. In assigning a hearing site, due regard shall be given to the convenience and necessity of the parties or their representatives and witnesses, the availability of suitable hearing facilities and other relevant factors.

2.6 Representation at hearings. At hearings held pursuant to these rules, any party may represent himself or be represented by an attorney-at-law admitted to practice before the courts of any state or the District of Columbia. In addition, any party who is also an operator may be represented by a full-time employee, and any miner may be represented by the representative of miners.

2.7 Burden of proof. In all proceedings before the Board, the party initiating the proceeding shall have the burden of proving his case by a preponderance of the evidence.

2.8 Proposed findings, conclusions and orders; briefs. The Board or the Hearing Examiner to whom a matter is referred may request the parties to file proposed findings of fact, conclusions of law and orders, together with a supporting brief. Such proposals and briefs also shall be allowed to be filed at the request of a party. At the request of a party, the Board or the Hearing Examiner to whom a matter is referred shall allow reply briefs to be submitted within ten (10) days after the date of filing of an opposing party's proposals and briefs.

All such proposals and briefs shall be served upon all parties and shall contain references to the record and authorities relied upon.

2.9 Hearings to be public. All hearings conducted under these rules shall be open to the public; and hearings conducted to hear charges concerning withdrawal or suspension of certification pursuant to section one, article five, chapter twenty-two of the Code, shall have a transcript made of all evidence presented in any such hearing. A transcript shall not be made of a hearing conducted to hear charges concerning discrimination or miner's entitlements pursuant to section twenty, article one-a, chapter twenty-two-a of the Code, unless (a) a party to such proceedings requests that a transcript be made within thirty (30) days from the date of the receipt of a final order or decision by the Board, or (b) the Board orders a transcript prepared on its own motion, or (c) a court of record or other judicial body exercising jurisdiction over this proceeding or appeal orders that a transcript be prepared.

§37-1-3. Rules Applicable to Proceedings Initiated to Withdraw Certification.

3.1. Scope. The rules in this section govern and are applicable to proceedings initiated pursuant to W. Va. Code 22-5-1 by a mine inspector, Commissioner or the Director to charge a mine foreman, assistant mine foreman, fire boss or any other certified person with neglect or failure to perform any duty mandated pursuant to W. Va. Code 22A-1A-1 or 22a-1a-2. In addition to the rules contained in this section, the general rules of practice before the Board contained in Section 1 of these rules and the rules relating to hearings held by the Board contained in Section 2 of these rules are also applicable to such proceedings.

3.2. By whom and against whom a charge may be initiated. A mine inspector or the Director and the Commissioner may charge a mine foreman, assistant mine foreman, fire boss or any other certified person with neglect or failure to perform any duty mandated pursuant to 22a-1-1 or 22a-1-2.

3.3. Initiation of proceedings. The charge is initiated by filing it with the Director or with the Board. If a charge is filed with the Director, the Director, within ten (10) days, shall forward notice of the charge with a copy of the charge to the Board.

3.4. Notice of charge and time to answer. The Board upon receipt of a charge shall immediately give notice of the charge accompanied by the charge, to the charged party, the Director and the Commissioner if he is not the charging

party, and the representative of the miner or miners at the mine where the violation is alleged to have occurred, giving ten (10) days from the date of the notice in which to answer.

3.5. Contents of charge. (a) A charge shall comply with applicable general requirements and shall contain:

- (1) The name of the person charged;
- (2) The duty or duties the person charged is alleged to have violated;
- (3) The approximate date and place so far as is known of the violation of duty; and
- (4) The capacity of the person making the charge.

(b) A charge shall be verified upon oath or affirmation on the basis of information and belief or personal knowledge by the charging party.

3.6. Contents of answer. An answer shall comply with applicable general requirements and shall contain any documents and materials which could aid the Board in its determination of the possible substance of the charge.

3.7. Who may file an answer. Any party may file an answer. The failure of a party to file an answer in the prescribed time shall not operate to bar that party's further participation in the proceeding.

3.8. Investigation of charge. (a) If the Board is unable to determine the substance of the charge, it may request the Director to investigate the charge.

(b) Upon request by the Board, the Director shall investigate the charge and report the results of the investigation to the Board within ten (10) days of his receipt of the charge.

3.9. Probable cause determination. (a) Within twenty (20) days after receipt of the charge the Board shall evaluate the charge and determine whether or not a violation of duty has been stated.

(b) In making a probable cause determination, the Board shall evaluate all documents and materials of record, including the charge and any answer filed, in order to determine as nearly as possible the substance of the charge.

3.10. Notice of probable cause determination, and hearing or denial of hearing. (a) If the Board determines that probable cause exists to support the allegation that the person charged has violated his duty, the Board by the end of the twenty (20) day period shall set a date for hearing which date shall be within eighty (80) days of the filing of the charge.

(b) If probable cause is determined, notice of the hearing, a copy of the charge and the probable cause determination shall be mailed by certified mail, return receipt requested to:

- (1) The charging party;
- (2) The charged party;
- (3) The Director and the Commissioner, if he is not the charging party;
- (4) The representative of the miner or miners at the mine where the violation is alleged to have occurred; and
- (5) To any interested person of record.

(c) If the Board determines that no probable cause exists, notice of denial of the hearing, a copy of the charge and the reasons for the failure to state a charge shall be mailed by certified mail, return receipt requested:

- (1) The charging party;
- (2) The charged party;
- (3) The Director and the Commissioner, if he is not the charging party;
- (4) The representative of the miner or miners at the mine where the violation is alleged to have occurred; and
- (5) To any interested person of record.

3.11. Board findings. (a) At the conclusion of the hearing the Board shall proceed to determine the case upon consideration of all the evidence offered and shall render a decision in writing containing its findings and conclusions of law.

(b) If the Board finds by a preponderance of the evidence that the certificate or certificates of the charged person should be suspended or revoked pursuant to W. Va. Code 22a-5-1, it shall enter an order to that effect. No renewal of the certificate shall be granted except as provided in W. Va. Code 22A-5-1.

3.12. Judicial review. Any party adversely affected by a final order or decision issued by the Board under these rules pursuant to W. Va. Code 22A-5-1, shall be entitled to judicial review thereof pursuant to W. Va. Code 29A-5-4.

§37-1-4. Rules Applicable to Proceedings Initiated Alleging Discrimination or for Compensation Owed to Miners as a Result of a Withdrawal Order.

4.1 Scope. The rules of this section govern and are applicable to proceedings initiated pursuant to section twenty, article one-a, chapter twenty-two-a of the Code by any miner or a representative of miners who believes that he has been discharged or in any other way discriminated against because he, (a) has notified the Director, his authorized representative or an operator, directly or indirectly, of any alleged violation or danger, (b) has filed, instituted or caused to be filed or instituted any proceeding under this law, (c) has testified or is about to testify in any proceeding resulting from the administration or enforcement of the provisions of the state mining laws; or any miner who has not been compensated by an operator for lost time due to the posting of a withdrawal order. In addition to the rules contained in this section, the general rules of practice before the Board contained in Section 1 of these rules and the rules relating to hearings held by the Board contained in Section 2 of these rules are also applicable to such proceedings.

4.2 When and by whom applications may be made to Board. Any miner or a representative of miners who believes that he has been discharged or otherwise discriminated against as set out in (a), (b) or (c) of Section 4.1 of these rules, or any miner who has not been compensated by an operator for lost time due to the posting of a withdrawal order, may, within thirty (30) days after such violation occurs, make application to the Board for a review of such alleged discharge, discrimination or failure to compensate.

4.3 Initiation of proceedings. The proceeding is initiated by filing the application with the Board.

4.4 Contents of application. An application shall comply with applicable general requirements and shall contain:

- (1) The name of the respondent,
- (2) A description of the act and detailed circumstances surrounding the alleged discharge, discrimination or failure to compensate, accompanied by any supporting documents that may be available,
- (3) Copies of any contract arbitration decision involving the applicant and the same set of facts alleged in the application,
- (4) A statement as to whether a similar complaint has been filed with the Secretary of the United States Department of Labor pursuant to 30 U.S.C. 815(c) of the Federal Mine Safety and Health Act.

4.5 Contents of answer. An answer shall comply with applicable general requirements and shall contain any documents and materials which could aid the Board in its determination of the possible substance of the charge.

4.6 Who may file an answer; time for answer. Any party may file an answer within fifteen (15) days of the date of service of the application on the party. The failure of a party to file an answer shall not foreclose the party's further participation in the proceeding.

4.7 Investigation of application. Upon receipt of the application, the Board shall cause such investigation to be made as it deems appropriate. Such investigation shall provide an opportunity for a public hearing as provided in Section 2 of these rules at the request of any party to enable the parties to present information relating to the alleged violation.

4.8 Notice of application. A copy of the application along with any other materials filed with the Board shall be served on the respondent by the applicant as set forth in Section 1.9(f) of these rules.

4.9 Notice of hearing. Mailing of the notice of hearing to the respondent at his last address of record as reflected in the records of the Department of Energy shall be deemed adequate notice to the respondent.

4.10 To whom notice is to be given and contents of notice. (a) Notice of any hearing in the matter shall be mailed by certified mail, return receipt requested to:

- (1) The applicant;
- (2) The respondent; and
- (3) To any interested person of record.

(b) Each written notice of the hearing shall contain the date, time and place of the hearing; and a short and plain statement of matters which are to be the subject of or asserted at the hearing. Such notice shall be provided in accordance with the provisions of W. Va. Code 29a-7-2.

4.11 Public hearing. A public hearing shall be held only at the request of any party to enable the parties to present information relating to such violation or by order of the Board. A request for such hearing by any party must be filed with the Board and served on all other parties within twenty (20) days of the date of service of the application on the requesting party.

4.12 Final decisions of the Board. (a) Finding of violation. If the Board finds that a violation did occur, it shall issue a decision within forty-five (45) days of the conclusion of the investigation, making findings of fact and conclusions of law, incorporating therein, requiring the person committing such violation to take such affirmative action to abate the violation as the Board deems appropriate, including, but not limited to, the rehiring or reinstatement of the miner or representative of miners to his former position with back pay, and also pay compensation for the idle time as a result of a withdrawal order.

(b) Finding of no violation. If the Board finds that no violation occurred, it shall issue an order denying the application, such order shall incorporate the Board's findings therein.

4.13 Proceedings relative to discharge; forty-five (45) day limitation. (a) If the proceedings under Section 4 of these rules relative to discharge are not completed within forty-five (45) days of the date of discharge due to delay caused by the operator, the miner shall be automatically reinstated until the final determination.

(b) If the proceedings under Section 4 of these rules relative to discharge are not completed within forty-five (45) days of the date of discharge due to delay caused by the Board, then the Board may, at its option, reinstate the miner until the final determination.

(c) If the proceedings under Section 4 of these rules relative to discharge are not completed within forty-five (45) days of the date of discharge due to delay caused by the miner, the Board shall not reinstate the miner until the final determination.

(d) Prior to any order of reinstatement under sections (a) or (b) of this rule, if no hearing has been previously held on the discharge by either the Board or a Hearing Examiner, the Board shall hold a hearing to determine the cause of any delay and the matters specified herein. Temporary reinstatement until the final determination of the proceedings shall be granted once the Board first determines that it has jurisdiction of the application, unless the respondent shows that there is a substantial unlikelihood that the application will succeed on the merits, and that the granting of the order of temporary reinstatement will adversely affect the safety or health of the miners at the mine where the applicant is to be reinstated.

4.14 Request by applicant for costs. Whenever an order is issued under Section 4 of these rules pursuant to W. Va. Code 22A-1A-20(c), at the request of the applicant, a sum equal to the aggregate amount of all costs and expenses including the reasonable attorney's fees as determined by the Board to have been reasonably incurred by the applicant for, or in connection with, the institution and prosecution of such proceedings, shall be assessed against the person committing such violation.

4.15 Judicial review. Any party adversely affected by a final order or decision issued by the Board under these rules pursuant to W. Va. Code 22A-1A-20 Code shall be entitled to judicial review thereof pursuant to W. Va. Code 29A-5-4.

4.16 Deferral. In any proceeding instituted under the Code and to which this section applies and upon motion by any party to the proceeding, the Board may dismiss an application and defer to the processing of the same claim by the United States Department of Labor if the Board finds that the same claim was first presented to the United States Department of Labor and is being or has been processed by that agency.

TITLE 37 SERIES 2 PROCEDURES FOR TEMPORARY SUSPENSION OF CERTIFICATES

§37-2-1. General.

1.1 Scope. Procedures for temporary suspension of certificates issued to persons pursuant to Chapter 22A of the Code of West Virginia pending full hearing before the Board of appeals.

1.2 Authority. W. Va. Code 29A-3-3 and 29A-3-15.

1.3 Filing Date. August 11, 1983.

1.4 Effective Date. September 11, 1983.

1.5 Definitions. Unless the context in which a word or term is used requires a different meaning, the definitions set out in W. Va. Code 22-1-1 apply to these regulations.

§37-2-2. Procedures For Temporary Suspension Of Certificates Issued To Persons Pursuant To Chapter 22A Of The Code Of West Virginia Pending Full Hearing Before The Board Of Appeals.

2.1. Finding Probable Cause by the Board of Appeals. No temporary suspension of the certificate of a certified person shall be made by the Commissioner unless and until a finding of probable cause that such person has violated statutory duties has been made by the Board of Appeals according to the provisions of W. Va. Code 22A-1A,- 29(b).

2.2. Temporary Suspension of Certificates. The Commissioner may order the temporary suspension of the certificate of any person certified pursuant to Chapter 22A of the Code of West Virginia, pending full evidentiary hearing before the Board of appeals if an investigation by authorized representatives of the Commissioner reveals that:

(a) The certified person was active in the capacity which required or requires, the certification issued by the Commissioner; or

(b) Such certified person is, or was, assigned by the operator or operator's agent to perform duties set out in the Code or regulations; and

(c) Such certified person failed and/or neglected to perform such statutory or regulatory duties; and

(d) Such failure and/or neglect of duty resulted in a finding by an authorized representative of the Commissioner of a violation of a health and safety standard of the Code or regulations; and

(e) Such violation of a health and safety standard resulted in the occurrence or high likelihood of the occurrence of the event against which the standard is directed or designed to prevent.

The temporary suspension shall be effective upon issuance by the Commissioner and shall remain effective until modified or terminated by the Commissioner or the Board of Appeals.

2.3. Notification. The Commissioner, or his authorized representative, shall notify the certified person in writing by personal service or certified mail that such person's certificate is temporarily suspended stating the reasons for such suspension.

2.4. Request for Modification. Any certified person whose certificate has been suspended pursuant to this regulation, may request in writing to the Board of appeals, that the Commissioner's suspension order be modified at any time after the finding of probable cause by the Board of Appeals.

2.5. Prior Proceedings. These regulations shall be applicable to all cases pending before the Board of Appeals on the date promulgation, unless otherwise ordered by the Board of appeals. Except when ordered by the Board of appeals, no re-issuance of any pleading, documents or request shall be required in such proceeding.

TITLE 48 SERIES 1 BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION STANDARDS FOR CERTIFICATION OF UNDERGROUND BELT EXAMINERS FOR UNDERGROUND COAL MINES

§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-2-3.

1.2 Authority. W. Va. Code 22-9-6 and 29A-3.

1.3 Effective Date. May 1, 1987

1.4 Filing Date. May 1, 1987

§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.

§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 48, Series 2, 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.

§48-1-4. Examination Components.

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

1. 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.
2. Practical.
 - (a) Use and care of flame safety lamp.
 - (b) Anemometer.
 - (c) Methane detector.

§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 seventy-five percent (75%) 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 seventy-five percent (75%) 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.

TITLE 48 SERIES 2

SAFETY TRAINING PROGRAM FOR PROSPECTIVE UNDERGROUND COAL MINERS

§48-2-1. General.

- 1.1 Scope. These rules govern safety training programs for prospective underground coal miners.
- 1.2 Authority. W. Va. Code 22A-9-6 and 29A-3
- 1.3 Filing Date. May 12, 1987
- 1.4 Effective Date. May 12, 1987

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

2.1. An approved training program must, 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 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 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 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 Miner's Cards. (a) Upon completion of the approved eighty (80) hour pre-employment training program, a permit of apprenticeship shall be issued to any person who scores at least seventy-five percent (75%) of the final examination administered by the West Virginia Department of Energy, provided that such person passes the examination within forty-five (45) days after completing the eighty (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 apprenticeship 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 seventy-five percent (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 forty-five (45) days after completing the eighty (80) hour program. In the event of failure on the second opportunity the prospective miner must repeat the approved eighty (80) hour pre-employment training program in order to retake the examination.

2.8. Issuance and Expiration of Renewed Apprentice Miner's Cards (a) Apprentice miner's card may be renewed by retaking and passing with a score of a least seventy-five percent (75%) the appropriate apprenticeship examination.

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

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

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

(e) Any prospective miner who does not score at least seventy-five percent (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 thirty (30) days. In the event of failure to retake or pass the examination on the second opportunity the prospective miner must repeat the approved eighty (80) hour pre-employment training program in order to retake the examination.

2.9. Guidelines for Issuing Underground Miner's Certification. (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 eighty (80) hour apprenticeship program and has at least six (6) months total experience, being one hundred eight (108) shifts, worked as an apprentice miner within this State and demonstrated his competence as a miner by scoring at least eighty percent (80%) on the underground miner's certification examination.

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

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

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

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

This course outline is sequence by instructional units for eighty (80) hours of student-teacher contract. Implementation of this program may be achieved by using the training materials available through the Department of 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: four (4) hours.

- (a) How coal is mined.
- (b) Types of coal mines.
- (c) Types of mining methods.
- (d) Basic coal mining terminology.
- (e) Use of coal.

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

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

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

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

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

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

- (a) Basic electricity.
- (b) Conductors and nonconductors of electricity.
- (c) Recognition and prevention of electrical hazards.
- (d) Removal and treatment of a person in contact with dangerous electrical circuits.

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

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

- (a) Recognition of potential accident-producing situations.
- (b) Lifting procedures for high and low coal.
- (c) Proper handling of supplies and materials.

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

- (a) Demonstration and practice of Holger-Nielsen back pressure method of artificial respiration.
- (b) Control of bleeding.

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

3.8. Mine Gases and Their Detection. -- Time: four and one half (4) hours.

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

3.9. Fire Prevention and Control. -- Time: Three (3) hours.

- (a) Causes of mine fires and explosions.
- (b) Preventive measures.
- (c) Primary and alternate methods of fire control.
- (d) Demonstration and practice in using a portable fire extinguisher.
- (e) Location of fire fighting materials in the mine.

3.10. Ventilation and Mine Mapping. -- Time: five and one half (5) hours.

- (a) Introduction to mine ventilation systems.
- (b) Principal ventilation system components.
- (c) Methods of ventilating the working face for blower and pusher fan systems.
- (d) Minimum distances from line curtain to face and curtains to ribs.
- (e) Procedures for hanging check curtains.
- (f) Mine maps and mine map symbols.
- (g) Primary and alternate escapeways on mine maps and section maps.

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

- (a) C.P.R. Practice.
- (b) Treatment of physical shock.
- (c) Dressing of open wounds.

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

- (a) Recognition of hazardous roof and rib conditions.
- (b) Instruction in visual inspection.

- (c) Demonstration and practice of the sound and vibration method of inspection.
- (d) Use of the slate bar.
- (e) Appropriate actions for new miner under hazardous roof and rib conditions.
- (f) Introduction to basic roof support systems.
- (g) Correct and incorrect installation of conventional roof supports.
- (h) Correct and incorrect installation of roof bolts.

3.13. Haulage and Equipment Safety. -- Time: seven (7) hours.

- (a) Hazards and safety practices of working around, near, or on both track haulage equipment and rubber tired vehicles.
- (b) Track haulage communication.

3.14. State and Federal Laws and Regulations. -- Time: two (2) hours.

- (a) State and federal laws that pertain to new miner.

NOTE: *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 Four. -- Time: two (2) hours.

- (a) Practice C.P.R. and artificial respiration.
- (b) Treatment of burns, closed wounds, strains, sprains, and ruptures.

3.16. Miner and Operator Rights and Responsibilities. -- Time: three (3) hours.

- (a) UMW Contract.
- (b) Company rules and regulations.
- (c) Legal rights and responsibilities.
- (d) Grievance procedures.

3.17. Health and Sanitation. -- Time: two (2) hours.

- (a) Detection, causes and prevention of pneumoconiosis, hearing damage, and respirable dust disorders.
- (b) Federal health and safety, but as it pertains specifically to health and sanitation.

3.18. First Aid - Part Five. -- Time: two (2) hours.

- (a) C.P.R. and artificial respiration practice.
- (b) Treatment of fractures and dislocations.
- (c) Transporting the injured.

3.19. General Safety - Part Two. -- Time: four (4) hours.

- (a) Accident causes and prevention.
- (b) Tool care.
- (c) Selection of appropriate tools for tasks.
- (d) Interpersonal communications.
- (e) Supervisor-employee relations.
- (f) Safety attitudes.

3.20. General Mine Safety. -- Time: seven (7) hours.

- (a) Hazards and related safety practices for low coal, high coal, wet mines.
- (b) Longwall, bridgwall and shortwall and related hazards.
- (c) Good housekeeping.
- (d) Cleaning activities and related hazards around ribs, tailpieces and belts.
- (e) Mine communication systems.
- (f) Emergency procedures.
- (g) When and how to build barricades.

3.21. First Aid - Part Four. -- Time: two (2) hours.

- (a) Location of first aid materials in an underground coal mine.
- (b) Review and practice of first aid procedures.

3.22. Summary and Debriefing. -- Time: four (4) hours.

- (a) Review of major points.
- (b) Question and answer problem-solving session.
- (c) Permit of apprenticeship examination.

§48-2-4. 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.

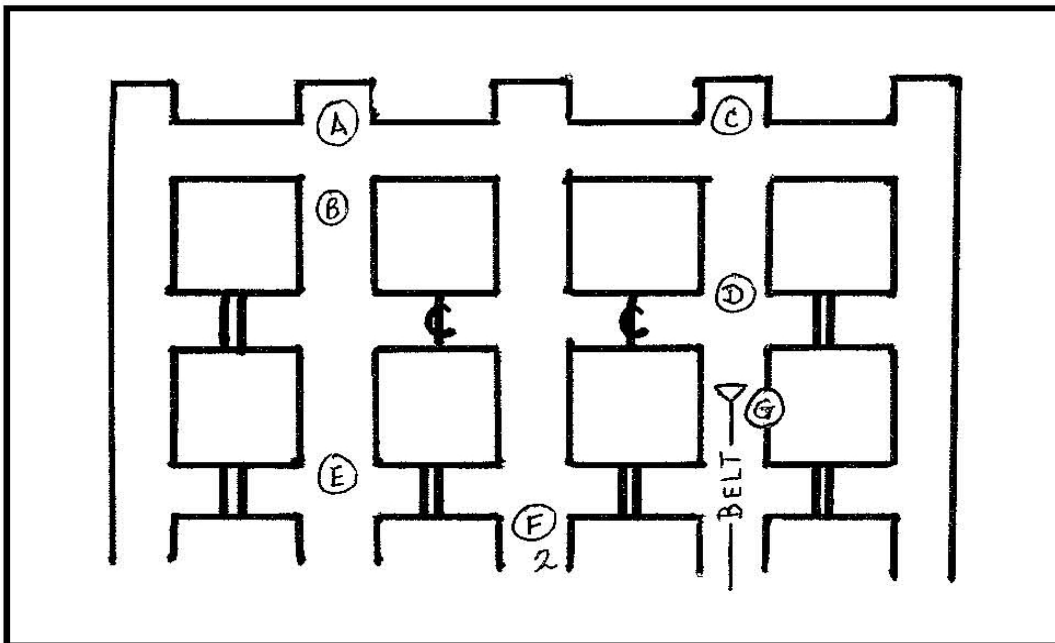
4.1. General Orientation to Mining. Unit Objective:

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:

- (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 (3) types of mines; shaft mine, drift mine, and slope mine.
- (2) Given verbal or pictorial descriptions of the following terms, the trainee will correctly match at least fifteen (15) of the terms with their descriptions:
 - (a) Breakthrough
 - (b) Coal bed
 - (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
- (3) Given the simplified mine map shown in Figure A, at the end of this regulation, trainee will correctly identify and label the following mine features; room; face; pillar; crosscut and entry.

FIGURE A



- (4) Given the positions A through G on Figure A, trainee will correctly identify at least six (6) out of the following ten (10) positions:
 - (a) Two (2) positions inby the last open crosscut
 - (b) Five (5) positions outby the last open crosscut
 - (c) Two (2) positions inby the end of the belt (tailpiece)
 - (d) One (1) position outby the end of the belt (tailpiece)

(5) Given verbal or pictorial descriptions of each of the following five (5) methods of mining coal, the trainee will correctly identify at least three (3) of the following five (5) methods:

- (a) Continuous
- (b) Conventional mining
- (c) Longwall mining
- (d) Shortwall mining
- (e) Bridgeway mining

(6) Given eleven (11) pictures of each of the following mining machines, the trainee will match at least eight (8) of the eleven (11) 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)

(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: 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:

(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) Un-insulated electrical tools

(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";

- Driving nails or spads
- Cutting posts
- Scaling loose material
- Setting screws
- Removing protective shields from equipment
- Setting posts
- Cutting supply binders and bands

"Tools";

- Shovel
- Spad driver
- Saw
- Axe
- Wrench
- Screwdriver
- Hammer
- Snips
- Slate bar
- Crow bar

(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 seventy-five percent (75%) of the correct carrying modes.

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

- (a) Struck by
- (b) Struck against

- (c) Caught between, in, or on
 - (d) Strain or sprain
 - (e) Exposure to harmful accidents
- (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 seventy percent (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.
- (6) Given a pictorial representation of the six (6) steps for lifting objects in high coal mines, arranged out of sequence, the trainee will rearrange the pictures in their correct sequence. The six (6) steps for lifting, in sequence, are:
- (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
- (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
- (8) Given sixteen (16) pictures illustrating correct and incorrect methods for handling the following supplies, the trainee will select at least seven (7) of eight (8) of the correct methods:
- (a) Rails
 - (b) Concrete blocks
 - (c) Headers
 - (d) Roof bolts
 - (e) Cribbing
 - (f) Tubing
 - (g) Crossbars
 - (h) Planks and timbers
- (9) Given pictorial examples of good and bad safety meetings, the trainee will select the good examples.
- (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: Given appropriate examples or cues, the trainee will demonstrate his knowledge of 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:

- (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

- (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) Non-ragged gloves
 - (i) Knee pads (for low coal)
 - (j) Leg bands.
- (3) Given pictorial examples of safe and unsafe methods of boarding and riding a conveyor belt, the trainee will select the safe methods.
- (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.
- (5) Given pictorial examples of cap lamps and battery meters with various readings, the trainee will select those with an acceptable battery charge.
- (6) Given pictures illustrating underground coal mine hazards, the trainee will correctly identify at least eleven (11) of the following fifteen (15) 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
- (7) Given pictorial examples of correct and incorrect ways of crossing conveyor belts, the trainee will select the correct ways.
- (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.
- (9) Given a list of appropriate methods to guard against high and/or low coal hazards, the trainee will correctly match at least four (4) out of six (6) 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
- (10) Given pictures illustrating wet mine hazards, the trainee will correctly match at least seventy-five percent (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

- (11) Given pictures illustrating correct and incorrect procedures for shoveling the belt, the trainee will select at least seventy-five percent (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 being pulled into the belt
- (12) Given pictures illustrating both correct and incorrect procedures for shoveling the tailpiece, the trainee will select at least seventy-five percent (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
- (13) Given pictures illustrating correct and incorrect procedures for shoveling the rib, the trainee will select at least seventy-five percent (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
- (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.
- (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
- (16) Given three (3) verbal examples of signaling procedures to use where escape to the surface has been blocked by a mine fire and barricading has been completed, the trainee will select the correct signaling procedure to use. The correct signaling procedures consist of:
- (a) When you hear three (3) shots, pound hard ten (10) times
 - (b) Rest fifteen (15) minutes and repeat
 - (c) When you hear five (5) shots, you have been located
- (17) Given a list of correct and incorrect procedures to take if an unsafe condition is discovered, the trainee will select the two (2) correct procedures. The correct procedures are:
- (a) Correct the unsafe condition (if possible)
 - (b) Report to foreman
- (18) Given a diagram of the following five (5) cap light signals to be communicated, the miner trainee will match the correct communication signal (or flagging) to at least three (3) of the five (5):
- (a) Move left
 - (b) Move right
 - (c) Come here
 - (d) Yes (go)
 - (e) No (stop)
- (19) Given correct and incorrect statements regarding blasting, the miner trainee will select at least fifty (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) Non-certified 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 shot firer yell his warning

4.4 Ventilation and Mine Mapping

Unit Objectives: 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:

- (1) Given verbal or pictorial descriptions of the following terms, the trainee will correctly match seventy-five percent (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

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

(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 (10) feet from the face to the curtain.

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

(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.

(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.

(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

(8) Given mine maps of two (2) working section, one (1) with an isolated intake escapeway and one without, the trainee will draw lines on each map indicating the appropriate escapeways for each of the two (2) fire locations.

4.5. Recognition and Avoidance of Electrical Wires.

Unit Objective: 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:

(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;
 - (l) Power cables;
 - (m) Splice
 - (n) Trailing cables;
 - (o) Transformer;
 - (p) Trolley wire.
- (2) Given pictures or items used or found in a mine, the trainee will separate conductors from nonconductors of electricity.
- (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) 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.
- (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.
- (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: 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:

- (1) Given pictorial and verbal examples of hazardous conditions in an underground mine, the trainee will identify at least four (4) 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.
- (2) Given a list of mine locations, the trainee will select at least six (6) out of eight (8) 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 (25) 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.
- (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 a breathing apparatus and a rescue line.
- (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 (40) feet of the face.

4.7. Mine Gas Identification and Detection.

Unit Objective: 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:

- (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.
- (2) Given pictures of methane detectors showing a variety of readings, the trainee will correctly select those depicting dangerous concentrations of methane.
- (3) Given pictures of flame safety lamp with different flame heights and colors, the trainee will correctly select the illustration of each of the following conditions:
 - (a) Safe atmosphere;
 - (b) Oxygen deficiency atmosphere;
 - (c) Methane containing atmosphere.
- (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.
- (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 (20) minutes during operation;
 - (b) All equipment operators must test for methane before tramming into a working face;
 - (c) Mine foremen/fire bosses must check for methane before each shift and at least once every two (2) hours during the shift.
- (6) Given 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.
- (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 situations when a self-rescuer may be used.
- (8) Given a verbal list of intervals ranging from five (5) minutes to five (5) hours, the trainee will select the correct interval for the protective capacity of the self-rescuer in a one percent (1%) concentration of carbon monoxide.
- (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.
- (10) Given pictorial examples of correct and incorrect procedures for testing the M.S.A. W65 and Drager Self-Rescuer units for airtightness and damage, the trainee will select the correct procedures.
- (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) They must either be worn or kept within easy reach (three (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.
- (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: 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:

- (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.

(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.

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

- (a) Visual inspection of tops and ribs;
- (b) Sound and vibration method of inspection.

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

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

(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: 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.)

(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 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' and safety of the equipment;
- (e) Provide specific job training.

(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.

- (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) Given correct and incorrect statements regarding grievance procedures for settlement of health or safety disputes as specified in the 1974 Bituminous Wage Agreement, the trainee will select the correct statements.
- (5) Given correct and incorrect statements regarding discharge procedures as specified in the 1974 Bituminous Wage Agreement, the trainee will select the correct statements.
- (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:
- Bereavement payment;
 - Christmas bonus;
 - Jury duty;
 - Reporting pay;
 - Sick pay;
 - Vacations;
 - Paid holidays;
 - Clothing allowance.
- (7) Given correct and incorrect statements regarding the job bidding procedures as specified in the 1974 Bituminous Wage Agreement, the trainee will select the correct statements.
- (8) Given correct and incorrect statements regarding work restrictions during the first ninety (90) 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: 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:

- (1) Given verbal descriptions of the following terms, the trainee will correctly match each term with its description.
- Certified;
 - Qualified;
 - Permissible equipment.
- (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.
- (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) Given verbal descriptions of ten (10) jobs in an underground mine, the trainee will correctly select six (6) which require special certification or qualifications. These are:
- Underground Mine Forman/Fire Boss;
 - Assistant Underground Mine Forman/Fire Boss;
 - Shot Firer;
 - Mine Electrician;
 - Mine Mechanic;
 - Belt Examiner.
- (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 fifty dollars (\$250.00) for each violation.
- (6) Given a list of penalties, the trainee will correctly select the penalty prescribed by law to an operator of a coal mine in which a violation of health and safety standards occurs. The penalty is not more than three thousand dollars (\$3,000.00) for each violation.
- (7) Given verbal descriptions of locations in an underground coal mine, the trainee will correctly select the four (4) locations where a two-way communications system must be located. The four (4) locations requiring the system are:
- Any working section more than one thousand five hundred (1,500) feet from the main portal;
 - Automatic elevators;
 - Haulage equipment;
 - Every four thousand (4,000) feet in a return airway that has been designated as an escapeway.
- (8) Given verbal descriptions of employment regulations, the trainee will correctly select regulations which apply to employment as an apprentice miner (red hat) which includes:
- An apprentice must wear a red hat for six (6) months to identify him as an inexperienced miner;
 - An apprentice must be under the immediate supervision of a certified miner or foreman.

4.11. Haulage and Equipment Safety.

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

Training Objectives:

- (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.
- (2) Given pictorial examples of safe and unsafe conditions and clearances of the clearance side of track haulageways, the trainee will select the safe examples. Safe examples include:
 - (a) Twenty-four (24) inch clearance from the farthest projection on the clearance side;
 - (b) Clearance side free of debris or materials.
- (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 clearances;
 - (b) Mark or point out switches.
- (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.
- (5) Given pictorial or verbal examples of equipment operations, the trainee will select at least three (3) major operational checks that must be conducted before haulageway equipment can be operated. These checks include:
 - (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.
- (6) Given the preoperational 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 the 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.
- (7) Given the preoperational steps, arrange 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.
- (8) Given verbal or pictorial examples of correct and incorrect operational checks to be performed before tramping a piece of equipment into a face area, the trainee will select the correct operational checks. The correct operational checks:
 - (a) Check roof and ribs of working area;
 - (b) Make methane test of area;
 - (c) Inspect condition of trailing cable.
- (9) Given pictorial examples of safe and unsafe practices while working near, under, or around booms, the trainee will select the safe examples.
- (10) Given pictorial examples of safe and unsafe practices while working near or around operating face equipment, the trainee will select the safe examples.
- (11) Given pictorial examples of safe and unsafe practices while stepping across cables, the trainee will select the safe examples.
- (12) Given pictorial examples of safe and unsafe practices while working on or around track haulage equipment, the trainee will select the safe examples.
- (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 devices when tramping through check curtains;
- (b) Tramping too fast;
- (c) Hitting bumps, ruts, 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: 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:

- (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.
- (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 Objectives: 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:

- (1) Given verbal or pictorial descriptions of the following terms, the trainee will correctly match at least fifteen (15) 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
- (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.
- (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) Given a chart of the human body, the trainee will correctly place a "P" on at least eight (8) of the eleven (11) pressure points for one side of the body.
- (5) Given a chart of the human body and four (4) locations of serious wounds, the trainee will place an "X" at the correct pressure point to control bleeding for each wound.
- (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:
- Use a strong, wide piece of cloth;
 - Select a solid, padded object and wrap the arm or leg with it next to the arterial pressure point;
 - Tie a half knot on the outside of the arm or leg;
 - Insert a strong stick over the half knot and tie it in place;
 - Twist the stick to apply pressure until bleeding slows;
 - Loosen tourniquet after ten (10) minutes;
 - If bleeding begins again, tighten tourniquet after a few seconds;
 - Tell doctor when and how long the tourniquet was applied.
- (7) Given verbal and pictorial examples of possible causes of physical shock, the trainee will correctly select at least four (4) of the following causes:
- Severe loss of blood;
 - Intense pain;
 - Severe or extensive injury;
 - Burns;
 - Anxiety;
 - Poisonous gases;
 - Sight of blood or injury to fellow worker.
- (8) Given verbal descriptions of physical and emotional reactions, the miner trainee will select at least three (3) of the symptoms of physical shock. Physical shock symptoms include:
- Chalk-like appearance;
 - Dull or anxious expression;
 - Shallow breathing;
 - Cold, moist skin.
- (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:
- Lay the victim flat;
 - Elevate feet six (6) inches;
 - Clear mouth of foreign objects;
 - Loosen clothing;
 - Keep the victim warm and dry.
- (10) Given pictorial examples of procedures for treating open wounds, arrange out of sequence, the miner trainee will rearrange the procedures in the following correct sequence. The procedures, in sequence, are:
- Stop the bleeding;
 - Cut or tear away the clothing around the wound;
 - Wipe away foreign particles from wound with a piece of sterile gauze;
 - Cover entire wound with sterile compresses or gauze;
 - Apply bandages securely.
- (11) Given correct and incorrect pictorial examples of methods for dressing wounds, the trainee will select the correct method for at least three (3) of the following:
- Head wounds;
 - Injured eyes;
 - Arm wounds;
 - Leg wounds;
 - Foot wounds;
 - Hand wounds.
- (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.
- (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:
- Lay the patient flat on his back with his knees drawn up;
 - Center one narrow cravat bandage across the top of the thighs halfway between the hips and knees;
 - Pass the ends around the thighs and cross them under the bend in the knees;
 - Carry the ends around the ankles and tie them in front and between the ankles;
 - Place a pillow or rolled up blanket under the knees;
 - 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.
- (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.
- (15) Given the four (4) steps of general care treatment for non-chemical burns, arranged out of sequence, the trainee will arrange the steps in correct sequence. The steps, in sequence, are:
 - (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.
- (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 (6) fractures.
- (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.
- (18) Given a list of places in a mine, select the two (2) places where first aid equipment must be located. The list includes:
 - (a) At the bottom of each regularly traveled slope or shaft or at the main entrance to the mine when shafts or slope bottoms are less than one thousand (1,000) feet from the surface;
 - (b) At a point in each working section, not more than five hundred (500) feet outby the active working surface face or faces.

4.14. Training Course Measurement Criteria. (1) Given a ten (10) item Likert scale attitude test at the beginning and end of the course, the trainee will display positive attitudes toward coal mining by scoring seventy percent (70%) or higher.

(2) Given a ten (10) 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 seventy percent (70%) on the test.

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

5.1. All training centers planning to participate in the eighty (80) hour training effort must be approved by the Board of Miner Training, Education and Certification. Each prospective training center must send to the Department of Energy, 1615 Washington Street, E., Charleston, West Virginia 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 four (4) for Approval Procedures for Instructors);
- (d) Classroom dimensions and appropriate number of students per class.

5.2. Any training center not using the training course available through the Department of 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.).

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

6.1. Each instructor who will be teaching the eighty (80) hour course must seek approval by the Department of Energy by sending the following information to the Department of Energy, 1615 Washington Street, E., Charleston, West Virginia 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.

TITLE 48 SERIES 3

SAFETY TRAINING PROGRAM FOR PROSPECTIVE SURFACE COAL MINERS

§48-3-1. General.

1.1 Scope. Rules and regulations governing the safety training program for prospective surface coal miners in West Virginia.

1.2 Authority. W V. Code22A-9-6 and 29A.

1.3 Filing Date. May 7, 1996.

1.4 Effective Date. May 7, 1996.

§48-3-2. Criteria for Health and Safety Training Program for Prospective Surface Coal Miners in West Virginia.

2.1. An approved training program must, as a minimum, include the topics described in the course outline in Section 3 of these rules and meet the training objectives specified in Section 4 of these rules. 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 of these rules 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 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 for Approval Procedures.)

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

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

(a) Audio-visual equipment suitable for presenting 16mm films, 35mm slides, transparencies and sound slide programs;

(b) Personal safety equipment to include, as a minimum, hard hats, safety glasses, safety shoes, respirators, gloves, hearing protection, and personal dust sampler;

(c) First-aid equipment and supplies including an appliance suitable for practicing C.P.R. and artificial respiration;

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

(a) National Bituminous Coal Wage Agreement (latest copy);

(b) Copy of laws pertaining to surface mines;

(c) Samples of defective hand tools;

(d) Tools used at surface mines (e.g. sledge hammer, spiking hammer, railroad jacks, hand shovel, pick and hammer);

(e) Samples of shooting materials (e.g. blasting caps, lead wires, detonator, prime cord and anfo). All materials must be demonstration materials only;

(f) Welding equipment;

(g) Samples of electrical cable in good and bad condition.

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

2.7. Issuance and expiration of initial apprentice miner's card. (a) Upon completion of the approved forty (40) hour pre-employment training program, a permit of apprenticeship shall be issued to any person who score a at least seventy-five percent (75%) on the final examination administered by the West Virginia Department of Energy: Provided, That such person passes the examination within forty-five (45) days after completing the forty (40) hour program.

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

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

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

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

2.8. Issuance and expiration of renewed apprentice miner's cards.

(a) Apprentice miner's card may be renewed by retaking and passing with a score of at least seventy-five percent (75%) on the apprenticeship examination.

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

(c) If an apprentice does 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) Any prospective miner who does not score at least seventy-five percent (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 thirty (30) days. In the event of failure to retake or pass

the examination on the second opportunity, the prospective miner must repeat the approved forty (40) hour pre-employment training program in order to retake the examination.

2.9. Independent coal truck driver certification. (a) Independent coal mine truck drivers who possess an independent coal truck driver's certification are not required to complete the approved surface mining (40 hour) or underground (80 hour) apprenticeship program nor must they possess a coal miner's certification in order to drive a coal truck on mine property.

(b) To obtain an independent coal truck driver's certificate, a prospective independent coal truck driver must first possess a first-aid card, a valid driver's license, and must successfully complete an eight-hour training course, prescribed by the Board of Miner Training, Education, and Certification, prior to taking the examination. Successful completion means a score of at least 80 percent.

(c) Persons who possess an independent coal truck driver's certification are limited to driving coal trucks while on mine property and are not to engage in reclamation work or other mining activities. This experience will not be applicable toward a miner's certificate.

2.10. Guidelines for issuing surface miner's certification. (a) After January 14, 1977, a certificate of competency and qualification as a surface miner shall be issued to any person who has successfully completed the forty (40) hour apprenticeship program and has at least six (6) months total experience, being one hundred eight (108) shifts; worked as an apprentice miner within this state and has demonstrated his competency as a miner by scoring at least eighty percent (80%) on the surface miner's certification examination. Such certificate of competency is only required for those persons who perform normal duties of a surface miner.

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

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

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

(d) Any miner with less than six (6) months (one hundred eight (108) shifts) experience in another state must complete the forty (40) hour pre-employment training program and work as an apprentice miner; however, the experience obtained in another state may be applied toward the six (6) month (one hundred eighty (108) shifts) apprenticeship period.

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

(f) The term "normal duties," as used in the aforementioned requirements, include all duties performed by surface or underground miners at a mine that are directly related to the production process, reclamation and routine maintenance activities, (excluding coal preparation and construction work pursuant to WV Rules and Regulations, Title 36, Series 23, Governing Surface Construction in Coal Mines).

§48-3-3. Course Outline Of The Training Program For Prospective Surface Coal Mines.

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

3.1. Miner and operator's rights and responsibilities -- Time : one (1) hour.

- (a) UMWA Contract
- (b) Company rules and regulations
- (c) Legal rights and responsibilities
- (d) Grievance procedures

3.2. State and federal laws and regulations -- Time: one (1) hour. State and federal laws that pertain to the new miner.

3.3. General orientation to surface mining -- Time: three (3) hours.

- (a) How coal is mined
- (b) Types of surface coal mines
- (c) Types of surface mining methods
- (d) Basic surface coal mining terminology

3.4. Surface mine tour -- Time: two (2) hours. Note: If the tour is not possible, films or other appropriate instructional experience may be substituted.

- 3.5. First-aid -- Part I -- Time: two (2) hours.
- (a) What first-aid is
 - (b) How first-aid should be administered (treat life-threatening conditions first)
 - (c) Demonstration and practice of cardiopulmonary resuscitation* (C.P.R. or heart massage)
 - (d) Demonstration and practice of mouth-to-mouth resuscitation
- NOTE: *Pending inclusion of C.P.R. in M.E.S.A.'s general first-aid course.**
- 3.6. General Safety -- Time: one (1) hour.
- (a) Note: General safety includes non-coal mining specific safety procedures, precautions, and practices.
 - (b) Recognition of potential accident-producing situations
 - (c) Lifting procedures
 - (d) Proper handling of supplies and materials
 - (e) Accident causes and prevention
 - (f) Tool care
 - (g) Selection of appropriate tools for tasks
 - (h) Communications
- 3.7. First-aid -- Part II - Time: two (2) hours.
- (a) Demonstration and practice of Holger-Nielson back pressure method of artificial respiration.
 - (b) Control of bleeding
- 3.8 General mine safety -- Time: one (1) hour.
- (a) Personal safety equipment
 - (b) Safety procedures for cleaning coal
 - (c) Good housekeeping practices
- 3.9 First-aid -- Part III - Time: two (2) hours.
- (a) C.P.R. practice
 - (b) Treatment of physical shock
 - (c) Dressing of open wounds
- 3.10. Heavy equipment safety -- Time: three (3) hours.
- (a) Bulldozer safety
 - (b) Front end loader safety
 - (c) Slips and falls from equipment
 - (d) Shovel and dragline safety
 - (e) Scraper safety
 - (f) Mounting and dismounting shovels and draglines
 - (g) Pre-operational checks
 - (h) Safety practices around auger mining equipment
 - (i) Railroad car safety at tipples
 - (j) Drilling machine safety
- 3.11. First-aid -- Part IV - Time: two (2) hours.
- (a) Practice of C.P.R. and artificial respiration
 - (b) Treatment of burns, closed wounds, strains, sprains, and ruptures
- 3.12. Haulage safety -- Time: one (1) hour.
- (a) Haulage terms
 - (b) Haulage road safety
 - (c) Safe driving on haulage roads
- 3.13. Preparation plant and tipple safety -- Time: One (1) hour.
- 3.14. First-aid -- Part V - Time: two (2) hours.
- (a) C.P.R. and artificial respiration practice
 - (b) Treatment of fractures and dislocations
 - (c) Transporting of injured.
- 3.15. Welding safety -- Time: two (2) hours
- (a) Welding terms
 - (b) Welding system components and functions
 - (c) Safety in handling gas cylinders
 - (d) Safety when welding near flammable material
 - (e) Protective equipment for welding
- 3.16. Recognition and avoidance of electrical hazards -- Time: one (1) hour.
- (a) Basic electricity
 - (b) Conductors and nonconductors of electricity
 - (c) Recognition and prevention of electrical hazards
 - (d) Removal and treatment of a person in contact with dangerous electrical circuits

3.17. First-aid -- Part VI - Time: two (2) hours.

- (a) Location of first-aid materials at a surface coal mine
- (b) Review and practice of first-aid procedures

3.18. Fire prevention and control - Time: two (2) hours.

- (a) Causes of mine fires and explosions
- (b) Preventive measures
- (c) Primary and alternate methods of fire control
- (d) Demonstration and practice in using a portable fire extinguisher
- (e) Location of fire fighting materials at the mine

3.19. Highwall and spoilbank safety - Time: two (2) hours.

- (a) Terms pertaining to highwall safety
- (b) Recognition of highwall hazards
- (c) Safety practices for highwall and spoilbanks
- (d) Recognition of warning signs of dangerous highwalls and spoilbanks.

3.20. Explosives and blasting safety - Time: two (2) hours.

- (a) Blasting terms
- (b) Safety in handling leadwires
- (c) Hazards of thunderstorms to shooting safety
- (d) Security for misfired shots
- (e) Shot firer's warning

3.21. Health and sanitation - Time: thirty (30) minutes.

- (a) Dust hazards
- (b) Noise hazards
- (c) Use of respirator and hearing protection

3.22. Summary and debriefing - Time: 2 1/2 hours

- (a) Review of motor points
- (b) Question and answer problem solving session
- (c) Permit of apprenticeship examination

§48-3-4. Training Objectives For Surface Coal Mine Health and Safety Training Course.

4.1. General orientation to surface mining

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

Training Objectives:

(2) Given a list of verbal descriptions or pictures of two (2) different types of surface coal mines, you will match each description or picture with the following types of surface mines: strip mine; auger mine.

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

- (a) Bench
- (b) Highwall
- (c) Overburden
- (d) Pit
- (e) Reclamation
- (f) Seam
- (g) Spoilbank; spoil pile; spoil
- (h) Tipple
- (i) Tram

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

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

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

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

4.2. General safety

Unit Objectives: (1) Given pictures of safe and unsafe surface mining tools and procedures, you will select the safe tools and procedures.

Training Objectives:

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

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

(3) Given pictures of mining accidents, you will match each picture to the basic type of accident. Five (5) 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 conditions

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

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

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

- (a) Keep feet parted - one (1) alongside, one (1) behind the object.
- (b) Keep back straight.
- (c) Tuck chin in.
- (d) Grip object with whole hand.
- (e) Tuck elbows and arms in.
- (f) Keep body weight positioned directly over feet.

(6) Given correct and incorrect examples of asking for instructions and giving instructions, you will select correct examples.

4.3. General mining safety.

Unit Objective: (1) Given appropriate examples or cues, you will demonstrate your ability to perform standard safety practices and procedures, and to recognize and respond correctly to commonly found surface mine conditions.

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

- (a) Hard hat
- (b) Safety shoes or boots
- (c) Snug-fitting clothing and long hair control

- (d) Safety glasses or goggles
 - (e) Respirators
 - (f) Hearing Protection
 - (g) Non-ragged correctly to commonly found surface mine conditions
- (3) Given verbal descriptions of common tasks performed at the surface mine and pictures of common hand tools, you will match each task with the proper tool or tools to accomplish it. Examples include:
- (a) Sledge hammer track work at tipple
 - (b) Railroad jacks - close railroad cars
 - (c) Hand shovel - clean cars and coal
 - (d) Pick - working inside bin
 - (e) Axes - cutting timber
 - (f) Hand tools - mechanical work
 - (g) Hand tools - electrical work
- (4) Given verbal descriptions of correct and incorrect procedures for cleaning coal, you will identify the correct procedures. Correct procedures include:
- (a) Be alert for moving equipment
 - (b) Pay close attention to highwall and spoilbank, especially if coal is being shot.
- (5) Given pictures of correct and incorrect housekeeping practices that relate to slips, falls, and fire hazards, you will select the correct pictures.

4.4. Recognition and avoidance of electrical hazards.

Unit Objective: (1) Given verbal information or pictures, you will demonstrate your knowledge of electrical hazard and related safety procedures and practices. You will demonstrate knowledge and understanding of common terms concerning surface mine electrical systems.

Training Objectives:

- (2) Given verbal descriptions or pictures representing the following terms, you will match each term with its description or picture.
- (a) Electrical conductor
 - (b) Ground/Grounding
 - (c) Electrical insulation
 - (d) Power cables
- (3) Given pictures illustrating correct and incorrect methods of removing a person from contact with a dangerous electrical circuit, you will select the correct methods.
- (4) Given pictures of electrical accidents and verbal descriptions of causes, you will match each accident with its cause. These causes include:
- (a) Improper grounding of electrical machinery
 - (b) Failure to wear proper protective equipment
 - (c) Failure to cut power on the system before starting repair
 - (d) Inattention to existence of power line near work areas.
 - (e) Performing of electrical repair and maintenance tasks by unauthorized or unqualified people

4.5. Fire prevention and control.

Unit Objective: (1) Given appropriate cues and illustrated examples, you will demonstrate understanding of surface mine fire hazards and their control.. You will demonstrate your knowledge of the rules pertaining to the location and operation of fire fighting equipment and your ability to apply that knowledge appropriately.

Training Objective:

- (2) Given pictures or verbal descriptions of potential fire hazards, you will select those hazards at the surface mine. Potential fire hazards include:
- (a) Open flame
 - (b) Electrical failures
 - (c) Inadequately maintained equipment or equipment failure
 - (d) Improper equipment refueling methods.
- (3) Given pictures or verbal descriptions of locations of a surface mine, you will select those locations where the law requires storage of fire fighting equipment. These locations are:
- (a) Equipment
 - (b) Temporary and permanent electrical installations
 - (c) Oil storage areas
 - (d) Welding, cutting, and soldering areas
 - (e) Tipple
- (4) Given correct and incorrect statements concerning general principles of fire fighting, you will select the correct statements. Correct statements include:
- (a) Warn fellow workers and sound fire alarm if there is evidence of a fire.
 - (b) Know the location and use of available fire fighting equipment.
 - (c) Shut off power in case of an electrical fire.

- (d) Direct stream of water or chemical at the base of the fire (not in the case of an oil or gas on water fire).
- (e) Apply water or chemical in a rapid sweeping action starting at the edge of the fire and working inward.
- (f) Keep yourself from being cut off by the fire so that you can retreat if necessary.
- (g) Do not enter a smoke filled area.

4.6. Heavy equipment safety.

Unit Objective: (1) Given written statements or pictures of working conditions on or near surface mine heavy equipment, you will recognize safe surface mine practices and demonstrate your knowledge of safety principles and procedures.

Training Objective:

- (2) Given pictures of verbal descriptions of safe and unsafe practices for operating bulldozers, you will select the safe practices. These practices include:
 - (a) Keep the dozer safe distances from an overhanging edge.
 - (b) Keep a safe distance from the edge of a highwall or embankment.
 - (c) Exercise extreme caution when working or trimming on steep slopes.
 - (d) Only operate equipment you are familiar with and authorized to.
 - (e) Use caution when working near trees so that branches do not whip back on you.
 - (f) Use caution when trimming backwards.
 - (g) Pay attention to task at hand.
- (3) Given pictures or verbal descriptions of safe and unsafe practices for operating from-end loaders, you will select the safe practices. These practices include:
 - (a) Travel downgrades at safe speeds.
 - (b) Use caution when trimming over wet, frozen or rutted surfaces; and loose areas around the edges
 - (c) Only operate equipment that you are familiar with and are authorized to operate.
 - (d) Pay attention and know where others are at all times.
- (4) Given pictures of conditions associated with heavy equipment, you will select the conditions that could cause slips or falls.
- (5) Given pictures or verbal descriptions of safe and unsafe practices for working around shovels and draglines, you will select the safe practices. Safe practices include:
 - (a) Place yourself in a safe position when performing maintenance.
 - (b) Repair or inspect equipment when it is not operating.
 - (c) Be sure your clothes are snug-fitting so you are not caught on moving equipment.
- (6) Given pictures or verbal description of safe and unsafe practices for working around drilling machines, you will select the safe practices. These practices include:
 - (a) Use a respirator and safety glasses at all times.
 - (b) Keep the boom in a safe position when trimming.
 - (c) Keep your hands and fingers out of pinch points.
- (7) Given pictures or verbal descriptions of correct and incorrect methods of mounting and dismounting draglines and shovels, you will select the correct methods. The correct methods include:
 - (a) Notify operator before mounting or dismounting.
 - (b) Use ladders when required.
 - (c) Never put your hands on the track.
- (8) Given correct and incorrect statements of the pre-operational checks that should be performed on equipment, you will select the correct checks. Correct checks include:
 - (a) Check tires for proper inflation and safe condition.
 - (b) Check for required safety equipment on machine (guards on fans, fire extinguisher).
 - (c) Secure loose items.
 - (d) Check steering system for proper operation:
 - (1) Service system
 - (2) Emergency system
 - (e) Check braking system for proper operation:
 - (1) Service system
 - (2) Parking brake
 - (f) Check windows:
 - (1) Clean
 - (2) View not blocked by cracks
 - (g) Check air pressure for proper operating range.
 - (h) Check fluid levels:
 - (1) Hydraulic oil
 - (2) Engine oil
 - (3) Coolant

- (i) Check visibility aids for good condition:
 - (1) Mirrors
 - (2) Headlights and running lights
 - (3) Warning lights or flashers
 - (j) Check backup alarm for operation.
 - (k) Report to proper authority when a malfunction occurs that requires shop maintenance.
 - (l) All gauge readings correct:
 - (1) Engine temperature
 - (2) Engine oil pressure and temperature
 - (3) Transmission oil pressure and temperature
 - (4) Hydraulic pressure
- (9) Given pictures of machines that have been prepared safely or unsafely for maintenance work, you will select those that are safely prepared. The safe preparations include:
- (a) Machine on level, dry ground, and away from traffic.
 - (b) Wheels or tracks blocked.
 - (c) Buckets or blades supported with blocks, when raised for work.
 - (d) Raised truck beds secured with safety pins, safety bars, or blocked.
- (10) Given pictures or verbal descriptions of precautions to be taken when working on or near auger mining equipment, you will select appropriate precautions. Precautions include:
- (a) Be clear when the operator moves the auger.
 - (b) Take precautions against falling off the auger machine or into the flight.
 - (c) Check highwall and spoilbank conditions frequently.
 - (d) Assure clothes are snug fitting.
 - (e) Never smoke around auger holes.
 - (f) Test for methane regularly.
- (11) Given verbal descriptions of pictures of correct and incorrect practices when operating or working close to scraper (pans), you will select the correct practices. The correct practices include:
- (a) Check loading area, haul road and fill area for dangerous conditions.
 - (b) Travel with pan close to the ground.
 - (c) When parking or not working, lower the pan to the ground.
- (12) Given pictures or verbal descriptions of safe and unsafe practices for oilers or draglines and shovels, you will select the safe practices. These safe practices include:
- (a) Grease shovels and draglines when machine is not in operation.
 - (b) Only one (1) person should do signaling.
 - (c) Mount and dismount equipment only when stopped.
- (13) Given pictures or verbal descriptions of safe and unsafe practices entering auger holes, you will select the safe practices. Safe practices include:
- (a) A certified person will examine the face of the highwall for a distance of at least twenty-five (25) feet on each side of the auger hole immediately before any person enters the hole. Any hazards found will be corrected before any persons enter the auger hole.
 - (b) A responsible person will be assigned to observe the highwall for possible movement while any person is entering or is in the auger hole.
 - (c) A qualified person will test for oxygen deficiency and methane with an approved type testing device at the collar of the hole before any persons enter.
 - (d) Only a qualified person will be allowed to enter an auger hole and frequent tests for methane and oxygen deficiency will be made in the hole with approved type devices. If more than two percent (2%) of methane or less than nineteen and five tenths percent (19.5%) of oxygen is found, no further work will be performed in the hole until the atmosphere has been made safe.
 - (e) The person entering the hole will wear a lifeline that extends to the hands of a person on the surface who will be someone other than the person assigned to observe the highwall.
 - (f) The person entering the hole will examine and test the interior surfaces for dangers from falling materials. Any hazards found will be corrected immediately or the hole will be vacated.
 - (g) Internal combustion engines in the vicinity of the auger hole will be stopped while any person is entering, exiting, or in the hole.
 - (h) The results of the examination and action taken, date, time, and reasons for entering the hole will be recorded in a book, which shall be kept at the mine.
- 4.7. Haulage safety.
- Unit Objective: (1) Given appropriate examples and cues, you will demonstrate understanding of the safety rules, practices and procedures pertaining to surface mine haulage operations and equipment.

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

- (a) Haulage
- (b) Haulage road
- (c) On-road haulage
- (d) Off-road haulage

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

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

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

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

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

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

4.8. Preparation plant and tipple safety.

Unit Objective: (1) Given appropriate verbal, written, and pictorial examples of safety precautions and practices to use when working in or around tipples or prep plants, you will demonstrate your knowledge and understanding of these precautions and practices.

Training Objectives:

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

- (a) Tipple
- (b) Bin
- (c) Preparation plant
- (d) Car dropper
- (e) Belt takeup
- (f) Belt drive
- (g) Slate Picker

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

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

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

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

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

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

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

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

- (a) Assume a safe body position.
- (b) Position yourself where you can operate the brake on either car when possible.

- (c) Assure coupler alignment is correct.
- (d) Maintain adequate clearance between the edge of the car and obstacles.
- (e) Pay attention and notify others of changes in operational routine.
- (f) Assure brakes are set on remaining cars when dropping operations begin.

4.9. Miner and operator rights and responsibilities.

Unit Objective: (1) Given appropriate operator and miner rights and responsibilities governing current UMWA contract, grievance procedures and company rules and regulations, you will demonstrate your ability to recognize and understand them as they pertain to a new surface miner.

Training Objectives:

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

The operator is responsible to:

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

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

The miner is responsible to:

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

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

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

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

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

4.10. State and federal laws and regulations.

Unit Objective: (1) Given the appropriate cues, you will demonstrate your knowledge and understanding of the laws and regulations pertaining to the certification of miners, health and safety standards and inspection for surface mines.

Training Objectives:

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

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

- (a) Completion of a forty (40) hour course of instruction in surface mining.
- (b) Satisfactory completion of an examination conducted by the West Virginia Department of Energy.

(4) Given correct and incorrect statements regarding certification requirements, you will select the correct statements. Certification requirements include:

- (a) At least six (6) months experience.
- (b) Successful completion of an examination conducted by the West Virginia Department of Energy.

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

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

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

- (a) An apprentice must wear a red hat for six (6) months to identify him as an inexperienced miner.
- (b) An apprentice must be under the immediate supervision of a certified miner or foreman.

(8) Given correct and incorrect statements about the term immediate supervision, you will select the correct statements.

4.11. Welding safety.

Unit Objective: (1) Given verbal descriptions or pictures of welding systems and components found at the surface mines, you will recognize and understand their function. You will also recognize the safe practices that prevent injury to welders and to others who work around cutting or welding operations.

Training Objectives:

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

- (a) Gas welding
- (b) Arc welding
- (c) Cutting
- (d) Flash burn

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

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

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

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

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

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

(7) Given pictures of welders and helpers dressed properly and improperly, you will select those dressed properly.

4.12. Highwall and spoilbank safety

Unit Objective: (1) Given appropriate cues, you will demonstrate your understanding and recognition of the terms associated with highwall and spoilbank safety hazards, precautions, and procedures.

Training Objectives:

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

- (a) Scaling
- (b) Undercutting
- (c) Weathering
- (d) Crack
- (e) Slip

(3) Given pictures of highwall hazards and statements describing the hazards, you will match each picture with the correct statement. Statements include:

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

(4) Give verbal descriptions or pictures of safe and unsafe practices near highwalls and spoilbanks, you will select the safe practices. Safe practices include:

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

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

- (a) Falling material (working)
- (b) Visual movement of spoilbank (will be slow at first)

(c) Cracks in the highwall

(d) Content of material in spoilbank (if more than fifty percent (50%) of spoil is sand or other fine material, its condition is likely to be unstable.)

4.13. Explosives and blasting safety.

Unit Objective: (1) Given visual and verbal presentations of safe blasting methods and procedures, you will demonstrate your ability to recognize correct shooting and handling procedures and methods.

Training Objectives:

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

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

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

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

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

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

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

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

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

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

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

4.14. Health and sanitation

Unit Objective: (1) Given appropriate cues and visual or verbal examples, you will demonstrate your understanding of the hazards of, and protection against coal dust and excessive noise at the surface mines.

Training Objectives:

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

- (a) Personal dust sampler
- (b) Respirable dust
- (c) Respirator

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

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

4.15. First-Aid

Unit Objective: (1) Given the proper cues, verbal descriptions or pictures, or supplies and equipment, you will demonstrate your knowledge of and ability to administer emergency medical attention when it is required. You will demonstrate your ability to recognize and correctly define common terms relating to the certain emergency medical procedures properly and in correct sequence.

Training Objectives:

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

- (a) Artificial respiration
- (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
 - (u) Shock
- (3) Given the following steps for administering first aid, arranged out of sequence, you will arrange them in correct sequence.
- (a) Locate the injury
 - (b) If needed, give artificial respiration.
 - (c) Look for and control bleeding.
 - (d) Treat for physical shock.
 - (e) Treat wounds and burns.
 - (f) Look for fractures and apply appropriate treatment.
 - (g) Transport patient
- (4) Given an appliance used for artificial respiration practice, you will correctly demonstrate:
- (a) Mouth-to-mouth artificial respiration.
 - (b) Back pressure method of artificial respiration
- (5) Given a chart of the human body with various points marked on it, you will select the points that represent pressure points.
- (6) Given a chart of the human body marked with locations of serious wounds and possible pressure points, you will select the correct pressure point to control bleeding for each wound.
- (7) Given pictures of the steps in applying a tourniquet, arranged out of sequence, you will arrange them in correct sequence. The correct sequence of steps for applying a tourniquet are:
- (a) Use a strong, wide piece of cloth.
 - (b) Select a solid, padded object and wrap the arm or leg with it next to the arterial pressure point.
 - (c) Tie a half knot on the distal portion (away from center of body) of the arm or leg.
 - (d) Insert a strong stick over the half knot and tie it in place.
 - (e) Twist the stick to apply pressure until bleeding slows.
 - (f) Loosen tourniquet after ten (10) minutes.
 - (g) If bleeding begins again, tighten tourniquet after a few seconds.
 - (h) Tell doctor when and how long tourniquet was applied.
- (8) Given verbal descriptions or pictures of correct and incorrect causes of physical shock, you will select the correct causes. The correct causes include:
- (a) Severe loss of blood
 - (b) Intense pain
 - (c) Severe or extensive injury
 - (d) Burns
 - (e) Anxiety
 - (f) Poisonous gases
 - (g) Sight of blood or injury to fellow worker
- (9) Given verbal descriptions of physical and emotional reactions, you will select the symptoms of physical shock. These symptoms include:
- (a) Chalk-like appearance
 - (b) Dull or anxious expression
 - (c) Shallow breathing
 - (d) Cold, moist skin
- (10) Given pictures of correct and incorrect procedures for treating physical shock, you will select the correct procedures. The correct procedures include:
- (a) Lay the victim flat
 - (b) Elevate feet six inches (6")
 - (c) Clear mouth of foreign object
 - (d) Loosen clothing
 - (e) Keep the victim warm

- (11) Given pictures of correct and incorrect procedures for treating open wounds, you will select the correct procedures. The procedures are:
- Stop the bleeding.
 - Cut or tear away the clothing around the wound.
 - Wipe away foreign particles from wound with a piece of sterile gauze.
 - Cover entire wound with sterile compresses or gauze.
 - Apply bandages securely.
- (12) Given pictures of correct and incorrect methods of dressing wounds, you will select the correct methods. The wounds include:
- Head wounds
 - Injured eyes
 - Arm wounds
 - Leg wounds
 - Foot wounds
 - Hand wounds
- (13) Given pictures of correct and incorrect treatments for closed wounds, you will select the correct treatments for closed wounds.
- (14) Given pictures of correct and incorrect procedures for treating a rupture or hernia in the abdomen, you will select the correct procedures. The procedures are:
- Lay the victim flat on his back and draw his knees up.
 - Center one (1) narrow cravat bandage along the top of the thighs halfway between the hips and knees.
 - Pass the ends around the thighs and cross them under the bend in the knees.
 - Carry the ends around the ankles and tie them in front and between the ankles.
 - Place a pillow or rolled up blanket under the knees.
 - Place a second cravat bandage underneath the padding and bring the ends up over the thighs near the knees and tie them securely.
 - If swelling remains, place a cold appliance over the site.
- (15) Given pictures of correct and incorrect methods of treating foreign bodies in the eyes, ears, nose, and throat, you will select the correct methods.
- (16) Given pictures of correct and incorrect procedures for general care and treatment of non-chemical burns, you will select the correct procedures. The correct procedures include:
- Remove clothing from burned area (unless clothing sticks to the skin).
 - Cover burn with cool, moist dressing.
 - Cover the victim with a blanket
 - Treat for shock.
- (17) Given pictures of correct and incorrect treatments for fractures of the following parts of the body: head, neck, back, rib, pelvis, arm, hand, leg, and foot, you will select the correct treatments.
- (18) Given pictures of correct and incorrect methods of moving an injured person from a surface mine, you will select the correct method.
- (19) Given a list of places at a surface mine, you will select the places where first-aid equipment must be located. Correct place are:

- At or near each working place that coal is being mined.
- At each preparation plant.
- At shops.
- At other surface installations that regularly employ ten (10) or more people.

4.16. Training course measurement criteria.

Unit Objective: (1) The purpose of the Likert scale attitude tests is to measure attitudinal changes of the trainees as a result of this course. This will be accomplished by administration of this test before and after the training.

(2) Given a ten (10) item Likert scale attitude test at the beginning and end of the course, the trainee will display positive attitudes toward coal mining by scoring seventy percent (70%) or higher.

(3) Given a ten (10) 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 seventy percent (70%) on the test.

§48-3-5. Approval Procedures for Training Programs.

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

- Address and location of the training center.
- Description of equipment and facilities available.
- List of participating instructors (see Section 6 for approval procedures for instructors).
- Classroom dimensions and approximate number of students per class.
- Name and address of person(s) responsible for training program.

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

(a) An outline of the proposed course showing how it meets the criteria established by the Board of Miner Training, Education and Certification.

(b) A list of instructional material to be used (e.g., films, programmed material, etc.) and noting where it would be used within the instructional sequence.

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

§48-3-6. Approval Procedures For Instructors.

6.1. Each instructor who will be teaching the forty (40) hour course must seek approval by the Department of Energy by sending the following information to the Department of Energy, 1615 Washington Street East, Charleston, West Virginia 25311.

(a) A summary of the individual's teaching experience and related credentials (e.g.: M.E.S.A. teaching certificates).

(b) A description of the individual's work experience, surface mining or otherwise, in sufficient detail to determine the individual's exposure to the unit operations of coal mining.

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

(d) The name and address of the person who should be notified as to the candidate approval or disapproval.

TITLE 48 SERIES 4

INITIAL TRAINING PROGRAM FOR PROSPECTIVE MINE RESCUE TEAM MEMBERS

§48-4-1. General.

1.1 Scope. Rules and regulations governing the initial training program for prospective mine rescue team members in the state of West Virginia.

1.2 Authority. W. Va. Code 22A-9-6

1.3 Filing Date. October 5, 1978

1.4 Effective Date. November 4, 1978

§48-4-2. Criteria For The Initial Mine Rescue Team Member Training Program For Prospective Mine Rescue Team Members In West Virginia.

2.1. Physical Requirements. (a) An applicant for initial mine rescue training shall not have reached their fiftieth (50) birthday. Any person making application to participate in initial mine rescue training shall have had an examination by a physician, who shall certify that such applicant is physically fit to perform mine rescue and recovery work while wearing a self-contained oxygen breathing apparatus. The physical examination shall be completed within thirty (30) days prior to scheduled initial training.

(b) A physician shall fill out West Virginia Department of Energy physical form, and such form shall be presented to the Mine Rescue Training Instructor five (5) days prior to scheduled initial training.

§48-4-3. Experience Requirements.

3.1. An applicant for initial mine rescue training shall have been employed underground for a total of one (1) year or more within the three (3) preceding years.

§48-4-4. Training Requirements.

4.1. Each applicant for initial mine rescue training shall complete a thirty-one (31) hour course of instruction, as prescribed and approved by the Board of Miner Training, Education, and Certification in Section 6 in the use, care, and maintenance of the type of apparatus that will be utilized.

4.2. If the type of apparatus is changed, a mine rescue team member shall receive an additional eight (8) hour training.

4.3. Each member of a mine rescue team shall have completed a West Virginia Department of Energy approved First-Aid course.

4.4. Each mine rescue team member shall train at intervals not exceeding thirty (30) calendar days. Each training session shall not be less than four (4) hours. Training shall include the wearing and use of the apparatuses by the mine rescue team members for a period of at least one (1) hour under oxygen.

4.5. A mine rescue team member who is absent from more than three (3) of the four (4) hour training sessions in one (1) year shall be replaced. Except that in an event of illness or injury, time extensions shall be permitted as established by the Commissioner of the Department of Energy.

4.6. A record of training of each team member shall be on file at such locations where the apparatuses are stored.

§48-4-5. Mine Rescue Instructor Requirements.

5.1. Must have been a mine rescue team member for at least two (2) years or received special training approved by the Commissioner of the Department of Energy.

5.2. Must have at least three (3) years underground mining experience or received special training approved by the Commissioner of the Department of Energy.

5.3. Must be thoroughly trained with the use and care of all types of detection instruments and apparatuses to be used by the team.

5.4. Must demonstrate to the Commissioner of the Department of Energy or his representative that he is qualified to serve as an instructor.

5.5. Instructors for initial training of mine rescue team members shall be approved by the Department of Energy.

§48-4-6. Course Outline of the Initial Training Program for Mine Rescue Team Members.

6.1. This course outline is sequenced for thirty-one (31) hours of student-instructor contact.

(a) First session

- 4 hours - Introduction, and lecture in use, care and maintenance of apparatus
- 1 hour - Charging, testing, and readying the apparatus to wear
- 1 hour - Wearing apparatus (walking, no manual labor)
- 1/2 hour - Removing and putting apparatus away
- 1 hour - Lecture in Mine Rescue Procedures

(b) Second Session

- 4 hours - Lecture in use, care and maintenance of apparatus and question and answer period
- 1/2 hour - Testing apparatus for use
- 1 1/2 hours - Wearing apparatus (performing strenuous work)
- 1 1/2 hours - Cleaning apparatus

(c) Third Session

- 1 hour - Question and answer period
- 1/2 hour - Readying apparatus for use
- 1 1/2 hours - Wearing apparatus (performing strenuous work)
- 1 hour - Care and cleaning of apparatus
- 4 hours - Mine Rescue Procedures

(d) Fourth Session

- 1 hour - Question and answer period
- 1/2 hour - Recharging and testing apparatus for use
- 1 1/2 hours - Wearing apparatus (performing strenuous work and working in smoke room wearing apparatus)
- 1 hour - Care and cleaning apparatus
- 4 hours - Procedure and examination - testing shall determine if student knows how to cope with malfunctions

which he could possibly be confronted with during rescue work.

6.2. At the completion of the thirty-one (31) hour training in Mine Rescue and Mine Rescue Procedures the student shall reveal by examination that he is capable of, or had knowledge of, caring and cleaning apparatus, recharging oxygen cylinders, properly washing face pieces, wearing apparatus, working bypass, use and operation of oxygen pump, use and operation of cascade system, and properly trained in testing the high pressure and low pressure of the breathing apparatus.

§48-4-7. Alternate Approved Training Program.

7.1. An operator electing to develop an alternate training program, must obtain approval of its program from the Board of Miner Training, Education, and Certification.

7.2. Any operator not using the training course guidelines established by the Department of Energy and seeks approval of its training program shall submit such program to the Board of Miner Training, Education, and Certification for approval.

§48-4-8. Certification.

8.1. Upon completion of the thirty-one (31) hour training program a mine rescue certification certificate will be issued to such a person who has demonstrated by examination his competency and qualifications.

**TITLE 48 SERIES 5
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION
(RESERVED)**

Editors Note: This series rule has been transferred to 56 CSR 5.

**TITLE 48 SERIES 6
CERTIFICATION OF SURFACE MINE FOREMEN**

§48-6-1. General.

- 1.1 Scope. Rules and regulations governing the certification of surface mine foreman in West Virginia.
- 1.2 Authority. W. Va. Code 22A-3-20(b)
- 1.3 Filing Date. October 5, 1978
- 1.4 Effective Date. November 4, 1978

§48-6-2. Criteria for Certification of Surface Mine Foremen in West Virginia.

2.1. In every surface mine where five (5) or more persons are employed in a period of twenty-four (24) hours, the operator shall employ at least one (1) person certified in accordance with the provisions of Article 9 of this Chapter as a mine foreman. Each applicant for certification as a mine foreman shall, at the time he is issued a certificate of competency:

(a) Be a resident or employed in a mine in this state;
(b) Have had at least three (3) years experience in surface mining, which shall include at least eighteen (18) months experience on or at a working section of a surface mine or be a graduate of the School of Mines at West Virginia University, or of another accredited Mining Engineering School and have had at least two (2) years practical experience on a surface mine, which shall include at least eighteen (18) months experience on or at a working section of a surface mine; and

(c) Have demonstrated his knowledge of Mine Safety, First-Aid, Safety Appliances, Emergency Procedures relative to all equipment, State and Federal mining laws and regulations and other subjects by completing such training, education and examinations as may be required of him under Article 9 of this Chapter.

2.2. In surface mines in which the operations are so extensive that the duties devolve upon the mine foreman cannot be discharged by one (1) man, one (1) or more Assistant mine foreman may be designated. Such persons shall act under the instruction of the mine foreman who shall be responsible for their conduct in the discharge of their duties. Each assistant so designated shall be certified under the provisions of Article 9 of this Chapter. Each applicant for certification as Assistant Mine Foreman shall at the time he is issued a certificate of competency, possess all of the qualifications, be required to have at least two (2) years experience in surface mining, which shall include eighteen (18) months on or at a working section on a surface mine or be a graduate of the School of Mines at West Virginia University or of another accredited Mining Engineering School and has had twelve (12) months practical experience in a surface mine; all of which shall have been on or at a working section.

2.3. An applicant for certification as a surface mine foreman may receive certification in the State of West Virginia if such applicant:

(a) Is a resident or employed in a mine in this state;
(b) Has had at least three (3) years experience as a supervisor on or at a working section of a surface mine;
(c) Is the holder of a valid temporary surface mine foreman certification issued to such applicant by the Federal Government; and

(d) Has demonstrated his knowledge of mine safety by completing such gas testing, and flame safety lamp assembly examinations as required by the Commissioner of the West Virginia Department of Energy.

§48-6-3. Criteria for Mine Foreman Examiner for Surface Mine Foremen in West Virginia.

3.1. The Commissioner of the Department of Energy shall appoint a Mine Foreman Examiner to examine and certify surface mine foreman and assistant mine foremen. Such mine foreman examiner shall be a citizen of West Virginia, of good character, reputation and temperate habits. Such mine foreman examiner shall be paid a minimum salary of thirty-one thousand dollars (\$31,000) per year.

§48-6-4. Criteria for Duties of Mine Foreman Examiner.

4.1. The duties of the mine foreman examiner shall be to:
(a) Conduct examinations of surface mine foreman and assistant mine foremen.
(b) Prepare and certify to the Commissioner of the Department of Energy a register of all persons who successfully completed the examination with a passing grade of eighty percent (80%).

§48-6-5. Criteria for Location and Time of Mine Foreman Examinations.

5.1. The Commissioner of the Department of Energy shall determine the locations where the surface mine foreman examiner shall meet for the purpose of holding examinations, and at least two (2) weeks' notice of the time and place where the examinations are to be held shall be given. The examinations shall be given locations designated by the Commissioner of the Department of Energy.

§48-6-6. Criteria for Preparation of Examinations; Notice of Intention to Take Examination; Investigation and Applicants.

6.1. The Commissioner shall have prepared from time to time, modified examinations to be administered to applicants for certification as mine foreman and assistant mine foreman. All persons who desire to appear for the examination shall notify the Commissioner's designated representatives of their intentions to appear, if possible, not less than ten (10) days prior to the date set for the examination. The mine foreman examiner or other representative of the Commissioner of the Department of Energy appointed by the Commissioner shall inquire into the character and qualifications of the applicants who present themselves for examination.

§48-6-7. Criteria for Mine Foreman Examiner to Certify Successful Applicants to the Commissioner.

7.1. The mine foreman examiner shall certify to the Commissioner, on a form furnished by him, every person whose examination shall disclose his fitness for the duties of surface mine foreman and assistant mine foreman, and the Commissioner shall have prepared certificates of qualifications for the successful applicants and send them to the mine foreman examiner for distribution.

§48-6-8. Criteria for Record of Examinations

8.1. The mine foreman examiner shall send to the Commissioner the answer and all other papers of the applicants, together with the tally sheet and a list of the questions and answers, which shall be filed in the department's records.

§48-6-9. Surface Mine Foreman and Assistant Mine Foreman Certification Required.

9.1. After the first day of April, 1979, certification shall be required of all surface mine foremen and assistant mine foremen in accordance with the provisions of Chapter 22A, Article 3, Section 20(b).

TITLE 48 SERIES 7
STANDARDS FOR CERTIFICATION OF COAL MINE ELECTRICIANS

§48-7-1. General.

1.1 Scope. This legislative rule establishes standards for certification of persons performing electrical work in coal mines.

1.2 Authority. W. Va. Code 22A-7-8.

1.3 Filing Date. April 26, 2007.

1.4 Effective Date. April 26, 2007.

§48-7-2. Definitions.

2.1. 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.

(a) Listed below are examples of work that are required to be performed by a certified electrician or apprentice electrician, under the supervision required by Section 4.1(d) of this rule:

(1) Locating faults in cables;

(2) Installation of couplers on the end of cables;

(3) Repair of electric components of electrically powered portable, mobile or stationary equipment;

(4) Installation of electric wiring (excluding mine trolley wire);

(5) Electrical maintenance of permissible equipment;

(6) Any type of work performed inside transformers, power centers, rectifiers, switch boxes, switch houses, panels and other enclosures of electrical equipment or conductors; and

(7) Electrical troubleshooting and testing.

(b) Listed below are examples of work, which are not required to be performed by a certified electrician or apprentice electrician:

(1) Operation of electric equipment;

(2) Normal operation of control switches, switch boxes, or circuit breakers: Provided that no energized parts or conductors are exposed;

(3) Operation of cutout switches in trolley circuits;

(4) Hanging or removing fuse nips on or from trolley wires;

(5) Changing bits;

(6) Lubrication;

(7) Handling energized trailing cables;

(8) Inserting low and medium-voltage cable couplers from receptacles;

(9) Transportation of electric equipment and cables;

(10) Mechanical repairs on electrically powered equipment: Provided that no energized parts or conductors are exposed;

(11) Installation and repair of equipment and circuits in which shock hazards do not exist (having a normal rating of 40 volts or less when energized): Provided that such equipment is not required to be permissible;

(12) Installation, repair and guarding of trolley feeder wires when de-energized;

(13) Re-insulating or taping cables when no conductors or bare wires are exposed; and,

(14) Replacing blown fuses on trolley poles and nips.

2.2 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.

2.3 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 MHST; 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 non-coal 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.

2.4 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.

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

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 Qualified Person. The term "qualified person" means a person who has completed an examination and is considered qualified on record by the Office of Miners' Health, Safety and Training. (Refer to W. Va. Code 22A-1-2(d)(6)).

2.8 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)).

2.9 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.

2.10 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.

§48-7-3. Classifications of Electrical Certification.

3.1. Classifications of Certification -- After the effective date of this rule, electrical certification shall be issued only for low, medium and high voltage.

Apprentice electricians may become certified electricians by the methods of certification as provided in Section 4 of this rule.

§48-7-4. Qualifications.

4.1. Apprentice Electrician. A person becoming an apprentice electrician shall be issued an apprentice electrician's card by the Office of Miners' Health, Safety and Training upon verification by the employer that the person has attended an eight (8) hour classroom training course in the hazards of electricity, has been issued an experienced miner card, and is to be trained in accordance with this rule or an alternative electrical training program established and approved pursuant to Section 2.8.1., for the next twelve (12) months.

(a) During the twelve (12) month training period the apprentice electrician shall complete an approved forty (40) hour classroom training program comprised of the following subjects:

- (1) State and Federal mining laws which apply to electricity;
- (2) Permissibility;
- (3) AC and DC theory;
- (4) Basic electricity;
- (5) Schematic reading;
- (6) Gas detection and fire prevention; and,
- (7) National Electric Code.

(b) Twenty percent (20%) of the twelve (12) month training shall be involved directly with electrical work.

(c) All of the apprentice electrician's training experience shall be logged and kept by the operator with the operator and apprentice both validating the experience by signatures. Records verifying an apprentice's electrical experience shall be presented prior to testing for electrical certification.

(d) All electrical work performed by an apprentice electrician in the work area shall be examined by a certified electrician prior to any work being performed, and again prior to the circuits or equipment being energized and returned to service. Testing and/or troubleshooting electrical problems on energized electrical circuits may be performed by an apprentice electrician under the immediate supervision of a certified electrician.

4.2 Electrician (Low, medium and high voltage). A person may become certified as a low, medium, and high voltage electrician when the person has at least twelve (12) months of experience in performing electrical work as an apprentice electrician, has worked with low, medium, and high voltage, (at least twenty (20%) percent of the required electrical experience during the twelve (12) month training program shall be directly related to high voltage) and has satisfactorily passed the electrical certification examination. The low, medium and high voltage certified electrician is permitted to perform all types of electrical work at any mining operation.

4.3 If an apprentice electrician is unable to obtain the experience that is directly related to high voltage due to the lack of high voltage equipment that is available, the apprentice may at the discretion of the Director complete a high voltage training program prescribed by the Board of Miner Training Education and Certification and approved by the Director of the WV Office of Miners Health Safety and Training.

4.4 Degree in Electrical Engineering. A person who has a Bachelor's Degree or Associate Degree in electrical engineering from an accredited college or university, and has at least six (6) months of experience in performing electrical work under the supervision of a certified electrician may be permitted to become certified as an electrician when the person has satisfactorily passed the electrician certification examination.

4.5 Electrical Training Programs Already in Effect. All persons training to become certified electricians prior to the effective date of these rules and regulations, shall be allowed to continue training and become certified as an electrician after the completion of one years experience in performing electrical work under the supervision of a certified electrician and after successful passage (at least eighty (80%) percent score) of the certification examination. Any person starting training to become a certified electrician on or after the effective date of these rules, shall comply with the applicable provisions of this rule.

4.6 Prior Certification. All valid electrical certifications issued by the Department of Mines or the Department of Energy prior to the effective date of this rule shall remain valid.

Any person holding a prior certification and wishing to be certified in another category must:

- (1) document his experience;

- (2) successfully pass any other portion of the electrical certification examination not previously taken for low, medium, and high voltage as required in Section 5 this rule; and,
- (3) successfully pass the hands-on (skill) portion of the electrical certification examination.

§48-7-5. Examinations.

5.1. Electrician examination for low, medium, and high voltage. Examinations for low, medium, and high voltage electrician certification shall consist of eight (8) parts:

- (a) Direct current theory and application
- (b) Alternating current theory and application
- (c) Electric equipment and circuits
- (d) Permissibility of electric equipment
- (e) Legal requirements -- State and Federal laws
- (f) National Electric Code
- (g) Dangers of high voltage
- (h) Hands-on (skill)

In order to pass the electrical certification examination, the applicant must score at least eighty percent (80%) in parts (a) through (g), and must pass part (h). The hands-on (skill) part (h), is graded on a pass/fail basis. An applicant who fails to pass the examination must reapply to take the examination within thirty (30) days after notification of a failing score. An applicant who fails the examination two (2) times must receive at least forty (40) hours of additional classroom training as provided in Section 4.1(a) of these rules prior to retaking the examination. An applicant who fails the examination the third time must repeat the twelve (12) month apprentice program as required in Section 4.1 of this rule.

§48-7-6. Certification Procedures.

6.1. Application for certification. Prior to taking an examination for certification an individual must submit an application to the Office of Miners' Health, Safety & Training to take the examination. The application must be submitted to the Office of Miners' Health, Safety and Training within thirty (30) days of completion of the apprentice training program.

Upon receipt of an application for examination, the Office of Miners' Health, Safety and Training shall provide for the applicant to be examined at the next available examination, which is at least fifteen days from receipt of the application, and shall inform the applicant of the time and place for examination. Within fifteen days after the completion of the examination, the Office of Miners' Health, Safety and Training shall inform the applicant of his or her score.

6.2. Certification. Upon determination that an applicant for certification has satisfactorily passed the examination for certification, and has presented proper documented electrical experience, the Office of Miners' Health, Safety and Training shall promptly issue electrical certification to the applicant.

- 6.3. Effect of certification. Except where otherwise provided in this rule, no person may perform electrical work:
- (a) until such person has become a certified electrician to perform such work; or,
 - (b) unless such work is performed by an apprentice electrician under the direct supervision or immediate supervision of a certified electrician; or,
 - (c) unless such work is performed on circuits of forty (40) volts or less.

This provision does not prohibit a person already being trained prior to the effective date of these rules, to continue to perform electrical work under the direct supervision of a certified electrician until he has met the experience requirements.

§48-7-7. Exceptions.

7.1. Mining equipment manufacturer's service representatives are not required to be certified as mine electricians or apprentice electricians in order to perform work on equipment which is manufactured or serviced by the company they are representing. Such individuals are considered to be persons trained to perform electrical work and to maintain electrical equipment. When work is performed by manufacturer's service representatives who are not a certified electrician or an apprentice electrician, such work shall be performed under the direct supervision of a certified electrician and the completed work is to be examined by a certified electrician before the machine or equipment is placed in service.

7.2. Certification from other States. Any person holding a mine electrician certification issued by any other state may act in the capacity of electrician until the next available electrical certification examination is held by the Office of Miners' Health, Safety and Training, but for a period not to exceed a maximum of ninety (90) days.

§48-7-8. Criteria for Apprentice Electrical Training Program.

8.1. Apprentice electrician card. An apprentice electrician card shall be issued by the Office of Miners' Health, Safety and Training when applied for by the miner, with a statement from the mine operator stating that the applicant has attended an eight (8) hour classroom training course in the hazards of electricity, has been issued an experienced miner card, and will be in an approved electrical training program or in an alternative electrician training program established and approved pursuant to Section 8.2.1., for the next twelve (12) months. The apprentice electrician card will be issued for twelve (12) months and may be extended for valid reasons by the Office of Miners' Health, Safety and Training.

8.2. Approved electrical training program. A minimum of forty (40) hours of classroom training is required, and shall cover the following subjects:

- (a) State and Federal laws which apply to electricity;
- (b) Permissibility;
- (c) AC and DC theory;
- (d) Basic electricity;

(e) Schematic reading;

(f) Gas detection.

The twelve (12) month training program shall include electrical and mechanically related work, with twenty percent (20%) of the twelve (12) months being involved directly with electrical work. The apprentice must attend at least eighty (80%) percent of all regularly scheduled days during the twelve (12) month training program.

8.3. Criteria and standards for alternative electrical training programs must be adopted by unanimous approval of the Director and the Board of Miner Training, Education and Certification. An alternative electrical training program will not become effective until approved by the Secretary of State as an emergency rule or by the Legislature as an amendment to this rule.

8.4 Failure to complete apprentice training. If for valid reasons accepted by the Director, an apprentice electrician is unable to complete the twelve (12) month apprentice training program within twelve (12) consecutive months, the Director may permit the individual a time extension to complete the required training; Provided, that the time period extension may not exceed two (2) years.

§48-7-9. Annual Training.

9.1. Electrical refresher training. In order to maintain electrical certification, an individual must complete annually an approved eight (8) hour refresher course. The course shall include but not be limited to permissibility, state and federal law, safety in job performance and training on equipment applicable to the card holders' work.

9.2. Failure to maintain electrical certification. An individual who fails to attend the required annual refresher training is required to retake the electrical certification examination and the hands-on (skill) portion of the examination. Upon scoring at least eighty percent (80%) on each subject of the initial examination, and successful passage of the hands-on portion of the examination, the individual will be issued a new electrical certification card.

This provision will not apply to an individual who was unable to take the annual electrical refresher training for valid reasons accepted by the Director. The individual must, however, complete eight (8) hours of refresher training within ninety (90) days after returning to work.

TITLE 48 SERIES 8

RULES GOVERNING THE 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. WV Code § 22A-7-5 and § 22A-7-6.

1.3 Filing Date. May 17, 2007.

1.4 Effective Date. May 25, 2007

§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 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 WV 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 Miners' 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 non-coal 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 WV 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 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 48CSR8(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 – Personal 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 shall be documented and cosigned by a West Virginia certified mine electrician, (**see Appendix A**). The training session shall be in progress for a minimum of six calendar months. During the training period, the apprentice electrician shall document all hands-on practical electrical mine experience, both underground and in the lab. All electrical experience shall be cosigned by a West Virginia certified mine electrician. The apprentice electrician shall 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 a 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 working 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 lab. All electrical work experience will be logged as required in 48CSR7-4.
- (b) 20% of the 56 hours of high voltage electrical training shall be hands-on training.

§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 **Addendum 3**). The apprentice electrician 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 **Addendum 3**).

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 shall be submitted on a document provided by the West Virginia Office of Miners' 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 **Addendum 3**) 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) Ohm's 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 circuits
 - 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 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 practices
- (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. Troubleshooting 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 Electric Code
 - (2) Discussion, demonstration, and practice
 - (3) Test and discussion
 - (j) High Voltage Systems Certification Test
 - (1) Review of electrical sections WV Law and Part(s) 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.
 - (m) During the formal classes, the apprentice electrician shall complete other practical lab exercises that will include but are not limited to the following.
 - (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 a 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 a 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 and 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. The log must be dated and signed by both the apprentice electrician and the certified electrician observing the work being 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 and 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 substations, 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.

TITLE 56 SERIES 1 DEPARTMENT OF ENERGY

PROCEDURES AND PRACTICE BEFORE THE DEPARTMENT OF ENERGY

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

§56-1-1. General.

1.1. Scope, Construction, and Applicability. (a) The procedures and rules of practice set forth herein shall govern and apply to proceedings before Presiding Officers, the Commissioner of the Department of Energy or the Department generally including proceedings to assess monetary civil penalties pursuant to Section 19, Article 1A, Chapter 22A of the Code, proceedings to review orders and notices pursuant to Section 16, Article 1A, Chapter 22A of the Code and proceedings initiated upon a petition for declaratory ruling pursuant to Section 1, Article 4, Chapter 29A of the Code.

(b) In any proceedings initiated prior to the effective date of these rules, the provisions hereof shall govern and apply to all activities in such proceedings conducted after the effective date of these rules. Except when ordered by the Presiding Officer, no re-issuance of any pleading, documents or requests shall be required in such a proceeding.

(c) These rules shall be liberally construed to secure the just, prompt and inexpensive conduct and determination of all proceedings before the Department of Energy consistent with adequate consideration of the issues involved.

(d) On any procedural question not regulated by the rules, the pertinent provisions of the Administrative Procedure Act shall apply. On any matter not regulated by these rules and for which there is no pertinent provision in the Administrative Procedure Act, the provisions of the West Virginia Rules of Civil Procedure or the rules of evidence and privilege applicable in the courts of general jurisdiction of this State, as appropriate, shall apply.

1.2 Authority. W. Va. Code 22A-3-3-1, 29A-1-4, 29A

1.3 Filing Date. December 30, 1982

1.4 Effective Date. January 30, 1983

1.5 Definitions. As used in these rules: (a) All terms used in these rules, not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

(b) Assessment officer: The term "Assessment Officer" shall mean any person or persons designated and appointed by the Commissioner to carry out the duties of the Assessment officer outlined in Part 2 of these rules.

(c) Assessment review officer: The term "Assessment Review Officer" shall mean any person or persons designated and appointed by the Commissioner to carry out the duties of the Assessment review officer outlined in Part 2 of these rules.

(d) Code: The term "Code" when following a reference to a specific section, article, and chapter, shall mean the West Virginia Code of 1931, as amended.

(e) Declaratory ruling: The term "Declaratory Ruling" means a decision and order issued by the Commissioner of the Department of Energy as a ruling pursuant to Section 1, Article 4, Chapter 29A of the Code.

(f) Mine: The term "Mine" shall mean any mine as defined in Section 1, Article 1A, Chapter 22A of the Code, and any surface mine as that term is defined in Section 3, Article 3, Chapter 22A of the Code.

(g) Notice of violation: The term "Notice of Violation" shall mean a notice issued pursuant to the provisions of Section 13, Article 1A, Chapter 22A of the Code.

(h) Notice of assessment: The term "Notice of Assessment" shall mean a notice issued for the assessment of a civil penalty pursuant to the provisions of Section 19, Article 1A, Chapter 22A of the Code, and described in Section 2.4, Part 2 of these rules.

(i) Presiding officer: The term "Presiding Officer" shall mean the Commissioner or any person authorized by the Commissioner to conduct hearings required or authorized under the coal mine health and safety laws of this State.

(j) Representative of miners: The term "Representative of Miners" shall mean a person or organization designated by a group of miners to act as their representative before the Department.

(k) Withdrawal order: The term "Withdrawal Order" means an order issued pursuant to Section 13, Article 1A, Chapter 22A of the Code.

1.6. Parties. (a) In proceedings to assess monetary civil penalties against any operator of a coal mine under Section 19(a), Article 1A, Chapter 22A of the Code; and when the amount of the assessment only is in dispute, the parties shall be:

- (1) the operator against whom a penalty is proposed, and
- (2) the Department of Energy.

(b) In proceedings to assess monetary civil penalties against any miner under Section 19(a), Article 1A, Chapter 22A of the Code, the parties shall be:

- (1) the miner charged with a violation and against whom a penalty is proposed, and,
- (2) the Department of Energy.

(c) In proceedings to assess monetary civil penalties against any operator of a coal mine under Section 19(b), Article 1A, Chapter 22A of the Code; and where the amount of the assessment only is in dispute, the parties shall be:

- (1) the operator against whom a penalty is proposed, and
- (2) the Department of Energy.

(d) In proceedings to assess monetary civil penalties under Section 19(c), Article 1A, Chapter 22A of the Code, the parties shall be:

- (1) the corporate operator, director, officer, agent or other person or persons charged with a violation and against whom a penalty is proposed, and,
- (2) the Department of Energy.

(e) In proceedings to review an order or notice under Section 15, Article 1A, Chapter 22A of the Code or in a proceeding to assess monetary civil penalties against any operator of a coal mine under Section 19(a), (b), and (c), Article 1A, Chapter 22A of the Code, where the operator is disputing the notice or order alleging a violation, the parties shall be:

- (1) the representatives of the miners at the mine affected by the notice of order, and
- (2) the operator of the affected mine, and
- (3) the Department of Energy.

(f) In proceedings initiated by a petition for declaratory ruling pursuant to Section 1, Article 4, Chapter 29A of the Code, the parties shall be:

- (1) the person requesting a declaratory ruling;
- (2) the Department of Energy, and
- (3) any interested person of record allowed to intervene under Section 1.7 of these rules or any other person so allowed to intervene.

1.7. Intervention. (a) Any person claiming a right of participation in a proceeding on the basis that the person has an interest in the outcome of the proceedings or any person otherwise seeking to intervene in a proceeding may become a party to a proceeding upon the Presiding Officer's granting of such person's petition to intervene.

(b) A petition seeking intervention must be written, setting forth the interest of the petitioner in the proceedings, containing a showing that petitioner's participation will assist in the determination of the issues in question, and such petition must be served, contemporaneously with the filing, on the Commissioner who shall serve such petition on all other parties to the proceeding.

(c) Any party may file objections to a petition for intervention within fifteen (15) days after service of the petition on the party.

(d) A petition for leave to intervene may be filed at any stage of a proceeding before the commencement of a hearing. After the commencement of a hearing, a petition for leave to intervene may be filed only with the waiver by all parties or upon a showing by the petitioner of good cause for the delay in seeking intervention.

(e) The Presiding Officer may grant or deny petitions for intervention or may permit intervention limited to a particular part of the proceeding.

1.8. Form of documents. (a) Caption. The documents filed in any proceeding conducted under these rules shall be captioned in the name of the person or persons charged with a violation or seeking relief from the Department and may contain or include other information appropriate for the identification of the proceeding, including any docket number assigned to the case.

(b) Title. After the caption, each such document shall contain a title which shall be descriptive of the document and which shall identify the party by whom the document is submitted.

(c) Signature. The original of each document filed shall be signed at the end by the party submitting the document, or, if the party is represented by an attorney, by such attorney. The address and telephone number of the party or the attorney shall appear beneath the signature.

1.9. Filing and service of pleadings and other documents. (a) Where to file. All pleadings or documents in a proceeding described in these rules shall be filed with the Commissioner, Department of Energy, 1615 Washington Street, E., Charleston, West Virginia 25311.

(b) Number of copies. Except as otherwise provided in these rules, a party shall furnish an origin and two (2) copies of all pleadings and other documents required or permitted to be filed.

(c) How to file. All filing may be accomplished by personal delivery or first class mail.

(d) When filing effective. In the case of mailing by first class mail, filing is effective upon mailing. In the case of personal delivery, filing is effective upon delivery.

(e) Copies to be served. Copies of all pleadings and other documents filed in any proceeding described in these rules and copies of all notices pertinent to such proceedings shall be served upon all other parties to the proceeding.

(f) Method of service. Documents by which any proceeding is initiated shall be served on each other party personally or by registered or certified mail, return receipt requested. All subsequent documents may be served personally or by first class mail. Service by mail is complete upon mailing.

(g) Service of attorney. Whenever a party is represented by an attorney who has signed any document filed on behalf of such party or otherwise entered an appearance on behalf of such party, service thereafter shall be made upon the attorney.

(h) Proof of service. Any person initiating a proceeding under these rules shall file proof of service in the form of (i) a certificate of service, or (ii) a return receipt where service is by certified mail, or (iii) an acknowledgment by the party

served or (iv) a verified return where service is made personally. The certificate of service shall include a statement of how and when service was accomplished.

1.10. Amendments. (a) The strict formal requirements in pleadings are not required to be observed in documents, answers or any other papers filed with the Department and amendments or supplemental statements may be made and filed at any time prior to a scheduled hearing as long as the documents are filed and served as called for under these rules at least ten (10) days prior to the scheduled hearing date. If a party desires to file amended or supplemental statements less than ten (10) days before the scheduled hearing of the matter, the party or his representative shall make a written request to the Presiding Officer to file those amendments along with the amendments. Said request will set forth with particularity the reason for the need to file such documents at the late date. The Presiding Officer will then allow or disallow the filing based solely on his discretion as justice might require.

(b) A further and better statement of any cause or ground of complaint or defense, or a further and better statement of particulars of any matter stated, in any document, may in any case be ordered at the discretion of the Presiding Officer.

1.11. Motions. (a) Unless made during a hearing, all motions shall be in writing, contain a short and plain statement of the grounds on which it is based, and set forth the relief sought. Motions may be accompanied by appropriate supporting material or discussion of the reasons for granting the motion.

(b) A statement in opposition to a motion may be filed by any party within ten (10) days after the date of service.

(c) Any motion, including motions made during the hearing and except for motions relating to jurisdiction or directed verdict or for a motion for reconsideration of the final decision of the Commissioner, made less than ten (10) days before the commencement of an evidentiary hearing shall contain a showing of good cause for the motion not having been filed prior to the ten (10) day period.

(d) Unless ordered by the Presiding Officer, oral argument on motions will not be heard.

1.12. Consolidation of proceedings. The Presiding Officer may at any time order a proceeding described in these rules consolidated with any other such proceeding then pending before the Department, if such a consolidation is, in the opinion of the Presiding Officer, a more efficient and expeditious manner of taking evidence, as long as all parties to the proceeding are afforded due process of law and fair opportunity to present and make a record of evidence.

1.13. Hearings. All hearings shall be conducted by a Presiding Officer in accordance with the provisions of Section 3 of these rules, and all such hearings shall be open to the public.

1.14. Public access to departmental records. (a) Subject to reasonable regulation by the Commissioner, all departmental records relating to the assessment of monetary civil penalties or review proceedings under the coal mine health and safety laws of this State shall be open for public inspection.

(b) The Commissioner shall, from time to time, publish a list of final orders entered by the Department. Such list shall include the person against whom a violation was charged and the amount of the penalty paid or assessed or the relief sought and granted, as appropriate.

(c) The Commissioner shall make available to public inspection, all final orders, decisions and opinions in the adjudication of cases under the provisions of these rules.

(d) Notwithstanding the above provisions, upon the motion of any party to a proceeding, the Commissioner may take appropriate action to protect as confidential, trade secrets or sensitive information about individuals. However, under no circumstances shall this section be deemed to protect as confidential, proposed orders of assessments, final orders and decisions, or the dates on which meetings and conferences were held and the procedures by which cases were disposed of.

1.15. Time. (a) In computing any period of time prescribed or allowed by these rules, the day of the act, event, or default from which the designated period of time begins to run shall not be included. The last day of the period so computed shall be included, unless it is a Saturday, a Sunday, or a legal holiday when the offices of the government of this State are closed, in which event the period runs until the end of the next day which is not a Saturday, a Sunday, or a legal holiday when the offices of the government of this State are closed.

(b) When by these rules or by a notice given thereunder, an act is required or allowed to be done at or within a specified time, the Presiding Officer may extend such time for good cause at the expiration of the prescribed time or at the expiration of any earlier granted extension, upon the showing that the failure to act was for good cause.

(c) Whenever any party has the right or is required to do some act or undertake some proceedings within a prescribed period after service of a notice or other document upon him and the notice or document is served upon the party by mail, three (3) days shall be added to the prescribed period.

1.16. Discovery. (a) Parties may obtain discovery regarding any matter, not privileged, which is relevant to the subject matter involved in a pending proceeding. The party requesting discovery shall have the burden of showing the necessity and relevancy of any materials, answers or testimony desired. All requests for public records directed to the Department of Energy shall be in accordance with the provisions of Chapter 29B, Article 1, Section 1 et seq. of the Code of West Virginia, 1931, as amended.

(b) Discovery shall be completed within sixty (60) days after commencement of a proceeding. For good cause shown, the Presiding Officer may permit the time for discovery to be extended.

(c) Parties may obtain discovery of any relevant matter, not privileged, that is admissible evidence or appears reasonably calculated to lead to the discovery of admissible evidence.

(d) Upon application by a party or by the person from whom discovery is sought or upon its own motion, the Presiding Officer may, for good cause shown, make any order limiting discovery to prevent undue delay or to protect a party or person from annoyance, oppression, or undue burden or expense.

(e) Any party may take the testimony of any person, including a party, by deposition upon oral examination or written interrogatories. If the parties are unable to agree thereto, the time, place, and manner of taking depositions shall be governed by the order of the Presiding Officer.

(f) Any party may service written interrogatories or requests for admission upon another party. A party served with written interrogatories or a request for admission shall answer such interrogatories or request within fifteen (15) days of service unless the proponent of the interrogatories or request agrees to a longer time, or unless the Presiding Officer by order specifies a different time or excuses the party from answering in good cause shown. Interrogatories shall be answered under oath. For good cause shown, the Presiding Officer may order a party to produce and permit inspection, copying, or photographing of designated documents or objects.

1.17. Ex parte communications. (a) There shall be no ex parte communication with respect to the merits of any case not concluded, between the Presiding Officer and any of the parties or interveners, representatives, or other interested persons.

(b) In the event an ex parte communication in violation of this section occurs, the Commissioner or the Presiding Officer may make such orders or take such action as fairness requires. Upon notice and hearing, the Commissioner or the Presiding Officer may take disciplinary action against any person who knowingly and willfully makes or causes to be made a prohibited ex parte communication.

(c) All ex parte communications in violation of this section shall be placed on the public record of the proceedings.

(d) Any inquiries concerning filing requirements, the status of cases before the Presiding Officer, or docket information shall be directed to the Hearings Clerk at West Virginia Department of Energy, 1615 Washington Street, E., Charleston, West Virginia 25311. Telephone (304) 558-1425.

§56-1-2. Rules Applicable To Proceedings Initiated to Assess Civil Penalties.

2.1. Scope. (a) The rules in this Section govern, and are applicable, to proceedings initiated by the Commissioner to assess civil penalties under Section 19, Article 1A, Chapter 22A of the Code. In addition to the rules contained in this Section, the general rules of practice before the Department contained in Section 1 and the rules relating to hearings held by the Department contained in Section 3 are also applicable to such proceedings.

2.2. Assessment officer. (a) Within thirty (30) days after the effective date of these regulations, the Commissioner shall designate and appoint the inspectors-at-large and their designees to act as Assessment Officer(s) for the Department of Energy. It shall be the duty of the Assessment Officer to review withdrawal orders and notices of violation, and prepare Notices of Assessment.

2.3. Assessment review officer. (a) Within thirty (30) days after the effective date of these regulations, the Commissioner shall designate and appoint a person or persons to act as Assessment Review Officer(s) for the Department of Energy. It shall be the duty of the Assessment Review Officer, upon request for a pre-hearing conference by an operator or miner who has been notified of a proposed civil penalty assessment pursuant to Section 19, Article 1A, Chapter 22A of the Code, to review the civil assessments, accept statements and documents from the party requesting the conference, and hold the requested pre-hearing conference pursuant to Section 2.8 of these rules.

2.4. How initiated: notice of assessment. (a) Upon the completion of any inspection of a coal mine, it shall be the duty of each mine inspector, or representative of the Department of Energy making said inspection, to deliver to the Assessment Officer a copy of each finding, order, or notice issued during said inspection or prior inspections, which has been abated by the operator or individual charged in said finding, order, or notice with a violation, or if not abated by the operator or individual, then delivery of each finding, order or notice shall be made within a reasonable time after the time for abatement has expired.

(b) Within thirty (30) days after receipt of a copy of a notice or order issued by a mine inspector or authorized representative of the Department of Energy during a mine inspection, the Assessment Officer shall prepare a Notice of Assessment and forward the same to an Assessment Review Officer for service upon the person or persons charged with the violation of the state coal mine health and safety law, in accordance with the provisions of Section 1 of these rules.

(c) Each Notice of Assessment shall contain:

- (1) the name of the operator, miner or other person charged with a violation;
- (2) the name and address of the mine inspector or representative of the Department of Energy discovering or witnessing the alleged violation and reporting the same to the Commissioner;
- (3) the health or safety rule or regulation or law which the Assessment Officer believes has been violated;
- (4) the time, date, location, and circumstances of the alleged violation;
- (5) the amount of the proposed penalty;
- (6) such other information as the Commissioner may require.

Any of the above information may become part of the Notice of Assessment by attaching the same thereto.

2.5. Procedures for assessment of civil penalties. (a) Within thirty (30) days after receipt of the Notice of assessment, an Assessment Review Officer shall review the same and determine whether or not the proposed assessment should be recalculated using the guideline outlined in Section 19(a)(1), Article 1A, Chapter 22A of the Code.

(b) The Assessment Review Officer shall, within thirty (30) days after receipt of the Notice of Assessment, by certified mail, return receipt requested, serve upon the operator or miner charged (1) a copy of the Notice of Assessment, (2) a copy of the notice or order which is the basis for the Notice of Assessment, and (3) a written statement indicating to the person charged with a violation that a civil penalty may only be assessed after the person charged with a violation has been given an opportunity for a public hearing and the manner in which the person charged with a violation may request a hearing.

(c) The operator or miner shall have thirty (30) days from receipt of the Notice of Assessment to either (1) pay the penalty, (2) request, in writing, a conference with the Assessment Review Officer to provide information relating to the violation listed in the Notice of Assessment, or (3) request, in writing, a hearing on the violation in question pursuant to Section 3 of these rules. If the operator or miner does not exercise his right under this subsection within thirty (30) days of receipt of the Notice of Assessment, the Notice of Assessment will become a final Order of Assessment which will be due immediately and enforceable under Section 19, Article 1A, Chapter 22A of the Code.

2.6. Payment of assessment. (a) Upon receipt of the assessment by certified check or money order by the operator, miner or other person will close the case with respect to any civil penalties.

(b) Payment of the assessment should be sent to the Commissioner, Department of Energy, 1615 Washington Street, E., Charleston, West Virginia 25311. Checks should be made payable to the West Virginia Department of Energy.

2.7. Conference. (a) Upon receipt of a request for a conference, the Assessment Review Officer shall arrange for a timely conference convenient to all parties and the Assessment Review Officer.

(b) If the party or parties request a conference with the Assessment Review Officer, he may submit any additional information to the Assessment Review Officer which may be relevant to the fact of the violation or the amount of the penalty. Such information may be submitted prior to the conference and discussed during the conference. To expedite the conference, the Assessment Review Officer may contact the party or parties to discuss the case prior to such conference.

(c) At and/or subsequent to the conference, the Assessment Review Officer will consider all relevant information on the violation(s) in question presented by the party or parties and is authorized to decrease, increase or leave the same amount of the assessed penalty on the basis of any new information presented to him. When the facts warrant a finding that no violation of the coal mine health and safety laws of this State occurred, a penalty will not be assessed and the subject notice of violation or order will be vacated.

(d) If the party or parties appear in person and the issues are resolved, they may, at this time, tender payment of the amount agreed upon and thereby dispose of the case, or they may have twenty (20) days within which to submit payment to the Commissioner of the amount agreed upon and thereby dispose of the case. All such agreements must be in writing and signed by both parties. Failure to tender payment of the agreed amount within the twenty (20) day period will result in the agreed amount being entered as the final order of the Commissioner, enforceable under Section 19, Article 1A, Chapter 22A of the Code if the agreed amount is the same or greater than the original assessed amount or if the agreed amount is less than the original amount, the agreed amount will be increased to the original assessed penalty, all at the discretion of the Assessment Review Officer.

(e) If all issues cannot be resolved during a conference, the party or parties may tender payment for those violations upon which an assessment amount has been agreed as provided in Section 2.7(d) of these rules. Violations not resolved will be the subject of notice of hearing to assess civil penalty provided for in Section 2.8 of these rules.

2.8. Assessment of civil penalties - How initiated. (a) A proceeding for the assessment of a civil penalty shall be initiated by the Assessment Review Officer by filing a Notice of Assessment Proceeding with the Commissioner and by serving a copy of the notice on the party against whom a penalty is sought. Such notices shall be prepared, filed and served within thirty (30) days, after (1) an operator, miner, person or persons request a hearing after receipt of a Notice of Assessment, or (2) the Assessment Review Officer and a party charged with a violation are unable to resolve all issues concerning such violation during a conference as provided in Section 2.7 of these rules.

(b) The Notice of Assessment Proceeding shall include a list of the alleged violations for which a civil penalty is sought to be assessed. In addition, the Notice of Assessment pertaining to each alleged violation contained on such list shall be included with the Notice of Assessment Proceeding.

(c) Upon receipt of a Notice of Assessment Proceeding, the Commissioner shall immediately appoint a Presiding Officer for all proceedings relating thereto.

2.9. Answer. (a) A party against whom a penalty is sought shall file an answer within twenty (20) days after service of a Notice of Assessment Proceeding with the Commissioner. Notice to the party charged must be given at the time.

2.10. Contents of answer. All answers shall contain: (a) A short and plain statement of the reasons why each of the violations listed in the Notice of Assessment proceeding are contested, including whether a violation occurred; and (b) A request for a hearing, or an express waiver of the right to a hearing and a request for a formal consideration of the issues by the Presiding Officer.

2.11. Summary disposition. (a) Failure to answer. Where the party charged with a violation(s) fails to timely file an answer to the Notice of Assessment Proceeding, such party will be deemed to have waived his right to hearing, and the Notice of Assessment shall be forwarded to the Commissioner for entry as a final order.

(b) Failure to appear at hearing. When a person charged with a violation fails to appear at a hearing conducted under Section 3 of these rules, the Commissioner may dispose of the case or otherwise formally consider it in accordance with the provisions contained in Section 3 of these rules.

2.12. Decisions and orders after hearing or formal consideration of the case. (a) After the filing of an answer in a case, the Presiding Officer shall schedule and conduct a hearing regarding the case or otherwise formally consider it in accordance with the provisions contained in Section 3 of these rules.

(b) Where, after hearing or after submission of the case and consideration of the record as a whole or in the event a hearing is waived, the Presiding Officer finds that a violation of the coal mine health and safety laws of this State has occurred, he shall determine the amount of the penalty which is warranted in accordance with Section 19, Article 1A, Chapter 22A of the Code, and these rules, and incorporate in a decision concerning the violation findings of fact, conclusions of law and an order setting forth the amount of any penalty and a requirement that the penalty be paid. Each decision and order against an operator shall contain findings of fact on each of the following criteria: the operator's history of previous violations, the appropriateness of such penalty to the size of the business of the operator charged, the gravity of the alleged violation, and the demonstrated good faith of the operator charged in attempting to achieve rapid compliance after notification of the alleged violation.

(c) Where, after hearing or after submission of the case and consideration of the record as a whole in the event a hearing is waived, the Presiding Officer determines that no violation occurred, he shall incorporate in a decision concerning the violation findings of fact, conclusions of law and an order vacating the notice of violation or order and dismissing the proceeding to assess civil penalty.

(d) In proceedings where the Presiding Officer is not the Commissioner, the record in the case and the decision and order of the Presiding Officer shall be forwarded to the Commissioner for his review. The Commissioner shall approve, alter and approve or reject the decision and order of the Presiding Officer. In the event the Commissioner rejects the decision and order of the Presiding Officer, the Commissioner shall forthwith prepare a final decision and order to replace the decision and order rejected.

(e) A copy of all decisions and orders prepared by or approved by the Commissioner shall be served, by certified mail, upon all parties and, unless the decision and/or order otherwise provides, the decision and order so served shall become effective immediately following service unless a party makes application for rehearing or modification in accordance with Section 3.13 of these rules.

§56-1-3. Hearings.

3.1. Scope. (a) Unless otherwise specified in these or other rules and regulations, the rules in this Section shall govern and apply to hearings conducted by the Commissioner other Presiding Officer or by the Department pursuant to the authority provided in the laws of this State or rules and regulations promulgated pursuant thereto.

3.2. Conduct of hearings. A Presiding Officer shall conduct every hearing.

3.3. Powers of presiding officers. (a) The Presiding Officer in connection with conducting a hearing and subject to the rules set forth in this section, may:

- (1) Administer oaths and affirmations;
- (2) Issue subpoenas in accordance with the provisions of Section 1, Article 5, Chapter 29A of the Code;
- (3) Rule upon offers of proof and receive relevant evidence;
- (4) Permit evidentiary depositions to be taken and read as in civil actions in the circuit courts of this State;
- (5) Permit discovery depositions;
- (6) Regulate the course of the hearings;
- (7) Dispose of procedural requests or similar matters;
- (8) Hold conferences for the settlement or simplification of the issues with the consent of the parties; and
- (9) Take any other action in connection with such hearing authorized by law.

(b) In any case where the Presiding Officer is not the Commissioner, such Presiding Officer may, on his own motion, and shall, at the request of any party, certify any interlocutory ruling to the Commissioner where he determines (1) that such ruling involves a controlling question of law, and (2) that an immediate decision on the question by the Commissioner may materially advance the ultimate disposition of the matter before him.

(c) In no case shall a Presiding Officer other than the Commissioner enter a final order or decision.

3.4. Notice of hearing: contents of notice. (a) Unless otherwise specified in these rules, no hearing shall be conducted under these rules or otherwise unless the parties to the proceeding shall have received at least ten (10) days written notice.

(b) Each written notice of the hearing shall contain the date, time, and place of the hearing and a short and plain statement of the matters which are to be the subject of or asserted at the hearing. Such notice shall be given in accordance with the provisions of Section 2, Article 7, Chapter 29A of the Code.

3.5. Date, time, and place of hearing. (a) The date, time, and place of each hearing shall be determined by the Presiding Officer on the bases of convenience to parties and witnesses. Any request for postponement or relocation of a hearing shall be filed and served on all parties no later than five (5) days prior to the originally scheduled date. Such request may be granted upon showing of good cause.

3.6. Representation at hearings. (a) At hearings held pursuant to these rules, any party may represent himself or be represented by an attorney-at-law admitted to practice before the courts of any state or the District of Columbia. In

addition, any party which is also an operator may be represented by a full-time employee, and any miner may be represented by the representative of miners.

3.7. Waiver of evidentiary presentation. (a) Any party who desires to submit written pleadings, comments or information in lieu of an evidentiary hearing may submit such documents for the Presiding Officer's consideration in the matter in the event hearing is waived as provided in subsection (b) of this section.

(b) Parties entitled to an evidentiary hearing may waive such right in writing, but unless all entitled parties file timely waivers, a hearing will be conducted. Such waivers must be unequivocal and request the Presiding Officer to decide the matter at issue on the pleadings and written record of the case, including any stipulations the parties might enter or any documents filed in accordance with subsection (a) of this section.

(c) When a hearing is waived under the provisions of this section, the written record in the case shall be submitted to the Presiding Officer for decision.

3.8. Burden of proof. (a) In proceedings under the coal mine health and safety laws of this State, the party initiating the proceeding shall have the burden of proving his case by a preponderance of the evidence provided that (a) in a penalty proceeding, the Department shall have the burden of proving its case by a preponderance of the evidence, and (b) whenever the violation of any provisions of the state coal mine health and safety laws is an issue, the Department shall have the burden of proving the violation by a preponderance of the evidence.

3.9. Proposed findings, conclusions and orders. (a) The Presiding Officer may request the submission by parties of proposed findings of fact, conclusions of law, and orders, together with a supporting brief. Such proposals and briefs shall be served upon all parties, and shall contain adequate reference to the record and authorities relied upon.

3.10. Hearings to be public. (a) All hearings conducted under these rules shall be open to the public.

3.11. Decisions and orders. (a) Within sixty (60) days after conclusion of the hearing or after submission of the case and consideration of the record as a whole in the event a hearing is waived, the Presiding Officer shall render a decision and order which shall be in writing and shall include a statement of (a) findings and conclusions and the reasons or basis therefore on the material issues of fact and law, and (b) the appropriate ruling or order granting in part, or denying the relief sought.

(b) In proceedings where the Presiding Officer is not the Commissioner, the Presiding Officer shall issue and serve a copy of the recommended decision upon all parties by certified mail. The record in the case and the original recommended decision shall be forwarded to the Commissioner. Within fifteen (15) days of the service of the recommended decision a party adversely affected or aggrieved by such decision may file with the Commissioner, and serve upon all parties, a petition for rehearing pursuant to Section 3.12(b) of these rules setting out with particularity the grounds for requesting such rehearing. The Commissioner shall approve, alter, remand or reject the recommended decision and order of the Presiding Officer, the Commissioner shall, in accordance with the provisions of Section 3.12(e) of these rules, prepare a final decision and order to replace the recommended decision and order rejected.

(c) A copy of all decisions and orders prepared or approved by the Commissioner shall be served, by certified mail, upon all parties and, unless the decision and/or order provides the decision and order so served shall become effective immediately following service.

3.12. Re-opening; re-hearing; modification. (a) Applications for re-opening a proceeding after hearing or submission and before decision shall be made by petition filed prior to service of a final decision. Such petition shall state specifically the grounds relied upon and, if it be for the purpose of introducing additional evidence, shall also state the nature and purpose of the evidence to be adduced.

(b) Applications for re-hearing or re-argument after decision shall be made by petition filed within fifteen (15) days after service of the recommended or final decision. Such petition shall state specifically the grounds relied upon and, if any decision and order is sought to be vacated, reversed or modified by reason of (1) matters arising since the decision; (2) consequences which would result from compliance with the decision and order; or (3) facts not in the possession of petitioner prior to decision, such reason shall also be stated.

(c) Applications for modification of decisions and orders of the Department, which seek only a change in the date of such decisions and orders shall take effect, shall be made by petition filed within fifteen (15) days after service of the final decision, except that, in the event of an unforeseen emergency satisfactorily shown by the petitioner, such relief may be sought informally by telegram or otherwise, upon notice to all parties or attorneys who appeared in the proceeding.

(d) A copy of each petition filed under this section shall be served on all other parties to the original proceeding and each petition shall be accompanied by a certificate showing service upon such parties. Within ten (10) days after such service, an adverse party may file and serve a reply to the petition.

(e) Upon the filing of a reply or upon the failure of an adverse party to reply within ten (10) days after service of a copy of the petition of such party, the Commissioner shall consider the petition, the replies thereto, and the record of the proceeding, and, if he or she determines a hearing upon the petition to be necessary, shall, after ten (10) days notice send to all parties to hold such hearing in accordance with the provisions of Section 3 of these rules. Within thirty (30) days after consideration of the petition, the replies thereto and the record of the proceeding, the Commissioner shall issue an order either granting in part or denying the relief requested in the petition.

§56-1-4. Rules Applicable to Proceedings for Modification, Extension, Termination or Review of Orders And Notices.

4.1. Scope. (a) The rules in this Section govern and are applicable to review proceedings initiated pursuant to Section 15, Article 1A, Chapter 22A of the Code, by operators or representatives of miners in any mine affected by orders

and notices of violation issued pursuant to the provisions of Sections 13 and 14, Article 1A, Chapter 22A of the Code. In addition to the rules contained in this Section, the general rules of practice before the Department contained in Section 1 and the rules relating to hearings held by the Department contained in Section 3 are also applicable to such proceedings.

4.2. By whom modification, extension, termination or review proceedings may be initiated. (a) The following persons may initiate proceedings for modification, termination or review of notices of violation or orders:

- (1) an operator issued an order pursuant to the provisions of Section 13, Article 1A, Chapter 22A of the Code;
- (2) any representative of miners in any mine affected by such a withdrawal order or by any modification or termination of such order;
- (3) an operator issued a notice of violation pursuant to subsection (b), Section 13, Article 1A, Chapter 22A of the Code, if he believes that the time fixed in such notice for the abatement of the violation is unreasonable;
- (4) any representative of miners in any mine affected by such a notice of violation, if he believes that the time fixed in such notice for abatement of the violations is unreasonable;
- (5) any operator affected by an order issued under Section 14, Article 1A, Chapter 22A of the Code; or
- (6) any representative or miners in a mine affected by an order issued under Section 14, Article 1A, Chapter 22A of the Code.

(b) For purposes of Section 4 of these regulations the mine "affected" by any order or notice shall be deemed to be the mine at which the violation in question allegedly occurred or at which the imminent danger giving rise to the withdrawal order was allegedly found to exist.

4.3. Initiation of proceedings. (a) Proceedings for the review of an order issued pursuant to the provisions of Sections 13 and 14, Article 1A, Chapter 22A of the Code, a modification or termination thereof, a notice of violation issued pursuant to the provisions of Section 13, Article 1A, Chapter 22A of the Code, or a modification or termination thereof, shall be initiated by those parties entitled to seek review as designated in Section 4.2 of these rules, by filing an application for review.

(b) An application for review shall be filed with the Commissioner within thirty (30) days of receipt of the applicant for the order or notice of violation sought to be reviewed or within thirty (30) days of receipt of any modification or termination of a notice of violation or an order where review of such modification or termination of a notice of violation or an order where review of such modification or termination is sought. A copy of the application for review shall be served upon all other parties by the party making application for review.

(c) An operator's failure to file an application for review of an order or notice of violation shall not preclude the operator from challenging the fact of violation or raising any other pertinent matter in a proceeding under Section 2.8 through 2.12 of these rules.

4.4. Answer. (a) Any party, other than the Department of Energy, desiring to participate in the proceeding in opposition to the application for review shall file an answer within fifteen (15) days of service of such application for review.

4.5. Contents of application and answer. (a) An application for review and an answer shall comply with applicable general requirements and shall contain:

- (1) A short and plain statement of (i) such party's position with respect to each issue of law or fact which the party contends is pertinent to the legality or correctness of the order or notice; and (ii) the relief requested by such party;
- (2) A statement of whether the party submitting the document requests a public hearing or waives it as provided in Section 3.7 of these rules. Where an answer does not include an unequivocal waiver, a party shall be deemed to have requested a hearing and initial decision.

(b) A copy of the order or notice sought to be reviewed shall be attached to each application for review.

4.6. Proceedings after application; decision and order. (a) Upon receipt of an application for review the Commissioner shall cause an investigation of the matter to be made as he or she deems appropriate and shall appoint a Presiding Officer for all proceedings relating to such application.

(b) In the event the application has requested a hearing in the application for review, the Presiding Officer shall give notice of and conduct such hearing in accordance with the provisions of Section 3 of these rules. In the event the applicant has waived a hearing in accordance with the provisions of Section 3.7 of these rules, the Presiding Officer shall promptly consider the pleadings and all documents submitted therewith by the parties.

(c) Within sixty (60) days after conclusion of the hearing or after consideration of the pleadings and documents filed therewith in the event a hearing is waived, the Presiding Officer shall issue a written decision and order incorporating therein findings of fact and conclusions of law, vacating, affirming, modifying, extending, or terminating the notice of violation, the order or the modification or termination of such notice or order.

(d) In proceedings where the Presiding Officer is not the Commissioner, the record in the case and the decision and order of the Presiding Officer shall be forwarded to the Commissioner for his review. The Commissioner shall approve, alter and approve, or reject the decision and order of the Presiding Officer. In the event the Commissioner rejects the decision and order of the Presiding Officer, the Commissioner shall forthwith prepare a decision and order to replace the decision and order rejected.

(e) A copy of all decisions and orders prepared or approved by the Commissioner shall be served, by certified mail, upon all parties and each order so served shall become effective upon service.

4.7. Temporary relief; when appropriate. (a) As part of an initial application for review, or at any time during which an application for review is pending, an applicant may file a written request for temporary relief from any modification or termination of any order, or from any order issued under Section 13, Article 1A, Chapter 22A of the Code.

(b) If the application for temporary relief is incorporated in the application for review, the applicant shall incorporate in such application a detailed statement giving reasons why temporary relief is appropriate under the circumstances.

(c) If the application for temporary relief is made at any time after the application for review has been filed, the application for temporary relief shall be in the form provided for in Section 1.8 of these rules and shall specify the status of the review proceeding and the reasons why the application for temporary relief is being made. When an application for temporary relief is made after an application for review has been filed, a copy thereof shall be served upon all parties to the proceeding.

(d) The Presiding Officer may, upon consideration of the request for temporary relief, grant such relief as he deems appropriate: Provided, That no temporary relief shall be granted unless:

(1) a hearing has been held in which all parties were given an opportunity to be heard;

(2) the applicant shows that there is substantial likelihood that the final decision and order will be favorable to the applicant; and

(3) such relief will not adversely affect the health and safety of miners in the coal mine.

(e) Under no circumstances shall temporary relief be granted in the case of a notice issued under Section 13(b), Article 1A, Chapter 22A of the Code.

(f) Any temporary relief granted by a Presiding Officer who is not the Commissioner shall be subject to review by the Commissioner.

4.8. Expedition of proceedings. (a) As part of an initial application for review, or at any time after the filing of an application for review, party may move the Presiding Officer to expedite the hearing and decision of the case. Such motion shall be in writing and accompanied by supporting documents that establish the party's claim of exigent circumstances warranting expedition.

(b) A copy of all such motions for expedition shall be served upon all other parties by the applicant.

(c) The Presiding Officer shall promptly review the motion and may advance the matter on his calendar or expedite the proceedings as he deems appropriate.

(d) Where expedited proceedings are requested under this Section, periods of time for filing applications, answers or responses, or for holding hearings, as provided elsewhere in these rules, may be waived by agreement of the parties or altered by order of the Presiding Officer.

(e) Any motions granted in this section by a Presiding Officer who is not the Commissioner shall be subject to review by the Commissioner.

§56-1-5. Rules Applicable to Proceedings Initiated Upon Petition for Declaratory Ruling.

5.1. Scope. (a) The rules in this Section govern and are applicable to proceedings initiated pursuant to Section 1, Article 4, Chapter 29A of the Code on petition of any interested person for a declaratory ruling to be issued by the Department of Energy with respect to the applicability to any person, property or statement of facts of any rule or statute enforceable by the Department of Energy. In addition to the rules contained in the Section, the general rules of practice before the Department contained in Section 1 and the rules relating to hearings held by the Department contained in Section 3 are also applicable to such proceedings.

5.2. Scope. (a) Any interested person may initiate proceedings for a declaratory ruling by the Department with respect to the applicability to any person, property or statement of facts of any rule or statute enforceable by it.

5.3. Initiation of proceedings. (a) Proceedings for a declaratory ruling pursuant to Section 1, Article 4, Chapter 29A of the Code shall be initiated by filing a petition for declaratory ruling with the Department of Energy.

5.4. Answer. (a) Any party, other than the Commissioner, desiring to participate in the proceeding in opposition to the petition for declaratory ruling shall file an answer within fifteen (15) days of service of such petition.

5.5. Contents of petition and answer. (a) A petition for declaratory ruling and an answer shall comply with applicable general requirements and shall contain:

(1) A short plain statement of (i) such party's position with respect to each issue of law or fact which the party contends is pertinent to the applicability to a person, property or statement of facts of any rule or statute enforceable by the Department; and (ii) the construction of the rule or statute advanced by such party;

(2) A statement of whether the party submitting the document request a public hearing or waives such hearing as provided in Section 3.7 of these rules. Where a pleading does not include a request for public hearing, a party shall be deemed to have waived such hearing pursuant to Section 3.7 of these rules.

(b) Documents may be attached to pleadings as exhibits.

5.6. Proceedings after petition; decision and order. (a) Upon receipt of a petition for declaratory ruling the Commissioner may cause an investigation of the matter to be made as deemed appropriate and may appoint a Presiding Officer for all proceedings relating to such petition. If the Commissioner declines to issue a declaratory ruling in response to such petition, he shall notify all parties in writing.

(b) In the event a party has requested a hearing in the petition or an answer, the Presiding Officer shall give notice of and conduct such hearing in accordance with the provisions of Section 3 of these rules. In the event the party

has waived a hearing in accordance with the provisions of Section 5.5 of these rules, the Presiding Officer shall promptly consider the pleadings and all documents submitted therewith by the parties.

(c) Within sixty (60) days after conclusion of the hearing or after consideration of the pleadings and documents filed therewith in the event a hearing is waived, the Presiding Officer shall issue a written decision and order incorporating therein findings of fact and conclusions of law stating the applicability to any person, property or statement of facts of the rule or statute enforceable by the Department which is the subject of the petition. Such decision and order shall state whether or not such ruling is binding between the Department and the petitioner. Such ruling shall not be binding upon any person other than the petitioner.

(d) In proceedings where the Presiding Officer is not the Commissioner, the record in the case and the decision and order of the Presiding Officer shall be forwarded to the Commissioner for his review. The Commissioner shall approve, alter and approve or reject the decision and order of the Presiding Officer. In the event the Commissioner rejects the decision and order of the Presiding Officer, the Commissioner shall forthwith prepare a decision and order to replace the decision and order rejected.

(e) A copy of all decisions and orders prepared or approved by the Commissioner shall be served, by certified mail, upon all parties and each order so served shall become effective upon service.

TITLE 56 SERIES 2 OFFICE OF MINERS' HEALTH, SAFETY & TRAINING RULE GOVERNING SAFETY PROVISIONS FOR CLEARING CREWS

§56-2-1. General.

1.1 Scope. This rule governs safety provisions for clearing crews while on mine property in the State of West Virginia. It does not extend to commercial logging operations that may be on mine property and are regulated by OSHA and the WV Division of Forestry.

1.2 Authority. W. Va. Code 22A-1-6 and W. Va. Code 22A-1-38.

1.3 Filing Date. May 8, 2006.

1.4 Effective Date. May 8, 2006.

1.5 Applicability. This rule applies to each mine operator and independent contractor registered with the WV Office of Miners' Health, Safety and Training as required by West Virginia Code 22A-2-63.

§56-2-2. Definitions.

2.1. "Backcut" (felling cut) means the final cut in a felling operation.

2.2. "Ballistic Nylon" means a nylon fabric of high tensile properties designed to provide protection from lacerations.

2.3. "Butt" means the bottom of the felled part of a tree.

2.4. "Clearing Crew" (Land Clearing) means persons employed by the mine operator or independent contractor to clear and grub vegetation in preparation of, or during, mining operations.

2.5. "Chock" means a block, often wedge shaped, which is used to prevent movement.

2.6. "Competent Person" means a person designated by the mine operator or independent contractor who has a minimum of twelve (12) months experience in the clear cutting industry and is familiar with the normal hazards associated therein.

2.7. "Danger Tree" means a standing tree that presents a hazard to employees due to conditions such as, but not limited to, deterioration or physical damage to the root system, trunk, stem or limbs, and the direction and lean of the tree.

2.8. "Designated Person" means an employee who has the requisite knowledge, training and experience to perform specific duties.

2.9. "Director" means the director of the office of miners' health safety and training provided for in W. Va. Code 22A-1-3.

2.10. "Domino felling" means partial cutting of multiple trees which are left standing and then pushed over with a pusher tree.

2.11. "Employer" means the person or entity that directly employs the clearing crew. It may be an independent contractor or in some cases it may be the production operator.

2.12. "Fell" (fall) means to cut down trees.

2.13. "Feller" (faller) means an employee who fells trees.

2.14. "Grounded" means the placement of a component of a machine on the ground or on a device where it is firmly supported.

2.15. "Guarded" means covered, shielded, fenced, enclosed, or otherwise protected by means of suitable enclosures, covers, casings, shields, troughs, railings, screens, mats, or platforms, or by location, to prevent injury.

2.16. "Independent Contractor" means any firm, corporation, partnership or individual that contracts to perform services or construction at a coal mine.

2.17. "Limbing" means to cut branches off felled trees.

2.18. "Lodged Tree" (hung tree) means a tree leaning against another tree or object which prevents it from falling to the ground.

2.19. "Machine" means any vehicle (such as a car, bus, truck, trailer, or semi-trailer owned, leased or rented by the employer that is used for transportation of employees or movement of material), or any piece of stationary or mobile

equipment having a self-contained power plant that is operated off-road and used for the movement of material. Machines include, but are not limited to, tractors, skidders, front-end loaders, scrapers, graders, bulldozer and mechanical felling devices, such as tree shears and feller bunchers. Machines do not include airplanes or aircraft (e.g., helicopters).

2.20. "Production Operator" means any owner, lessee or other person who operates, controls or supervisors at a coal mine.

2.21. "Rated Capacity" means the maximum load a system, vehicle, machine, or piece of equipment was designed by the manufacturer to handle.

2.22. "Root Wad" means the ball of a tree root and dirt that is pulled from the ground when a tree is uprooted.

2.23. "Serviceable Condition" means a state or ability of a tool, machine, vehicle or other device to operate as it was intended by the manufacturer to operate.

2.24. "Slope" (grade) means the increase or decrease in altitude over a horizontal distance expressed as a percentage. For example, a change of altitude of 20 feet (6 m) over a horizontal distance of 100 feet (30 m) is expressed as a 20 percent slope.

2.25. "Snag" means any standing dead tree or portion thereof.

2.26. "Spring Pole" means a tree, segment of a tree, limb, or sapling, which is under stress, or tension due to the pressure or weight of another object.

2.27. "Tie Down" means chain, cable, steel strips or fiber webbing and binders attached to a truck, trailer or other conveyance as a means to secure loads and to prevent them from shifting or moving when they are being transported.

2.28. "Undercut" means a notch cut in a tree to guide the direction of the tree fall and to prevent splitting or kickback.

2.29. "Winching" means the winding of cable or rope onto a spool or drum.

§56-2-3. Personal Protective Equipment.

3.1. The employer shall assure that personal protective equipment, including any personal protective equipment provided by an employee, is maintained in a serviceable condition.

3.2. The employer shall assure that personal protective equipment, including any personal protective equipment provided by an employee, is inspected before initial use during each work shift. Defects or damage shall be repaired or the unserviceable personal protective equipment shall be replaced before work is commenced.

3.3. The employer shall provide, at no cost to the employee, and assure that each employee handling wire rope wears, hand protection which provides adequate protection from puncture wounds, cuts and lacerations.

3.4. The employer shall provide, at no cost to the employee, and assure that each employee who operates a chain saw wears leg protection constructed with cut-resistant material, such as ballistic nylon. The leg protection shall cover the full length of the thigh to the top of the boot on each leg to protect against contact with a moving chain saw. Exception: This requirement does not apply when an employee is working as a climber if the employer demonstrates to the director that a greater hazard is posed by wearing leg protection in the particular situation, or when an employee is working from a vehicular mounted elevating and rotating work platform.

3.5. The employer shall assure that each employee wears foot protection, such as heavy-duty logging boots that are waterproof or water repellent, cover and provide support to the ankle. The employer shall assure that each employee who operates a chain saw wears foot protection that is constructed with cut-resistant material, which will protect the employee against contact with a running chain saw. Sharp, calk-soled boots or other slip-resistant type boots may be worn where the employer demonstrates to the director that they are necessary for the employee's job, the terrain, the timber type, and the weather conditions, provided that foot protection otherwise required by West Virginia Surface Mine Rule 56CSR3.47 is met.

3.6. The employer shall provide, at no cost to the employee, and assure that each employee who works in an area where there is potential for head injury from falling or flying objects wears head protection as stated in West Virginia Surface Mine Rule 56CSR3.47.

3.7. The employer shall provide, at no cost to the employee, and assure that each employee wears the following:

(a) Eye protection where there is potential for eye injury due to falling or flying objects, face protection where there is potential for facial injury such as, but not limited to, operating a chipper.

(b) Logger-type mesh screens may be worn by employees performing chain-saw operations. The employee does not have to wear a separate eye protection device where face protection covering both the eyes and face is worn.

§56-2-4. Emergency Provisions.

4.1. Each worksite shall have one first-aid kit for every three (3) persons located at each worksite and equipped with items listed in Appendix A.

4.2. In accordance with West Virginia Surface Mine Rule 56 CSR 3.48.3, emergency arrangements shall be provided for the mine site.

4.3. Each worksite in accordance with the West Virginia Surface Mine Rule 56 CSR 3.48.4 shall be provided with emergency communications.

§56-2-5. Seat Belts.

5.1. Seat belts - For each vehicle or machine (equipped with rollover protective structure or falling object protective structure or overhead guards), including any vehicle or machine provided by an employee, the employer should assure:

- (a) That a seat belt is provided for each vehicle or machine operator;
- (b) That each employee uses the available seat belt while operating the vehicle or machine;
- (c) That each employee securely and tightly fastens the seat belt to restrain the employee within the vehicle or machine cab;
- (d) That each machine seat belt must meet the manufacturer's specifications.
- (e) That seat belts are not removed from any vehicle or machine. The employer shall replace each seat belt which has been removed from any vehicle or machine that was equipped with seat belts at the time of manufacture; and
- (f) That each seat belt is maintained in a serviceable condition.

§56-2-6. Environmental Conditions.

6.1 All work shall terminate and each employee shall move to a place of safety when environmental conditions, such as but not limited to, electrical storms, strong winds which may affect the fall of a tree, heavy rain or snow, extreme cold, dense fog, fires, mudslides, and darkness, create a hazard for the employee in the performance of the job.

§56-2-7. Work Areas.

7.1 (a) Employees shall be spaced and the duties of each employee shall be organized so the actions of one employee will not create a hazard for any other employee.

(b) Work areas shall be assigned so that trees cannot fall into an adjacent occupied work area. The distance between adjacent occupied work areas shall be at least two tree lengths of the trees being felled. The distance between adjacent occupied work areas shall reflect the degree of slope, the density of the growth, the height of the trees, the soil structure and other hazards reasonably anticipated at that work site. A distance of greater than two tree lengths shall be maintained between adjacent occupied work areas on any slope where rolling or sliding of trees is reasonably foreseeable.

(c) Each employee performing land clearing on mine property shall work in a position or location that is within visual or audible contact with another employee.

(d) The employer shall account for each employee at the end of each work shift.

§56-2-8. Signaling and Signal Equipment.

8.1 (a) Hand signals and audible contact, such as but not limited to, whistles, horns, or radios, shall be utilized whenever noise, distance, restricted visibility, or other factors prevent clear understanding of normal voice communications between employees.

(b) Engine noise, such as from a chain saw, is not an acceptable means of signaling.

(c) Only a designated person shall give signals, except in an emergency.

§56-2-9. Overhead Electric Lines.

9.1. Clearing operations near overhead electric lines shall be done in accordance with the requirements of the West Virginia Surface Mine Rule 56 CSR 3.37.

9.2. The employer shall notify the power company immediately if a felled tree makes contact with any power line. Each employee shall remain clear of the area until the power company advises that there are no electrical hazards.

§56-2-10. Flammable and Combustible Liquids.

10.1. (a) Flammable and combustible liquids shall be stored, handled, transported, and used in accordance with the requirements the West Virginia Surface Mine Rule 56 CSR 3.45.2 and 56 CSR 3.45.3.

(b) Flammable and combustible liquids shall not be transported in the driver compartment or in any passenger-occupied area of a machine or vehicle.

(c) Each machine, vehicle and portable powered tool shall be shut off during fueling. Diesel-powered machines and vehicles may be fueled while they are at idle, provided that continued operation is intended and that the employer follows safe fueling and operating procedures.

(d) Flammable and combustible liquids, including chain-saw and diesel fuel, may be used to start a fire, provided the employer assures that in the particular situation its use does not create a hazard for an employee.

§56-2-11. Explosives and Blasting Agents.

11.1. If at any time explosives and blasting agents are used in clearing operations they shall be secured and safely stored, handled, transported, and used in accordance with the requirements of the West Virginia Surface Mine Rule 56CSR3.32.3 and Department of Environmental Protection, Office of Explosives and Blasting Rule 199 CSR 1.

§56-2-12. Hand and Portable Powered Tools General Requirements.

12.1. The employer shall assure that each hand and portable powered tool, including any tool provided by an employee, is maintained in serviceable condition.

The employer shall assure that each tool, including any tool provided by an employee, is inspected before initial use during each work shift. At a minimum, the inspection shall include the following:

(a) Handles and guards to assure that they are sound, tight-fitting, properly shaped, free of splinters and sharp edges, and in place;

(b) Controls, to assure proper function;

(c) Chain-saw chains, to assure proper adjustment;

(d) Chain-saw mufflers, to assure that they are operational and in place;

(e) Chain brakes and nose shielding devices, to assure that they are in place and function properly;

(f) Heads of shock, impact-driven and driving tools, to assure that there is no mushrooming;

(g) Cutting edges, to assure that they are sharp and properly shaped; and

(h) All other safety devices, to assure that they are in place and function properly.

12.2. The employer shall assure that each tool is used only for purposes for which it has been designed.

12.3. When the head of any shock, impact-driven or driving tool begins to chip, it shall be repaired or removed from service.

12.4. The cutting edge of each tool shall be sharpened in accordance with manufacturer's specifications whenever it becomes dull during the work shift.

12.5. Each tool shall be stored in the provided location when not being used at a work site.

12.6. Racks, boxes, holsters or other means shall be provided, arranged and used for the transportation of tools so that a hazard is not created for any vehicle operator or passenger.

§56-2-13. Chain Saws.

13.1. (a) Each chain saw shall be equipped with an operable chain brake which shall meet the requirements of the manufacturer.

(b) Each gasoline-powered chain saw shall be equipped with a continuous pressure throttle control system, which will stop the chain when pressure on the throttle is released.

(c) The chain saw shall be operated and adjusted in accordance with the manufacturer's instructions.

(d) The chain saw shall be fueled at least 10 feet (3 m) from any open flame or other source of ignition.

(e) The chain saw shall be started at least 10 feet (3 m) from the fueling area.

(f) The chain saw shall be started on the ground or where otherwise firmly supported. Drop starting a chain saw is prohibited.

(g) The chain saw shall be started with the chain brake engaged.

(h) The chain saw shall be held with the thumbs and fingers of both hands encircling the handles during operation unless the employer demonstrates to the director that a greater hazard is posed by keeping both hands on the chain saw in that particular situation.

(i) The chain-saw operator shall be certain of footing before starting to cut. The chain saw shall not be used in a position or at a distance that could cause the operator to become off-balance, to have insecure footing, or to relinquish a firm grip on the saw.

(j) Prior to felling any tree, the chain-saw operator shall clear away brush or other potential obstacles, which might interfere with cutting the tree or using the retreat path.

(k) The chain saw shall not be used to cut directly overhead.

(l) The chain saw shall be carried in a manner that will prevent operator contact with the cutting chain and muffler.

(m) The chain saw shall be shut off or the throttle released before the feller starts his retreat.

(n) The chain saw shall be shut down or the chain brake shall be engaged whenever a saw is carried further than 50 feet (15.2 m). The chain saw shall be shut down or the chain brake shall be engaged when a saw is carried less than 50 feet if conditions such as, but not limited to, the terrain, underbrush and slippery surfaces, may create a hazard for an employee.

§56-2-14. Machines, Vehicles, and Mobile Equipment.

14.1. General Requirements. (a) The employer shall assure that each machine including any machine provided by an employee is maintained in serviceable condition.

(b) The employer shall assure that each machine including any machine provided by an employee is inspected before initial use during each work shift. Defects or damage shall be repaired on the unserviceable machine or shall be replaced before work is commenced.

(c) The employer shall assure that operating and maintenance instructions are available for each machine in the area where the equipment is being operated. Each machine operator and maintenance employee shall comply with the operating and maintenance instructions.

14.2. Machine Operation. (a) The machine shall be started and operated only by a designated person.

(b) The rated capacity of any machine shall not be exceeded.

(c) To maintain stability, the machine must be operated within the limitations imposed by the manufacturer as described in the operating and maintenance instructions for that machine on any slope which is greater than the maximum slope recommended by the manufacturer.

(d) Before starting or moving any machine, the operator shall determine that no employee is in the path of the machine.

(e) The machine shall be operated only from the operator's station or as otherwise recommended by the manufacturer.

(f) The machine shall be operated at such a distance from employees and other machines such that operation will not create a hazard for an employee.

(g) No employee other than the operator shall ride on any mobile machine unless seating, seat belts and other protection equivalent to that provided for the operator are provided.

(h) No employee shall ride on any load.

(i) Before the operator leaves the operator's station of a machine, it shall be secured as follows:

(1) The parking brake or brake locks shall be applied.

(2) The transmission shall be placed in the manufacturer's specified park position; and

(3) Each moving element such as, but not limited to blades, buckets, saws, and shears shall be lowered to the ground or otherwise secured.

(j) If a hydraulic or pneumatic storage device can move the moving elements such as, but not limited to, blades, buckets, saws and shears, after the machine is shut down, the pressure or stored energy from the element shall be discharged as specified by the manufacturer.

(k) The rated capacity of any vehicle transporting a machine shall not be exceeded.

(l) The machine shall be loaded, secured, and unloaded so that it will not create a hazard for any employee.

(m) For safe operation of equipment on slopes the operator shall follow the manufacturer's specifications and limitations of the mobile equipment, wire ropes, and all attachments.

(1) The machine being used to assist a dozer, or other machines working on slopes shall be of proper size and strength to provide adequate anchorage. The machine providing anchorage shall be positioned to provide maximum stability.

(2) The winch line assembly shall be of proper size and strength, and properly maintained to provide safety for all machines.

(a) Winch cables used by machines working on slopes shall be of proper size according to manufacturer's specifications.

(b) Winch cables shall be secured to the winch assembly drum according to the manufacturer's specifications.

(c) A minimum of three (3) wraps of winch cable shall remain on the drum at all times.

(d) The live-end connection device used to secure the two machines together shall be of a design that minimizes the possibility of accidental disconnection. The connection device shall be of the proper strength for the duties performed and maintained in safe condition according to manufacturer's specifications.

(e) All winch cables shall be securely fastened to the live-end connection device by the proper number of wire-rope clamps, or properly wedged according to the manufacturer's specifications.

(f) All components of the winch line assembly shall be inspected by the machine operator periodically during daily operations.

(3) Constant communications either audible or visual shall be maintained between machine operators while working on slopes.

14.3. Protective Structures. (a) Each tractor, skidder and mechanical felling device, such as tree shears or feller-buncher, placed into initial service after February 9, 1995, shall be equipped with falling object protective structure or rollover protective structure. The employer shall replace falling object protective structure or rollover protective structure, which have been removed from any machine. Exception: This requirement does not apply to machines, which are capable of 360-degree rotation. Rollover protective structure shall be tested, installed, and maintained in serviceable condition.

(b) Each machine shall have rollover protective structure or falling object protective structure tested, installed, and maintained in accordance with manufacturer's specifications.

(c) Each protective structure shall be of a size that does not impede the operator's normal movements.

(d) The overhead covering of each cab shall be of solid material and shall extend over the entire canopy.

(e) Each machine manufactured after August 1, 1996, shall have a cab that is fully enclosed with mesh material with openings no greater than 2 inches (5.08 cm) at its least dimension. The cab may be enclosed with other material(s) where the employer demonstrates to the director such material(s) provides equivalent protection and visibility. Exception: Equivalent visibility is not required for the lower portion of the cab where there are control panels or similar obstructions in the cab, or where visibility is not necessary for safe operation of the machine.

(f) Each machine manufactured on or before August 1, 1996, shall have a cab, which meets the requirements specified in the above paragraph or a protective canopy for the operator which meets the following requirements:

(1) The protective canopy shall be constructed to protect the operator from injury due to falling trees, limbs, saplings or branches which might enter the compartment side areas and from snapping winch lines or other objects.

(2) The lower portion of the cab shall be fully enclosed with solid material, except at entrances, to prevent the operator from being injured from obstacles entering the cab.

(3) The upper rear portion of the cab shall be fully enclosed with open mesh material with openings of such size as to reject the entrance of an object larger than 2 inches in diameter. It shall provide maximum rearward visibility; and

(4) Open mesh shall be extended forward as far as possible from the rear corners of the cab sides so as to give the maximum protection against obstacles, branches, etc., entering the cab area.

(5) The enclosure of the upper portion of each cab shall allow maximum visibility.

(6) When transparent material is used to enclose the upper portion of the cab, it shall be made of safety glass or other material that the employer demonstrates to the director provides equivalent protection and visibility.

(7) Transparent material shall be kept clean to assure operator visibility.

(8) Transparent material that may create a hazard for the operator, such as but not limited to, cracked, broken or scratched safety glass shall be replaced.

(9) Deflectors shall be installed in front of each cab to deflect whipping saplings and branches. Deflectors shall be located so as not to impede visibility and access to the cab.

(10) The height of each cab entrance shall be at least 52 inches (1.3 meters) from the floor of the cab.

(g) Each forklift shall be equipped with an overhead guard and maintained in accordance with the manufacturer's specifications.

14.5. Machine Access. (a) Machine access systems shall be installed and maintained in accordance with the manufacturer's specifications. Access systems shall be provided for each machine where the operator or any other employee must climb onto the machine to enter the cab or to perform maintenance.

(b) Each machine cab shall have a second means of egress. (This requirement does not pertain to skid steer loaders.)

(c) Walking and working surfaces of each machine and machine workstation shall have a slip resistant surface to assure safe footing.

(d) The walking and working surface of each machine shall be kept free of waste, debris and any other material, which might result in fire, slipping, or falling.

14.6. Exhaust Systems. (a) The exhaust pipes on each machine shall be located so exhaust gases are directed away from the operator. The exhaust pipes on each machine shall be mounted or guarded to protect each employee from accidental contact.

(b) The exhaust pipes shall be equipped with spark arresters. (Engines equipped with turbochargers do not require spark arresters).

(c) Each machine muffler provided by the manufacturer, or their equivalent, shall be in place at all times the machine is in operation.

14.7. Brakes. (a) Service brakes shall be sufficient to stop and hold each machine and its rated load capacity on the slopes over which it is being operated.

(b) Each machine placed into initial service on or after September 8, 1995 shall also be equipped with: back-up or secondary brakes that are capable of stopping the machine regardless of the direction of travel or whether the engine is running; and parking brakes that are capable of continuously holding a stopped machine stationary.

14.8 Guarding. (a) Each machine shall be equipped with guarding to protect employees from exposed moving elements, such as but not limited to, shafts, pulleys, belts on conveyors, and gears.

(b) Each machine used for limbing and chipping shall be equipped with guarding to protect employees from flying wood chunks, chips, bark, limbs and other material.

(c) The guarding on each machine shall be in place at all times the machine is in operation.

14.9. (a) The employer shall assure that each machine used to perform any clearing operation is maintained in safe condition.

(b) The employer shall assure that each machine used to perform any clearing operation is inspected before initial use during each work shift. Defects shall be recorded on a form approved by the director and shall be signed by the person performing the examination. Imminent danger equipment defects shall be corrected before the equipment is put into operation.

(c) The employer shall assure that operating and maintenance instructions are available in each machine. Each machine operator and maintenance employee shall comply with the operating and maintenance instructions.

(d) Mounting steps and handholds shall be provided for each machine wherever it is necessary to prevent an employee from being injured when entering or leaving the machine.

(e) The seats of each machine shall be securely fastened.

§56-2-15. Tree Felling.

15.1. General requirements. (a) Trees shall not be felled in a manner that may create a hazard for an employee, such as but not limited to, striking a rope, cable, power line, or machine.

(b) The immediate supervisor shall be consulted when unfamiliar or unusually hazardous conditions necessitate the supervisor's approval before cutting is commenced.

(c) While manual felling is in progress, no machine shall be operated within two tree lengths of trees being manually felled. Exception: This provision does not apply to machines performing tree-pulling operations.

(d) No employee shall approach a feller closer than two tree lengths of trees being felled until the feller has acknowledged that it is safe to do so, unless the employer demonstrates to the director that a team of employees is necessary to manually fell a particular tree.

(e) No employee shall approach a mechanical felling operation closer than two tree lengths of the trees being felled until the machine operator has acknowledged that it is safe to do so.

(f) Each danger tree shall be felled, removed or avoided. Each danger tree, including lodged trees and snags, shall be felled or removed using mechanical or other techniques that minimize employee exposure before work is commenced in the area of the danger tree. If the danger tree is not felled or removed, it shall be marked and no work shall be conducted within two tree lengths of the danger tree unless the employer demonstrates to the director that a shorter distance will not create a hazard for an employee.

(g) Each danger tree shall be carefully checked for signs of loose bark, broken branches and limbs or other damage before they are felled or removed. Accessible loose bark and other damage that may create a hazard for an employee shall be removed or held in place before felling or removing the tree.

(h) Felling on any slope where rolling or sliding of trees or is reasonably foreseeable shall be done uphill from, or on the same level as, previously felled trees.

(i) Domino felling of trees is prohibited. (The definition of domino felling does not include the felling of a single danger tree by felling another single tree into it).

§56-2-16. Manual Tree Felling.

16.1. (a) Before felling is started, the feller shall plan and clear a retreat path. The retreat path shall extend diagonally away from the expected felling line unless the employer demonstrates to the director that such a retreat path poses a greater hazard than an alternate path. Once the back cut has been made the feller shall immediately move a safe distance away from the tree on the retreat path. Before each tree is felled, conditions such as, but not limited to, snow and ice accumulation, the wind, the lean of tree, dead limbs, and the location of other trees, shall be evaluated by the feller and precautions taken so a hazard is not created for an employee.

(b) Each tree shall be checked for accumulations of snow and ice. Accumulations of snow and ice that may create a hazard for an employee shall be removed before felling is commenced in the area or the area shall be avoided.

(c) When a spring pole or other tree under stress is cut, no employee other than the feller shall be closer than two trees lengths when the stress is released.

(d) An undercut shall be made in each tree being felled unless the employer demonstrates to the director that felling the particular tree without an undercut will not create a hazard for an employee. The undercut shall be of a size so the tree will not split and will fall in the intended direction.

(e) A backcut shall be made in each tree being felled. The backcut shall leave sufficient hinge wood to hold the tree to the stump during most of its fall so that the hinge is able to guide the tree's fall in the intended direction. The backcut shall not penetrate into the predetermined hinge area.

(f) The backcut shall be above the level of the horizontal facecut in order to provide an adequate platform to prevent kickback.

(g) Notches shall be used on all trees and trunks over five inches or (12.5cm) in diameter at breast height.

§56-2-17. Limbing and Bucking.

17.1. (a) Limbing and bucking on any slope where rolling or sliding of trees or is reasonably foreseeable shall be done on the uphill side of each tree.

(b) Before bucking or limbing wind-thrown trees, precautions shall be taken to prevent the root wad, butt, or trees from striking an employee. These precautions include, but are not limited to, chocking or moving the tree to a stable position.

§56-2-18. Chipping (in-woods locations).

18.1. (a) Chipper access covers or doors shall not be opened until the drum or disc is at a complete stop.

(b) Infeed and discharge ports shall be guarded to prevent contact with the disc, knives, or blower blades.

(c) The chipper shall be shut down, locked and tagged out when an employee performs any servicing or maintenance.

(d) Detached trailer chippers shall be chocked during usage on any slope where rolling or sliding of the chipper is reasonably foreseeable.

§56-2-19. Pre-shift and On-shift Examination.

19.1. (a) Prior to the beginning of any shift a designated competent person shall visit and carefully examine all work areas for dangerous conditions. Upon completion of the examination, the competent person shall record the results in a book prescribed by the director, before persons enter the work area. This book shall be kept at the work area and made available for inspection by an authorized representative of the director.

(b) The designated competent person shall examine all work areas under his supervision for hazards at least once every four (4) hours during each working shift, or more often if necessary for safety. The competent person shall record the results of the on shift examination in a book prescribed by the director.

(c) Should the competent person find a place to be in a dangerous condition, they shall not leave the place until it has been made safe, or shall remove the persons working therein until the place is made safe.

(d) The competent person shall also record any dangerous conditions and practices found during the examination in a book provided for that purpose.

§56-2-20. Safety Meetings.

20.1. The employer shall have weekly safety meetings with all employees which shall provide training in the working practices and conditions at the work area and rules applicable thereto.

§56-2-21. Training.

21.1. (a) The employer shall provide training for each employee, including supervisors, at no cost to the employee.

(b) As soon as possible but not later than ninety (90) days from the effective date of this rule all employees shall receive a minimum of sixteen (16) hours of training. This training shall consist of:

(1) Eight (8) hours of task specific safety (clear cutting).

(2) Eight (8) hours of first aid, CPR, and emergency procedures.

21.2. Before any new employee begins work they shall receive the 16-hours of training described in Section 21.1.

21.3 The employer shall provide annual continuing training of at least eight hours covering the subjects listed in

APPENDIX A First Aid Requirements

The contents of the first-aid kit listed should be adequate for small work sites, consisting of approximately two to three employees. When larger operations or multiple operations are being conducted at the same location, additional first-aid kits should be provided at the work site or additional quantities of supplies should be included in the first-aid kits:

- Gauze pads (at least 4 x 4 inches)
- Two large gauze pads (at least 8 x 10 inches)
- Box adhesive bandages (band-aids)
- One package gauze roller bandage at least 2 inches wide
- Two triangular bandages
- Wound cleaning agent such as sealed moistened towelettes
- Scissors
- At least one blanket
- Tweezers
- Adhesive tape
- Latex gloves
- Resuscitation equipment such as resuscitation bag, airway, or pocket mask
- Two elastic wraps
- Splint
- Directions for requesting emergency assistance

subdivision 21.1(b) for each employee, including supervisors, at no cost to the employee.

TITLE 56 SERIES 3

SAFETY OF THOSE EMPLOYED IN AND AROUND SURFACE MINES

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

References to travel and reimbursement shall be in accordance with current State travel regulations

§56-3-1. General.

1.1 Scope. These rules govern safety of employees in and around mines.

1.2 Authority. W. Va. Code 22-6-4

1.3 Filing Date. March 28, 1991

1.4 Effective Date. April 29, 1991

1.5 Applicability. These regulations shall extend to all surface mining operations. These regulations shall not apply to any utility or railroad having facilities in the vicinity of surface mining operations unless such utility or railroad is also the operators of such surface mining operations.

1.6. Other law applicable. -- All provisions of the mining law of this state, specifically Chapter 22, Article 2 of the Code, are applicable to surface mining, except to the extent that these regulations cover the specific requirement, and except to the extent that the context of a specific provision would render its applicability totally inappropriate to surface mining.

§56-3-2. Effect of Law and Regulations.

2.1. These regulations shall have the effect of law and violations shall be deemed a violation of law and so cited with the same effect as law. All provisions of Article 1, Chapter 22 of the West Virginia Code relative to enforcement are applicable to the enforcement of these regulations.

§56-3-3. Definitions.

3.1. "Surface Mine" shall mean all areas surface mined or being surface mined as well as adjacent areas ancillary to the operations, together with preparation and processing plants; storage areas and haulageways, roads, shops and trails; which are covered by the provisions of Chapter 20, Article 6 of the Code and coal prospecting subject to Section 8, Article 6, Chapter 20 of the Code. "Surface Mine" for the purpose of these regulations shall not mean the surface operations connected with an underground coal mine.

3.2. Department. The term "Department" shall mean the state department of energy provided for in Section 2 of Chapter 22 of the West Virginia Code.

3.3. Director of the Department of Energy. The term "Director of the Department of Energy" shall mean the Director of the department of energy provided for in Chapter 22, Article 1, Section 3, of the West Virginia Code, and is synonymous with the term "Chief of the Department of Energy".

3.4. The term "Inspector" shall mean surface mine inspector employed by the Department of Energy.

3.5. Mine Inspectors' Examining Board. The term "Mine Inspectors' Examining Board" shall mean the mine inspectors' examining board provided for in Section 12 of Chapter 22 of the West Virginia Code.

3.6. Board of Appeals. The term "Board of Appeals" shall mean as provided for in Section 31 of Chapter 22 of the West Virginia Code.

3.7. Agent. The term "Agent" means any person charged with the responsibility for the operations of all or a part of a surface mine or the supervision of the miners on a surface mine.

3.8. Operator. The term "Operator" shall mean any firm, corporation, partnership or individual operating any surface coal mine or part thereof, or engaged in the construction of any facility associated with a coal mine.

3.9. Miner. The term "Miner" shall mean any individual working on or around a surface mine who is employed by the operator.

3.10. Person. The term "Person" shall mean any individual partnership, association, corporation, firm, subsidiary of a corporation or other organization.

3.11. Superintendent. The term "Superintendent" shall mean the person who shall have, on behalf of the operator, immediate supervision of one (1) or more mines.

3.12. Mine Foreman. The term "Mine Foreman" shall mean the certified person whom the operator or superintendent shall place in charge of the workings of the surface mine and of the persons employed thereon.

3.13. Assistant Mine Foreman. The term "Assistant Mine Foreman" shall mean a certified person designated to assist the mine foreman in the supervision of a portion or the whole of a mine or of the persons employed therein.

3.14. Supervisor. The term "Supervisor" shall mean a superintendent, mine foreman, assistant mine foreman, or any person specifically designated by the superintendent or mine foreman to supervise work of employees and who is acting pursuant to such specific designation and instructions.

3.15. Interested Persons. The term "Interested Persons" shall include the operator, members of any mine safety committee at the mine affected and other duly authorized representative of the mine workers and Department of Energy.

3.16. Certified Electrician. The term "Certified Electrician" shall mean any person who is qualified as a mine electrician and who has passed an examination given by the Department of Energy, or has at least three (3) years of experience in performing electrical work underground in a coal mine, in the surface work area of an underground coal mine, in a surface coal mine, in a non-coal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and has satisfactorily completed a coal mine electrical training program approved by the Department of Energy.

3.17. Certified Person. The term "Certified Person" when used to designate the kind of person to whom the performance of a duty in connection with the operation of a mine shall be assigned, shall mean a person who is qualified under the provisions of this law to perform such duty.

3.18. Accident. The term "Accident" shall mean any premature ignition, fire or injury, or death other than natural causes of any person.

3.19. Imminent Danger. The term "Imminent Danger" means the existence of any condition or practice on a surface mine which could be expected to cause death or serious physical harm before such condition or practice can be abated.

3.20. Qualified Person. The term "Qualified Person" shall mean a person who has completed an examination and is considered qualified on record by the Department of Energy.

3.21. Approved. The term "Approved" shall mean in strict compliance with mining law, or, in the absence of law, accepted by a recognized body or organization whose approval is generally recognized as authoritative on the subject.

3.22. Berm. Means a pile or mound of material or equivalent capable of restraining a vehicle.

3.23. Work of Preparing the Coal. -- The term "Work of Preparing Coal" shall mean the breaking, crushing, sizing, cleaning, washing, drying, mixing, storing, loading, and removing of over-burden from the top of the coal for the purpose of extracting coal.

3.24. Active Underground Mine Working. The term "Active Underground Mine Working" shall mean all places in a mine that are ventilated and inspected regularly.

3.25. Abandoned Underground Mine Workings. The term "Abandoned Underground Mine Workings" shall mean excavation, either caved or sealed, that is deserted and in which further mining is not intended, or open workings which are ventilated and not inspected regularly.

3.26. Working Place. The term "Working Place" shall mean all areas in or about a surface mine where persons are working.

3.27. Detonator. The term "Detonator" shall mean blasting caps, electrical blasting caps, and non-electric delay blasting caps.

3.28. Non-electric delay blasting caps. The term "Non-electric Delay Blasting Caps" shall mean a blasting cap with an intergral delay element in conjunction with and capable of being detonated by a detonation impulse or signal from a miniaturized detonating cord.

3.29. Primer. The term "Primer" shall mean a cartridge or container of explosives into which a detonator or detonating cord is inserted or attached, and whose purpose is to initiate the main explosive charge.

3.30. Detonating cord. The term "Detonating Cord" shall mean a flexible cord containing a center core of high explosives to detonate other explosives with which it comes in contact.

3.31. Cast primer or booster. The term "Cast Primer or Booster" shall mean a case or pressed block or solid high explosives (i.e., not nitroglycerin sensitized) which is normally used to detonate insensitive or non-capsensitive explosives.

3.32. Safety fuse. The term "Safety Fuse" shall mean a flexible cord containing an internal burning medium by which fire or flame is conveyed at a continuous and uniform rate from the point of ignition to the point of use, usually a blasting cap.

3.33. Detonating cord millisecond delay connectors. The term "Detonating Cord Millisecond Delay Connectors" shall mean non-electric shot interval (millisecond) delay devices for use in delaying blasts which are surface initiated by detonating cord.

3.34. Blasting agent. Means any material consisting of a mixture of a fuel and oxidizer which:
(a) is used or intended for use in blasting;
(b) is not classified as an explosive by the Department of Transportation;
(c) passes all United States DOT tests defining blasting agent, including insensitivity to a No. 8 blasting cap in accordance with CFR49, 173.114a.

3.35. Blasting area. Shall mean the area near blasting operations in which concussion or flying material can reasonably be expected to cause injury.

3.36 Explosives. The term "Explosives" shall mean any or all of the following, but is not limited to: water gel slurries, dynamites, permissibles, pellet powder, blasting caps, electric blasting caps, non-electrical delay blasting caps, cast primer and boosters, detonating cord, and detonating cord delay connections.

3.37. Electric blasting caps. The term "Electric Blasting Caps" shall mean instantaneous electric blasting caps and all types of delay electric blasting caps.

3.38. Armored cable. The term "Armored Cable" shall mean a cable provided with a wrapping of metal, usually steel wires or tapes, primarily for the purpose of mechanical protection.

3.39. Branch circuit. The term "Branch Circuit" shall mean any circuit, alternating current or direct current, connected to and leading from the main power lines.

3.40. Cable. The term "Cable" shall mean a standard conductor (single conductor cable) or a combination of conductors insulated from one another (multiple conductor cable).

3.41. Circuit breaker. The term "Circuit Breaker" shall mean a device for interrupting a circuit between separable contacts under normal or abnormal conditions.

3.42. Delta connected. The term "Delta Connected" shall mean a power system in which the windings or transformers or S.C. generators are connected to form a triangular phase relationship, and with phase conductors connected to each point of the triangle.

3.43. Effectively grounded. The term "Effectively Grounded" is an expression which means grounded through a grounding connection of sufficiently low impedance (inherent or intentionally added or both) so that fault grounds which may occur cannot build up voltages in excess of limits established for apparatus, circuits or systems so grounded.

3.44. Flame-resistant Cable, Portable. The term "Flame-resistant Cable, Portable" shall mean a portable flame-resistant cable that has passed the flame test of the Federal Bureau of Mines.

3.45. Ground or grounding conductor (mining). The term "ground or Grounding Conductor (mining)", also referred to as a safety ground conductor, safety ground, and frame ground, shall mean a metallic conductor used to connect the metal frame, or enclosure or any equipment, device or wiring system with a mine track or other effective grounding medium.

3.46. Grounded (earthed). The term "grounded (earthed)" shall mean that the system, circuit, or apparatus referred to is provided with a ground.

3.47. High voltage. The term "High Voltage" shall mean voltages of more than one thousand (1,000) volts.

3.48. Lightning Arrester. The term "lightning arrester" shall mean a protective device for limiting surge voltage on equipment by discharging or by passing surge current, it prevents continued flow or follow current to ground and is capable of repeating these functions as specified.

3.49. Low voltage. The term "low voltage" shall mean up to and including six hundred sixty (660) volts.

3.50. Medium voltage. The term "medium voltage" shall mean voltages from six hundred sixty-one (661) to one thousand (1,000) volts.

3.51. Mine Power Center or Distribution Center. The term "mine power center or distribution center" shall mean a combined transformer or distribution unit, complete within a metal enclosure from which one (1) or more low-voltage power circuits are taken.

3.52. Neutral (derived). The term "neutral (derived)" shall mean a neutral point or connection established by the addition of a "zigzag" or grounding transformer to a normally underground power system.

3.53. Neutral Point. The term "neutral point" shall mean the connection point of transformer or generator windings from which the voltage to ground is nominally zero (0), and is the point generally used for system groundings in wye-connected A.C. power system.

3.54. Portable (Trailing) Cable. The term "portable (trailing) cable" shall mean a flexible cable or cord used for connecting mobile, portable or stationary equipment in mines to a trolley system or other external source of electric energy where permanent mine wiring is prohibited or is impracticable.

3.55. Wye-Connected. The term "wye-connected" shall mean a power system connection in which one (1) end of each phase windings or transformers or A.C. generators are connected together to form a neutral point, and a neutral conductor may or may not be connected to the neutral point, and the neutral point may or may not be grounded.

3.56. ZigZag Transformer (Grounding Transformer). The term "zigzag transformer (grounding transformer)" shall mean a transformer intended primarily to provide a neutral point for grounding purposes.

3.57. Brake systems:

(a) Service brake system. The primary brake system used for stopping a vehicle.

(b) Emergency stopping system. The system used for stopping a vehicle in the event of any single failure in the service brake system.

(c) Parking system. A system to hold a stopped vehicle in a stationary position.

3.58. "Barricaded" means to obstruct passage of person, vehicles, or flying materials.

§56-3-4. Applicability and Enforcement of Laws Safeguarding Life and Property; Regulations; Authority of Department of Energy Regarding Safety Laws.

4.1. All provisions of the mining laws of this state intended to safeguard life and property shall extend to all surface mining operations insofar as such laws are applicable thereto. The director of the Department of Energy shall promulgate reasonable regulations in accordance with the provisions of Chapter 29A of this code to protect the safety of those employed in and around surface mines. The enforcement of all laws and regulations relating to the safety of those employed in and around surface mines is hereby vested in the Department of Energy and shall be enforced according to the provisions of Chapter 22 of the West Virginia Code.

§56-3-5. Director of the Department of Energy - Appointment; Term of Office.

5.1. There shall be a Director of the Department of Energy, who shall be appointed by the Governor with the advice and consent of the Senate and who shall serve for a term of four (4) years, subject to the provisions of Chapter 6, Article 6, Section 4(6-6-4) of the West Virginia Code, as amended. The original term of the director of the Department of Energy appointed under Chapter 22 of the West Virginia Code shall commence as of the effective date of this article (July 1, 1971), and all appointments to such office made thereafter shall be made for a full term of four (4) years, except that in case of a vacancy, the appointment shall be made for the unexpired term only.

§56-3-6. Director of the Department of Energy - Powers and Duties.

The director of the Department of Energy shall have full charge of the department. He shall have the power and duty to:

6.1. Supervise and direct the execution and enforcement of the provisions of Chapter 20 and 22 of the West Virginia Code.

6.2. Appoint a deputy director of the Department of Energy, fix his compensation and prescribe his powers and duties.

6.3. Employ such assistants, clerks, stenographers and other employees as may be necessary to fully and effectively carry out the provisions of this law and fix their compensation, except as otherwise provided in Article 1, Chapter 22 of the West Virginia Code.

6.4. Employ mine inspectors, and assign them to divisions or districts in accordance with the provisions of Chapter 22, Article 1, Section 7 of the West Virginia Code as may be necessary to fully and effectively carry out the provisions of this law, including the hiring and training of inspectors for the specialized requirements of surface mining, shaft and slope sinking, and surface installations and to supervise and direct such mine inspectors in the performance of their duties.

6.5. Suspend, for good cause, any mine inspector without compensation for a period not exceeding thirty (30) days in any calendar year.

6.6. Prepare report forms to be used by mine inspectors in making their findings, orders and notices, upon inspections made in accordance with Chapter 22 of the West Virginia Code.

6.7. Hear and determine applications made by mine operators for the annulment or revision of orders made by mine inspectors, and to make inspections of mines, in accordance with the provisions of Article 1, Chapter 22 of the West Virginia Code.

6.8. Cause a properly indexed permanent and public record to be kept of all inspections made by himself or by mine inspectors.

6.9. Make annually a full and complete written report of the administration of his department to the Governor and the Legislature of the state for the year ending the thirteenth day of June. Such report shall include the number of visits and inspections of mines in the state by mine inspectors, the quantity of coal, coke and other minerals (including oil and gas) produced in the state, the number of men employed, number of mines in operation, statistics with regard to health and safety of persons working in the mines including the causes of injuries and deaths, improvements made, prosecutions, the total funds of the department from all sources identifying each source of such funds, the expenditures of the department, the surplus or deficit of the department at the beginning and end of the year, the amount of fines collected, the amount of fines imposed, the value of fines pending, the number and type of violations found, the amount of fines imposed, levied and turned over for collection, the total amount of fines levied but not paid during the prior year, the titles and salaries of all inspectors and other officials of the department, the number of inspections made by each inspector, the number and type of violations found by each inspector: Provided, That no inspector shall be identified by name in this report. Such reports shall be filed with the Governor and the Legislature on or before the thirty-first day of

December of the same year for which it was made, and shall upon proper authority be printed and distributed to interested persons.

6.10. Call or subpoena witnesses, for the purpose of conducting hearings into mine fires, mine explosions or any mine accident; to administer oaths and to require production of any books, papers, records, or other documents relevant or material to the hearing. Any witness so called or subpoenaed shall receive forty dollars (\$40) per diem and shall receive mileage at the rate of fifteen cents (15) for each mile actually traveled, which shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such witness.

6.11. Institute civil actions for relief, including permanent or temporary injunctions, restraining orders, or any other appropriate action in the appropriate federal or state court whenever any operator or his agent violates or fails or refuses to comply with any lawful order, notice or decision issued by the director or his representative.

6.12. Perform all other duties which are expressly imposed upon him by the provisions of Chapter 22 of the West Virginia Code.

6.13. Make all records of the department open for inspections of interested persons and the public.

6.14. In conjunction with the director of the Department of Natural Resources, adopt programs, regulations and procedures designed to assist the small coal operator with obtaining permits and meeting the environmental protection performance standards for strip and underground coal mining operations with the State. For the purpose of this subdivision, a small coal operator is one who anticipated to mine less than two hundred thousand (200,000) tons per year, but the department in determining tonnage shall consider wholly owned subsidiaries to be the same operation as the parent corporation.

§56-3-7. Director of the Department of Energy; Eligibility; Salary.

NOTE: *Please refer to §22A-1-3 to review Director qualifications (eff. 2/2006)*

7.1. The director of the Department of Energy shall be a male citizen of West Virginia, shall be competent person of good repute and temperate habits and shall have had at least fifteen (15) years experience underground in coal mines, at least ten (10) of which shall have been underground in mines in this state. He shall possess a practical knowledge of the different systems of working, ventilating and draining of coal mines, and a practical and scientific knowledge of all noxious and dangerous gases found in such mines. A diploma in mining engineering from the West Virginia University school of mines or any similarly accredited engineering school shall be counted as two (2) years working experience. The director shall devote all of his time to the duties of his office and shall not be directly or indirectly interested financially in any mine in this state. The salary of the director of the Department of Energy shall be twenty five thousand dollars (\$25,000) per year and traveling expenses, which shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by the director of the Department of Energy.

§56-3-8. Director of the Department of Energy; Oath and Bond.

8.1. The director of the Department of Energy shall, before entering upon the discharge of his duties, take the oath of office prescribed by Section 5, Article 4 of the constitution, and shall execute a bond in the penalty of two thousand dollars (\$2,000), which security to be approved by the Governor, conditioned upon the faithful discharge of his duties, a certificate of which oath and which bond shall be filed in the office of the secretary of state.

§56-3-9. Mine Inspectors May Be Appointed to Fill Vacancy in Department; Permanent Tenure Benefits not Affected.

9.1. Notwithstanding any other provisions of law, if vacancy occurs in any appointive position within the Department of Energy, any mine inspector having permanent tenure, if qualified, may be appointed to such appointive position without forfeiting any of the benefits which have accrued to him because of his permanent tenure as a mine inspector.

§56-3-10. Eligibility for Appointment as Surface Mine Inspector; Qualifications; Salary and Expenses; Removal.

NOTE: *Please refer to §22A-1-13 for eligibility and salary requirements for surface mine inspectors (eff. 6/10/2006)*

Additionally, please refer to ADDENDUM 1 – effective 7/1/2007

10.1. In order to qualify for an appointment as a surface mine inspector, an eligible applicant shall have had at least five (5) years practical experience in surface mines, at least one (1) year of which, immediately preceding his original appointment, shall have been in surface mines in this state, and submit to a written and oral examination given by the mine inspectors' examining board. The examination shall relate to the duties to be performed by a surface mine inspector and may, subject to the approval of the mine inspectors' examining board, be prepared by the director of the West Virginia Department of Energy.

If the board finds after investigation and examination that the applicant (1) is eligible for appointment, and (2) has passed all oral and written examinations with a grade of at least eighty percent (80%), the board shall add such applicant's name and grade to register of qualified eligible candidates and certify its action to the director of the Department of Energy. The director may then appoint one (1) of the candidates from the three (3) having the highest grades.

All such appointees shall be citizens of West Virginia, in good health, not less than twenty-five (25) years of age, of good character and reputation, and temperate in habits. No person shall be eligible for permanent appointment as a surface mine inspector until he has served in a probationary status for a period of one (1) year to the satisfaction of the director of the department of energy.

Surface mine inspectors serving as such on the effective date of this section (July 1, 1977) may continue to serve for a probationary period not exceeding one (1) year and if eligible as prescribed by this section, may qualify for appointment during such probationary period in accordance with the provisions of this section.

However, surface mine inspectors employed on the effective date of this section (July 1, 1977) and who have served to the satisfaction of the Director of the Department of Energy for a period of two (2) years or more may continue to serve on a permanent tenure basis. In the performance of duties devolving upon surface mine inspectors, they shall be responsible to the inspector-at-large of the Department of Energy of their respective division.

The salary of the surface mine inspector supervisor shall be not less than seventeen thousand dollars (\$17,000) per year. Salaries of surface mine inspectors shall be not less than twelve thousand nine hundred dollars (\$12,900) per year during the first year of probationary service. After serving for a probationary period of one (1) year, the salary of a surface mine inspector shall be not less than fifteen thousand dollars (\$15,000) per year. In the discharge of their official duties in privately owned vehicles, surface mine inspectors and the surface mine inspector supervisor shall receive mileage at the rate of not less than fifteen cents (15) per mile. A surface mine inspector, after having received a permanent appointment, shall be removed from office only for physical or mental impairment, incompetency, neglect of duty, drunkenness, malfeasance in office, or other good cause.

§56-3-11. Mine Inspectors' Examining Board.

11.1. There shall be a mine inspectors' examining board consisting of five (5) members who, except for the public representative of such board, shall be appointed by the Governor, by and with the advice and consent of the Senate. Members so appointed may be removed only for the same caused and in like manner as elective state officers. One of the members of the board shall be a representative of the public, who shall be the director of the school of mines at West Virginia University. Two (2) members of the board shall be persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of coal mine operators and two (2) members shall be persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of coal mine workers. The Director of the Department of Energy shall be an ex-officio member of the board and shall serve as secretary of the board, without additional compensation; but he shall have no right to vote with respect to any matter before the board.

The members of the board except the public representative, shall be appointed for overlapping terms of eight years, except that the original appointments shall be for terms of two (2), four (4), six (6) and eight (8) years, respectively. Any member whose term expires may be reappointed by the governor.

Each member of the board shall receive fifty dollars (\$50) per diem while actually engaged in the performance of the work of the board, and shall receive mileage at the rate of 10 cents (10) for each mile actually traveled going from the home of the member to the place of the meeting of the board and returning therefrom, which shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such members of the board.

The public member shall serve as chairman of the board. Members of the board before performing any duty, shall take and subscribe to the oath required by Article 4, Section 5 of the constitution of West Virginia.

The mine inspectors' examining board shall meet at such times and places as shall be designated by the chairman. It shall be the duty of the chairman to call a meeting of the board on the written request of three (3) members or the Director of the Department of Energy. Notice of each meeting shall be given in writing to each member by the secretary at least five (5) days in advance of the meeting. Three (3) members shall constitute a quorum for the transaction of business.

In addition to other duties expressly set forth elsewhere in this article, the board shall:

(1) Establish, and from time to time revise, forms of application for employment as mine inspectors and forms for written examinations to test the qualification of candidates for the position;

(2) Adopt and promulgate reasonable rules and regulations relating to the examination, qualification and certification of candidates for appointment as mine inspectors, and hearings for removal of inspectors, required to be held under Chapter 22, Article 1. All of such rules and regulations shall be printed and a copy thereof furnished by the secretary of the board to any person upon request;

(3) Conduct after public notice of the time and place thereof, examinations of candidates for appointment as mine inspector. By unanimous agreement of all members of the board, one (1) or more members of the board or an employee of the Department of Energy may be designated to give a candidate the written portion of the examination.

(4) Prepare and certify to the Director of the Department of Energy a register of qualified eligible candidates for appointment as mine inspectors. The register shall list all qualified eligible candidates in the order of their grades, the candidates with the highest grade appearing at the top of the list. After each meeting of the board held to examine such candidates, and at least annually, the board shall prepare and submit to the director of the Department of Energy a revised and corrected register of qualified eligible candidates for appointment as mine inspector, deleting from such revised register all persons (a) who are no longer residents of West Virginia, (b) who have allowed a calendar year to expire without, in writing indicating their continued availability for such appointment, (c) who have passed over for appointment for three (3) years, (d) who have become ineligible for appointment since the board originally certified that such person was qualified and eligible for appointment as mine inspector, or (e) who, in the judgment of at least four (4) members of the board, should be removed from the register for good cause.

(5) Cause the secretary of the board to keep and preserve the written examination papers, manuscripts, grading sheets, and other papers of all applicants for appointment as mine inspector for such period of time as may be established

by the board. Specimens of the examinations given, together with the correct solution of each question, shall be preserved permanently by the secretary of the board;

(6) Issue a letter or written notice of qualifications to each successful eligible candidate;

(7) Hear and determine proceedings for the removal of mine inspectors in accordance with the provisions of Chapter 22, Article 1;

(8) Hear and determine appeals of mine inspectors from suspension orders made by the director pursuant to the provisions of Chapter 22, Article 2, Section 4: Provided, That an aggrieved inspector, in order to appeal from any order or suspension, shall file such appeal in writing with the mine inspectors' examining board not later than ten (10) days after receipt of notice of suspension. On such appeal the board shall affirm the act of the director unless it be satisfied from a clear preponderance of the evidence that the director has acted arbitrarily;

(9) Make an annual report to the governor and the director of the department of mines concerning the administration of mine inspection personnel in the state service, making such recommendations as the board considers to be in the public interest.

§56-3-12. Director and Inspectors Authorized to Enter Mines; Duties of Inspectors to Examine Mines; No Advance Notice; Reports After Fatal Accidents.

12.1. The Director of the Department of Energy shall have authority to visit, enter, and examine any mine, whether underground or surface and may call for the assistance of any district mine inspector or inspectors whenever such assistance is necessary in the examination of any mine. The operator of every coal mine shall furnish the director of the Department of Energy or mine inspector proper facilities for entering such mine and making examination or obtaining information.

If miners at any mine or one of their authorized representatives have reason to believe that dangerous conditions are existing or that the law is not being complied with, they may request the director to have an immediate investigation made.

Mine inspectors shall devote their full time and undivided attention to the performance of their duties, and they shall examine all of the mines in the respective districts and as often, in addition thereto, as the Director of the Department of Energy may direct, or the necessities of the case or the condition of the mine or mines may require, with no advance notice of inspection provided to any person, and they shall make a personal examination of each surface mine operation for the purpose of determining whether a danger, described in Chapter 22, Article 1, Section 14 of the West Virginia Code exists in any such mine, or whether any provisions of article two of this chapter is being violated or has been violated within the past forty-eight (48) hours in any such mine.

In addition to the other duties imposed by these rules and regulations, it shall be the duty of each inspector to note each violation he finds and issue a finding order or notice, as appropriate for each violation so noted. During the investigation of any accident, any violation may be noted whether or not the inspector actually observes the violation and whether or not the violation exists at the time the inspector notes the violation, so long as the inspector has clear and convincing evidence the violation has occurred or is occurring.

The mine inspector shall visit the scene of each fatal accident occurring in any mine within his district and shall make an examination into the particular facts of such accident; make a report to the Director of the Department of Energy, setting forth the results of such examination, including the condition of the mine and the cause or causes of such fatal accident, if known, and all such reports shall be made available to the interested parties, upon written requests.

At the commencement of any inspection of a coal mine by an authorized representative of the director, the authorized representative of the miners at the mine at the time of such inspection shall be given an opportunity to accompany the authorized representative of the director on such inspection.

§56-3-13. Findings Orders and Notices.

13.1. (a) If upon any inspection of a coal mine, an authorized representative of the director finds that an imminent danger exists such representative shall determine the area throughout which such danger exists, and thereupon shall issue forthwith an order requiring the operator of the mine or his agent to cause immediately all persons, except those referred to in subdivisions (1), (2), (3) and (4), subsection (c) of this section, to be withdrawn from and to be prohibited from entering such area until an authorized representative of the director determines that such imminent danger no longer exists.

All employees on the inside and outside of a mine who are idle as a result of the posting of a withdrawal order by a mine inspector shall be compensated by the operator at their regular rates of pay for the period they are idled, but not more than the balance of such shift. If such order is not terminated prior to the next working shift, all such employees on that shift who are idled by such order shall be entitled to full compensation by the operator at their regular rates of pay for the period they are idled, but for not more than four (4) hours of such shift.

(b) If, upon any inspection of a coal mine, an authorized representative of the director finds that there has been a violation of law, but the violation has not created an imminent danger, he shall issue a notice to the operator or his agent, fixing a reasonable time for the abatement of the violation. If, upon the expiration of the period of time, as originally fixed or subsequently extended, an authorized representative of the director of the Department of Energy finds that the violation has not been totally abated, and if he also finds that the period of time should not be further extended, he shall find the extent of the area affected by the violation and shall promptly issue an order requiring the operator of such mine or his agent to cause immediately all persons, except those referred to in subdivisions (1), (2), (3), (4), subsection (c) of this

section, to be withdrawn from, and to be prohibited from entering such area until an authorized representative of the director determines that the violation has been abated.

(c) The following persons shall not be required to be withdrawn from or prohibited from entering any area of the coal mine subject to an order issued under this section:

- (1) Any person whose presence in such area is necessary, in the judgment of the operator or an authorized representative of the director, to eliminate the condition described in the order;
- (2) Any public official whose official duties require him to enter such area;
- (3) Any representative of the miners in such mine who is, in the judgment of the operator or an authorized representative of the director, qualified to make coal mine examinations or who is accompanied by such person and whose presence in such area is necessary for the investigation of the conditions described in the order; and
- (4) Any consultant to any of the foregoing.

13.2. Notices and orders issued pursuant to these regulations shall contain a detailed description of the conditions or practices which cause and constitute an imminent danger or a violation of any mandatory health and safety standard and, where appropriate, a description of the area of the coal mine from which persons must be withdrawn and prohibited from entering.

13.3. Each notice or order issued under these regulations shall be given promptly to the operator of the coal mine or his agent by an authorized representative of the director issuing such notice or order, and all such notices and orders shall be in writing and shall be signed by such representative and posted on the bulletin board at the mine.

13.4. A notice or order issued pursuant to these regulations may be modified or terminated by an authorized representative of the director.

§56-3-14. Review of Orders and Notices by the Director.

14.1. An operator, issued an order pursuant to the provisions of Chapter 22, Article 1, Section 14 of the West Virginia Code, or any representative of miners in any mine affected by such order or by any modification or termination of such order, may apply to the director for review of the order within thirty (30) days of receipt thereof or within thirty (30) days of its modification or termination. An operator, issued a notice pursuant to Chapter 22, Article 1, Section 14, subsection (b) of the West Virginia Code or any representative of miners in any mine affected by such notice, may, if he believes that the period of time fixed in such notice for the abatement of the violation is unreasonable, apply to the director for review of the notice within thirty (30) days of the receipt thereof. The applicant shall send a copy of such application to the representative of miners in the affected mine, or the operator, as appropriate. Upon receipt of such application, the director shall cause such investigation to be made as he deems appropriate. Such investigation shall provide an opportunity for a public hearing, at the request of the operator or the representative of miners in such mine, to enable the operator and the representative of miners in such mine, present information relating to the issuance and continuance of such order or the modification or termination thereof or the time fixed in such notice. The filing of an application for review under this law shall not operate as a stay of any order or notice.

The operator and the representative of the miners shall be given written notice of the time and place of the hearing at least five (5) days prior to the hearing.

Upon receiving the report of such investigation, the director shall make findings of fact, and he shall issue a written decision, incorporating therein an order vacating, affirming, modifying, or terminating the order, or the modification or termination of such order, or the notice complained of and incorporate his findings therein.

In view of the urgent need for prompt decision of matters submitted to the director under this law, all actions which the director takes under this section shall be taken as promptly as practicable, consistent with adequate consideration of issues involved.

Pending completion of the investigation required by this section, the applicant may file with the director a written request that the director grant temporary relief from any modification or termination of order, or from any order issued under Chapter 22, Article 1, Section 14 of the West Virginia Code, except, an order issued under Chapter 22, Article 1, Section 15 of the West Virginia Code, together with a detailed statement giving reasons for granting such relief. The director may grant such relief, under such conditions as he may prescribe, if:

- (1) A hearing has been held in which all parties were given an opportunity to be heard;
- (2) The applicant shows that there is substantial likelihood that the findings of the director will be favorable to the applicant; and
- (3) Such relief will not adversely affect the health and safety of miners in the coal mine.

No temporary relief shall be granted in the case of a notice issued under Chapter 22, Article 1, Section 14 of the West Virginia Code.

§56-3-15. Posting of Notices, Orders, and Decisions; Delivery to Agent of Operator; Names and Addresses to be Filed by Operator.

15.1. (a) At each coal mine there shall be maintained an office with a conspicuous sign designating it as the office of the mine, and a bulletin board at such office or at some conspicuous place near an entrance of the mine, in such manner that notices, orders, and decisions required by this law or regulations to be posted on the mine bulletin board may be posted thereon, be easily visible to all persons desiring to read them, and be protected against damage by weather and against unauthorized removal. A copy of any notice, order, or decision required by these regulations to be given to an operator shall be delivered to the office of the affected mine, and a copy shall be immediately posted on the bulletin board of such mine by the operator or his agent.

(b) The director shall cause a copy of any notice, order, or decision required by these regulations to be given to an operator to be mailed immediately to a representative of the miners. Such notice, order, or decision shall be available for public inspection.

(c) In order to insure prompt compliance with any notice, order, or decision issued under these regulations, the authorized representative of the director may deliver such notice, order, or decision to an agent of the operator and such agent shall immediately take appropriate measures to insure compliance with such notice, order, or decision.

(d) Each operator of a coal mine shall designate a responsible official at such mine as the principal officer in charge of health and safety at such mine, and such official shall receive a copy of any notice, order, or decision issued under these regulations affecting such mine. In any case, where the coal mine is subject to the control of any person not directly involved in the daily operations of the coal mine, there shall be filed with the director the name and address of such person and the name and address of a principal official of such person who shall have overall responsibility for the conduct of an effective health and safety program at any coal mine subject to the control of such person and such official shall receive a copy of any notice, order, or decision issued affecting any such mine. The mere designation of a health and safety official under this subsection shall not be construed as making such official subject to any penalty under these regulations.

§56-3-16. Judicial Review.

16.1. (a) Any order or decision issued by the director under these regulations except an order or decision under Chapter 22, Article 1, Section 14 of the West Virginia Code shall be subject to judicial review by the circuit court of the county in which the mine affected is located or the circuit court of Kanawha County upon the filing in such court or with the judge thereof in vacation of a petition by any person aggrieved by the order or decision praying that the order or decision be modified or set aside in whole or in part, except that the court shall not consider such petition unless such person has exhausted the administrative remedies available under these regulations and files within thirty (30) days from the date of such order or decision.

(b) The party making such appeal shall forthwith send a copy of such petition for appeal, by registered mail, to the other party. Upon receipt of such petition for appeal, the Director of the Department of Energy shall promptly certify and file in such court a complete transcript of the record upon which the order or decision complained of was issued. The court shall hear such petition on the record made before the director. The findings of the director if supported by substantial evidence on the record considered as a whole, shall be conclusive. The court may affirm, vacate, or modify any order or decision or may remand the proceedings to the director for such further action as it may direct.

(c) In the case of a proceeding to review any order or decision issued by the director under these regulations, except an order or decision pertaining to an order issued under subsection (a), Chapter 22, Article 1, Section 14 of the West Virginia Code or an order or decision pertaining to a notice issued under subsection (b), Chapter 22, Article 1, Section 14 of the West Virginia Code, the court may, under such conditions as it may prescribe, grant such temporary relief as it deems appropriate pending final determination of the proceeding if:

- (1) All parties to the proceeding have been notified and give an opportunity to be heard on a request for temporary relief;
- (2) The person requesting such relief shows that there is a substantial likelihood that he will prevail on the merits of the final determination of the proceeding; and
- (3) Such relief will not adversely affect the health and safety of miners in the coal mine.

(d) The judgement of the court shall be subject to review only by the supreme court of appeals of West Virginia upon a writ of certiorari filed in such court within sixty (60) days from the entry of the order and decision of the circuit court upon such appeal from the director.

(e) The commencement of a proceeding under this section shall not, unless specifically ordered by the court, operate as a stay of the order or decision of the director.

(f) Subject to the direction and control of the attorney general, attorneys appointed for the director may appear for and represent him in any proceeding instituted under this section.

§56-2-17. Injunctions.

17.1. The director may institute a civil action for relief, including a permanent or temporary injunction, restraining order, or any other appropriate order in the circuit court of the county in which the mine is located or the circuit court of Kanawha County, whenever the operator or his agent (a) violates or fails or refuses to comply with any order or decision issued under these regulations, or (b) interferes with, hinders, or delays the director or his authorized representative in carrying out the provisions of these regulations, or (c) refuses to admit such representatives to the mine, or (e) refuses to furnish any information or report requested by the director in furtherance of the provisions of these regulations, or (f) refuses to permit access to, and copying of, such records as the director determines necessary in carrying out the provisions of these regulations. Each court shall have the jurisdiction to provide such relief as may be appropriate. Except as otherwise provided herein, any relief granted by the court to enforce an order under clause (a) of this section shall continue in effect until the completion or final termination of all proceedings for review of such order under these regulations, unless, prior thereto, the circuit court granting such relief sets it aside or modifies it. In any action instituted under this section to enforce an order or decision issued by the director after a public hearing, the findings of the director, if supported by substantial evidence on the record considered as a whole, shall be conclusive.

§56-3-18. Penalties.

18.1. (a) (1) Any operator of a coal mine in which a violation occurs of any health or safety rule or regulation or who violates any other provision of these regulations, shall be assessed a civil penalty by the director under subdivision

(3) of this subsection, which penalty shall be not more than three thousand dollars (\$3,000), for each violation. Each such violation shall constitute a separate offense. In determining the amount of the penalty, the director shall consider the operators' history of previous violations, the appropriateness of such penalty to the size of the business of the operator charged, the gravity of the violation and the demonstrated good faith of the operator charged in attempting to achieve rapid compliance after notification of a violation.

(2) Any miner who knowingly violates any health or safety provision of these regulations or health or safety rule or regulation promulgated pursuant to these regulations shall be subject to a civil penalty assessed by the director under subdivision (3) of this subsection which penalty shall not be more than two hundred fifty dollars (\$250) for each occurrence of such violation.

(3) A civil penalty shall be assessed by the director only after the person charged with a violation under these regulations has been given an opportunity for a public hearing and the director has determined, by a decision incorporating his findings of fact therein, that a violation did occur, and that the amount of the penalty which is warranted, and incorporating, when appropriate, an order therein requiring that the penalty be paid. Any hearing under this section shall be of record.

(4) If the person against whom a civil penalty is assessed fails to pay the penalty within the time prescribed in such order, the director shall file a petition for enforcement of such order in any appropriate circuit court. The petition shall designate the person against whom the order is sought to be enforced as the respondent. A copy of the petition shall forthwith be sent by certified mail, return receipt requested, to the respondent and to the representative of the miners at the affected mine or the operator, as the case may be, and thereupon the director shall certify and file in such court the record upon which such order sought to be enforced was issued. The court shall have jurisdiction to enter a judgment enforcing, modifying, and enforcing as so modified, or setting aside in whole or in part the order and decision of the director or it may remand the proceedings to the director for such further action as it may direct. The court shall consider and determine de novo all relevant issues, except issues of fact which were or could have been litigated in review proceedings before a circuit court under Chapter 22, Article 1, Section 18 of the West Virginia Code, and upon the request of the respondent, such issues of fact which are in dispute shall be submitted to a jury. On the basis of the jury's findings the court shall determine the amount of the penalty to be imposed. Subject to the direction and control of the attorney general, attorneys appointed for the director may appear for and represent him in any action to enforce and order assessing civil penalties under this subdivision.

(b) Any operator who knowingly violates a health or safety provision of these regulations or health or safety rule or knowingly violates or fails or refuses to comply with any order issued under Chapter 22, Article 1, Section 14 of the West Virginia Code, or any order incorporated in a final decision issued under this section, except an order incorporated in a decision under subsection (a) of this section or subsection (b), Chapter 22, Article 1, Section 21 of the West Virginia Code, shall be assessed a civil penalty by the director under subdivision (3) of subsection (a) of this section, of not more than five thousand dollars (\$5,000), and for a second or subsequent violation assessed a civil penalty of not more than ten thousand dollars (\$10,000).

(c) Whenever a corporate operator knowingly violates a health or safety provision of these regulations or health or safety rules, or knowingly violates or fails or refuses to comply with any order issued under these regulations or any order incorporated in a final decision issued under these regulations, except an order incorporated in a decision issued under subsection (a) of this section or subsection (b), Chapter 22, Article 1, Section 21 of the West Virginia Code, any director, officer, or agent of such corporation who knowingly authorized, ordered, or carried out such violation, failure, or refusal shall be subject to the same civil penalties that may be imposed upon a person under subsections (a) and (b) of this section.

(d) Whoever knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to these regulations or any order or decision issued under these regulations shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than five thousand dollars (\$5,000) or imprisoned in the county jail not more than six (6) months, or both fined and imprisoned. The conviction of any person under this subsection shall result in the revocation of any certifications held by him under Chapter 22 of the West Virginia Code which certify him or authorized him to direct other persons in coal mining operation of law and shall bar him from being issued any such license under Chapter 22 of the West Virginia Code except a miners' certification, for a period of not less than one (1) year or for such longer period as may be determined by the director.

(e) Whoever willfully distributes, sells, offers for sale, introduces or delivers in commerce any equipment for use in coal mines, including, but not limited to, components and accessories of such equipment, who willfully misrepresents such equipment as complying with the provisions of these regulations, or with any specification or regulations of the director applicable to such equipment, and which does not so comply, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be subject to the same fine and imprisonment that may be imposed upon a person under subsection (d) of this section.

§56-3-19. Discrimination.

19.1. (a) No person shall discharge or in any other way discriminate against or cause to be discharged or discriminated against any miner or any authorized representative of miners by reason of the fact that he believes or knows that such miner or representative, (1) has notified the director, his authorized representative, or an operator, directly or indirectly, of any alleged violation or danger, (2) has filed, instituted or caused to be filed or instituted any proceeding under these regulations, (3) has testified or is about to testify in any proceeding resulting from the administration or enforcement of the provisions of these regulations. No miner or representative shall be discharged or in any other way

discriminated against or caused to be discriminated against because a miner or representative has done (1), (2), (3), above.

(b) Any miner or representative of miners who believes that he has been discharged or otherwise discriminated against, or any miner who has not been compensated by an operator for lost time due to the posting of a withdrawal order, may, within thirty (30) days after such violation occurs, apply to the appeals board for a review of such alleged discharge, discrimination, or failure to compensate. A copy of the application shall be sent to such person who shall be the respondent. Upon receipt of such application, the appeals board shall cause such investigation to be made as it deems appropriate. Such investigation shall provide an opportunity for a public hearing at the request of any party to enable the parties to present information relating to such violation. The parties shall be given written notice of the time and place of the hearing at least five (5) days prior to the hearing. Mailing of the notice of hearing to the charged party at last address of record as reflected in the records of the Department of Energy shall be deemed adequate notice to the charged party. Such notice shall be certified mail, return receipt requested. Any such hearing shall be of record. Upon receiving the report of such investigation, the board shall make findings of fact. If it finds that such violation did occur, it shall issue a decision within forty-five (45) days, incorporating an order therein, requiring the person committing such violation to take such affirmative action to abate the violation as the board deems appropriate, including, but not limited to, the rehiring or reinstatement of the miner or representative of miners to his former position with back pay, and also pay compensation for the idle time as a result of a withdrawal order. If it finds that there was no such violation it shall issue an order denying the application. Such order shall incorporate the board's findings therein. If the proceedings under this section relative to the discharge due to delay caused by the operator, the miner shall be automatically reinstated until the final determination. If such proceedings are not completed within forty-five (45) days of the date of discharge due to delay caused by the board, then the board may, at its option, reinstate the miner until the final determination. If such proceedings are not completed within forty-five (45) days of the date of discharge due to delay caused by the miner the board shall not reinstate the miner until the final determination.

(c) Whenever an order is issued under this section, at the request of the applicant, a sum equal to the aggregate amount of all cost and expenses including the attorney's fees as determined by the board to have been reasonably incurred by the applicant for, or in connection with, the institution and prosecution of such proceedings, shall be assessed against the person committing such violation.

§56-3-20. Record and Reports.

20.1. In addition to such records as are specifically required by these regulations, every operator of a coal mine shall establish and maintain such records, make such reports, and provide such information, as the director may reasonably require from time to time to enable him to perform his functions under these regulations. The director is authorized to compile, analyze, and publish, either in summary or detailed form, such reports or information so obtained. Except to the extent otherwise specifically provided by these regulations, all records, information, reports, findings, notices, orders or decisions required or issued pursuant to or under these regulations may be published from time to time, may be released to any interested person, and shall be made available for public inspection.

§56-3-21. Mine Foreman Examiner for Mine Foreman and Assistant Mine Foreman - Salary.

21.1. The Director of the Department of Energy shall appoint a mine foreman examiner to examine and certify mine foreman and assistant mine foreman and mine examiners. Such mine foreman examiners shall be paid a minimum salary of thirteen thousand five hundred dollars (\$13,500) per year.

21.2. The duties of the mine foreman examiner shall be to:

- (a) Prepare and conduct examinations of mine foreman, assistant mine foreman,
- (b) Prepare and certify to the director of the department of energy a register of all persons who successfully completed the examination with a passing grade of eighty percent (80%).

21.3. The Director of the Department of Energy shall determine the location where the mine foreman examiner shall meet for the purpose of holding examinations, and at least two (2) weeks notice of time and place where the examinations are to be held shall be given.

The examinations shall be given at any location where there are at least five (5) men to be tested, and adequate facilities to conduct such examination. The office of the secretary to the mine foreman examiner shall be located in the capitol complex in Charleston. All records pertaining to the examinations shall be kept at such office.

21.4. The mine foreman examiner shall, with the approval of the director, prepare, and from time to time, modify examinations to be administered to applicants for certification as mine foreman.

All persons who desire to appear for examination shall notify the mine foreman examiner of their intentions to appear, if possible, not less than ten (10) days prior to the date set for the examination. The mine foreman examiner shall inquire into the character and qualifications of the applicants who present themselves for examination.

21.5. Certificates of qualification of service heretofore granted shall have equal value with certificates of qualifications granted under these regulations.

21.6. The mine foreman examiner shall certify to the director, on a form furnished by him, every person whose examination shall disclose his fitness for the duties of mine foreman, assistant mine foreman, and as above classified, and the director shall prepare certificates of qualification for the successful applicants and send them to the mine foreman examiner for distribution.

21.7. The mine foreman examiner shall send to the director the answers and all other papers of the applicants, together with the tally sheets and a list of the questions and answers as prepared by the mine foreman examiner which shall be filed in the department as public documents.

§56-3-22. Withdrawal of Certification.

22.1 (a) Charge of breach of duty. A mine inspector or the director may charge a mine foreman, assistant mine foreman, or any other certified person with neglect or failure to perform any duty mandated pursuant to these rules and regulations. The charge shall state the name of the person charged, the duty or duties he is alleged to have violated, the approximate date and place so far as is known of the violation of duty, the capacity of the person making the charge, and shall be verified on the basis of information and belief or personal knowledge. The charge is initiated by filing it with the director or with the board of appeals. A copy of any charges filed with the board of appeals or any member thereof, shall be transmitted promptly to the director. The director shall maintain a file on each charge and of all related documents which shall be open to the public.

(b) Evaluation of charge by board of appeals. Or within twenty (20) days after receipt of the charge the board shall evaluate the charge and determine whether or not a violation of duty has been stated. In making such a determination the board shall evaluate all documents submitted to it by all persons to determine as nearly as possible the substance of the charge and if the board of appeals is unable to determine the substance of the charge it may request the director to investigate the charge. Upon request, the director shall investigate the charge and report the results of the investigation to the board of appeals within ten (10) days of his receipt of the charge. If the board determines that probable cause exists to support the allegation that the person charged has violated his duty, the board by the end of the twenty (20) day period shall set a date for hearing which date shall be within eighty (80) days of the filing of the charge. Notice of the hearing or notice of denial of the hearing for failure to state a charge and a copy of the charge shall be mailed by certified mail, return receipt requested, to the charging party, the charged party, the director, the representative of the miner or miners affected, and to any interested person of record. Thereafter the board shall maintain the file of the charge which shall contain all documents, testimony and other matters filed which shall be open for public inspection.

(c) Hearing. The board of appeals shall hold a hearing, may appoint a hearing examiner to take evidence and report to the board of appeals within the time allotted, may direct or authorize taking of oral depositions under oath by any participant, or adopt any other method for the gathering of sworn evidence which affords the charging party, the charged party, the director and any interested party of record due process of law and a fair opportunity to present and make a record of evidence. Any member of the board shall have the power to administer oaths.

The board may subpoena witnesses and require production of any books, papers, records, or other documents relevant or material to the inquiry. The board shall consider all evidence offered in support of the charge and on behalf of the persons so charged at the time and place designated in the notice. Each witness shall be sworn and a transcript shall be made of all evidence presented in any such hearing. No continuance shall be granted except for good cause shown.

At the conclusion of the hearing the board shall proceed to determine the case upon consideration of all the evidence offered and shall render a decision containing its findings and conclusions of law. If the board finds by a preponderance of the evidence that the certificate or certificates of the charged person should be suspended or revoked, as hereinafter provided, it shall enter an order to that effect. No renewal of the certificate shall be granted except as herein provided.

(d) Failure to cooperate. Any person charged who shall, without just cause refuse or fail to appear before the board or cooperate in the investigation or gathering of evidence shall forfeit his certificate or certificates for a period to be determined by the board, not to exceed five (5) years, and such certificate or certificates may not be renewed except upon a successful completion of the examination prescribed by the law for mine foreman, assistant mine foreman, or other certified person.

(e) Penalties. The board may suspend or revoke the certificate or certificates of a charged party for a minimum of thirty (30) days or more including an indefinite period or may revoke permanently the certificate or certificates of the charged party, as it sees fit, subject to the prescribed penalties and monetary fines imposed elsewhere in this chapter.

(f) Integrity of penalties imposed. No person whose certification is suspended or revoked under this provision can perform any duties under any other certification issued under chapter 20 or 22 of this code, during the period of the suspension imposed herein.

(g) Any party adversely affected by a final order or decision issued by the board hereunder shall be entitled to judicial review thereof pursuant to section 4, article 5, chapter 29(a) of this code.

§56-3-23. Certification of Mine Foreman or Assistant Mine Foreman Whose License to Engage in Similar Activities Suspended in Another State.

23.1. Any person whose license, certificate or similar authority to perform any supervisory duties in another state has been suspended or revoked by that state cannot be certified under any provision of this chapter during the period of such suspension or revocation in the other state.

§56-3-24. Board of Appeals.

24.1. There is hereby created a board of appeals, Chapter 22, Article 1, Section 31, consisting of three (3) members. Two (2) members of the board shall be appointed by the Governor, one (1) person who by reason of previous training and experience may reasonably be said to represent the viewpoint of miners, and one (1) person who by reason of previous training and experience may reasonably be said to represent the viewpoint of the operators. The third (3rd) person, who shall be chairman of the board and who must not have had any connection at any time with the coal industry

or an organization representing miners, shall be selected by the two (2) members appointed by the Governor. The term of office of members of the board shall be five (5) years.

The function and duties of the board shall be to hear appeals, make determinations on questions of miners' entitlements due to withdrawal orders and appeals from discharge or discrimination, and suspension of certification certificates.

The chairman of the board shall have the power to administer oaths and subpoena witnesses and require production of any books, papers, records, or other documents, relevant or material to the appeal inquiry.

Each member of the board shall receive fifty dollars (\$50) per diem while actually engaged in the performance of the work of the board and shall receive mileage at the rate of ten cents (10) for each mile actually traveled going from home of the member to the place of the meeting of the board and returning therefrom, which shall be paid out of the state treasury upon a requisition upon the state auditor, properly certified by such members of the board.

Board members, before performing any duty, shall take and subscribe to the oath required by Article 4, Section 5 of the Constitution of West Virginia.

§56-3-25. Certification of Surface Mine Foreman.

25.1. (a) In every surface mine where five (5) or more persons are employed in a period of twenty-four (24) hours, the operator shall employ at least one (1) person certified in accordance with the provisions of Article 6(a) of Chapter 20 as a mine foreman. Each applicant for certification as a mine foreman shall, at the time he is issued a certificate of competency: (1) be a resident or employed in a mine in this state; (2) have had at least three (3) years experience in surface mining, which shall include at least eighteen (18) months experience on or at a working section of a surface mine or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school and have had at least two (2) years practical experience in a surface mine, which shall include at least eighteen (18) months experience on or at a working section of a surface mine; and (3) have demonstrated his knowledge of mine safety, first aid, safety appliances, emergency procedures relative to all equipment, state and federal mining laws and regulations and other subjects by completing such training, education and examinations as may be required of him under Article 6(a) of Chapter 20.

(b) In surface mines in which the operations are so extensive that the duties devolving upon the mine foreman cannot be discharged by one (1) man, one (1) or more assistant mine foreman may be designated. Such person shall act under the instruction of the mine foreman who shall be responsible for their conduct in the discharge of their duties. Each assistant so designated shall be certified under the provisions of Article 6(a) of Chapter 20. Each applicant for certification as assistant mine foreman shall, at the time he is issued a certificate of competency, possess all of the qualifications required of a mine foreman: Provided, That he shall, at the time he is certified, be required to have at least two (2) years experience in surface mining, which shall include eighteen (18) months on or at a working section of a surface mine or be a graduate of the school of mines at West Virginia University or of another accredited mining engineering school and have had twelve (12) months practical experience in a surface mine, all of which shall have been on or at a working section.

(c) The director shall on the first day of July, one thousand nine hundred seventy-eight (1978), promulgate such rules and regulations as may be necessary to carry out the provisions of Chapter 20, Article 6 of the West Virginia Code.

25.2. Any person holding a mine foreman's certificate issued by any other state may act in the capacity of mine foreman in any mine in this state until the next regular mine foreman examination held by the department, but not to exceed a maximum of ninety (90) days.

§56-3-26. Instruction of Employees and Supervision of Apprentices; Annual Examinations of Persons Using Flame Safety Lamps; Records of Examination; Maintenance of Methane Detectors, Etc.

26.1. It shall be the duty of the mine foreman or the assistant mine foreman of every coal mine in this state to see that every person employed to work in such mine shall, before beginning work therein, be instructed in the particular danger incident to his work in such mine, and be furnished a copy of the mining laws and rules of such mine.

26.2. No person shall be qualified for testing for methane and for oxygen deficiency unless each such person has been trained and demonstrates to the satisfaction of an authorized representative of the Director of the Department of Energy that he is qualified to test for methane with a flame safety lamp or other approved methane detectors. Records of such examinations shall be kept by the operator and the Director of the Department of Energy.

Persons whose duties require them to use a flame safety lamp and other approved detectors, that have been qualified by the Department of Energy to test for methane and oxygen deficiency, shall be examined at least annually to their competence by a certified mine foreman and a record that such examination was given, together with pertinent data relating thereto, shall be kept on file by the operator and a copy shall be furnished to the department of energy.

Persons whose duties require them to administer the annual examinations for methane and oxygen deficiency shall be examined annually by a qualified official from the Department of Energy. Each operator shall provide for the proper maintenance, and before each shift, care shall be taken to insure that such lamp or other device is in a permissible condition. Flame safety lamps shall be given proper maintenance and inspection before each working shift in a manner recommended by the manufacturing company and approved by the director of the department of energy. Other approved gas detectors shall be given proper maintenance and shall be tested in accordance with the manufacturer's recommendations before each working shift and calibrated each thirty (30) calendar days.

26.3. Job assignments to any miner. When a job assignment is given to any miner that he has not performed in the recent past, such inexperienced person in the particular job assignment shall be instructed in the hazards incident thereto and the law and regulations relevant thereto prior to performing any duties in such new job assignment. When

such job assignment includes the operation of equipment, the instruction shall include a supervised dry run. When the job assignment related to a plan in effect at the mine, the relevant portions of the plan shall be reviewed. A record shall be kept of such instruction.

§56-3-27. Mine Foreman and Assistant Mine Foreman; Daily Inspection of Working Places; Records.

27.1. Pre shift examination. (a) Prior to the beginning of any shift the mine foreman or assistant mine foreman shall visit and carefully examine highwalls in the working area and spoil piles for cracks, loose materials, overhanging ledges, and other dangerous conditions.

(b) Upon completion of the examination, the foreman shall record the results in a book prescribed by the director of the Department of Energy, at the designated station at the surface mine before persons enter the working area of the mine.

(c) The operator shall have weekly safety meetings with all employees which shall provide training in the working practices and conditions at the mine and rules and regulations applicable thereto.

27.2. On-shift examination. (a) The mine foreman or assistant mine foreman shall examine all working places in the pit under his supervision for hazards at least once every four (4) hours during each working shift, or more often if necessary for safety.

(b) It shall further be the duty of the mine foreman or the assistant mine foreman to carefully examine the haulage roads in the pit area for slips, cracks, overhanging trees and other dangerous conditions during his pre-shift and on-shift examinations.

27.3. Dangerous conditions. Should the mine foreman or his assistants find a place to be in a dangerous condition, they shall not leave the place until it is made safe, or shall remove the persons working therein until the place is made safe by some competent person designated for that purpose.

He shall also record any dangerous conditions and practices found during his examination in a book provided for that purpose.

27.4. Close deep operations. When a surface mine operations is known to be close to an active underground mine, the mine foreman or superintendent shall give the official representative of the underground mine at least twelve (12) hours notice in advance of any contemplated blasting that may endanger the safety of persons employed in the underground mine.

27.5. Instructions. -- The mine foreman shall see that every person employed to work at such mine shall, before the beginning work therein, be instructed in the particular dangers incident to his work in such mine, and be furnished a copy of the state surface mining rules and regulations.

27.6. Records of examinations. (a) All violations or hazardous conditions and the action taken to correct such violations or conditions including the pre-shift and on-shift examinations shall be recorded with ink or indelible pencil in a book prescribed by the Director of the Department of Energy, kept for such purpose at a place at the surface mine designated by mine management. All records of daily and weekly reports as prescribed herein, shall be open for inspection by interested persons, and the record book shall be kept for a period of one (1) year.

27.7. It shall be the duty of the mine foreman, assistant mine foreman to examine each mine within three (3) hours prior to the beginning of a shift and before any miner on such shift enters the active workings of the mine.

27.8. The mine foreman shall give prompt attention to the removal of all dangers reported to him by his assistants, or any other person working in the mine, and in case it is impracticable to remove the danger at once, he shall notify all persons whose safety is menaced thereby to remain away from the area where the dangerous condition exists.

§56-3-28. Duty of Mine Foreman to Notify Operator When Unable to Comply with Law; Duty of Operator.

28.1. The mine foreman shall notify, in writing the operator or superintendent of the mine, and the director of the Department of Energy, of his inability to comply with any of the requirements of this law, and it shall then become the duty of such operator or superintendent promptly to attend to the matter complained of by the mine foreman so as to enable him to comply with the provisions hereof. Every operator of a mine shall furnish all supplies necessary for the mine foreman to comply with the requirements of this law after being requested to do so in writing by the mine foreman.

§56-3-29. Death Or Resignation Of Mine Foreman; Successor.

29.1. In case of death or resignation of mine foreman, the superintendent or manager shall appoint a certified man to act as mine foreman.

§56-3-30. Excavating.

30.1. Loose material removal. Loose hazardous material shall be stripped for a safe distance (minimum of fifteen (15) feet), except where vegetation is required to support the slope from the top of pit or highwalls, and the loose unconsolidated material shall be sloped to the angle of repose, or barriers, baffle boards, screen, or other approved devices that afford equivalent protection.

30.2. Benches. When a bench is required to insure safe operations, the width and height of the bench shall be governed by the type of equipment to be used and the operations to be performed, type of material and height of wall.

30.3. Highwall and spoil bank work areas. (a) The highwall shall be sloped or benched when required by the Department of Energy, to prevent or minimize the danger of slide. All overhanging ledges and loose material shall be scaled from the highwall. When scaling of highwalls is necessary to correct conditions, a safe means shall be provided to perform such work.

(b) When the highwall is cracked and shows evidence of movement, or of weakening, the area shall be made safe or abandoned and dangered off.

(c) Trees endangering workmen along highwalls shall be removed. Such work shall be completed during daylight hours.

(d) Spoil banks shall be placed an adequate distance from the pit to prevent any material from rolling back and endangering the workmen. Spoils shall be kept free of bodies of water which would be hazardous in active work areas. Spoil material shall be sloped to the angle of repose or other measures taken to prevent the material from slothing, sliding, or rolling into the pit.

(e) Persons, other than those designated to correct unsafe conditions, shall not work near or under dangerous highwalls or banks.

(f) During bench loading, adequate precautions shall be taken to prevent equipment from going over a highwall.

30.4. Examinations. (a) Should a slide occur, a certified foreman or assistant shall examine the area of the slope or danger of additional slides. No person shall work in the area until the examination is complete and the area declared safe.

30.5. Repairs in excavation areas. Special safety precautions shall be taken when persons are required to perform repair work between immobilized equipment and within twenty (20) feet of the highwall or spoil bank where such equipment may hinder escape from falls or slides. A competent person shall be designated to observe the highwall or spoil bank. If equipment is mobile and repair work is necessary on such equipment, such equipment will be moved to a location out by the highwall or spoil bank.

30.6. Tree removal. When men are in the area, suitable warning shall be given before equipment shoves over or uproots trees, and workmen shall be removed from the immediate vicinity.

30.7. Night work. When surface mining is performed at night, the pit in the vicinity of the work shall be adequately illuminated.

§56-3-31. Drilling.

31.1. Inspection. Where required by the director, all drilling equipment shall be provided with restraining devices installed properly to prohibit the free fall of drill steels which may break or become de-threaded at the point of the adaptor.

31.2. Horizontal drill. (a) When horizontal drills are used, the operator shall not leave the controls while the drill stems are in operation.

(b) All persons shall be required to keep in the clear of auger and drill stems while in motion. No person shall be permitted to pass under or step over a moving drill stem or auger.

(c) Prior to horizontal holes being drilled in overburden, a careful inspection of the highwall face shall be made. All loose hazardous material shall be removed before other work is performed.

31.3. Vertical drilling. (a) When vertical drilling operations are being performed, the drill machine shall be continuously attended.

(b) When churn drills or vertical rotary drills are used, the drill machine operator shall not work under suspended tools. When collaring holes, inspecting, or during any operation where tools are removed from the hole, the tools shall be lowered to the ground or platform.

31.4. General precaution (drilling). (a) When drilling operations are being performed in the area of abandoned mines, special precautions shall be taken to protect against methane.

(b) In the event of a power failure, drill machine controls shall be placed in the neutral position.

(c) No person shall be permitted around auger and drill stems that are in motion.

(d) Starter hole drill steels shall be utilized when collaring holes with a hand-held drill.

(e) No person shall be permitted on the drill mast while the drill bit or carriage is in motion. Tools and/or other material shall not be left on the drill mast.

31.5. Drilling position. (a) Drill machine operators shall not drill from positions that hinder their access to controls levers, or from insecure footing, or staging, or from atop equipment not designated for this purpose.

(b) Men shall not hand grasp the drill steel while collaring holes or place their hand on the chuck or centralizer while drilling.

(c) Men operating or working near jackhammers or jackleg drills, shall position themselves so they will not be struck or lose their balance if the drill steel breaks.

31.6. Movement of drills. (a) Vertical drill holes and blast crevices that remain open after blasting and constitute a hazard shall be protected to prevent persons from falling into them.

(b) While moving a drill machine from one (1) area to another, drill steel tools and other equipment shall be secured and the mast placed in a safe position.

(c) The location of the drill machine helper shall be known to the drill machine operator at all times while such drill is being moved.

(d) Hand-held air drills shall be turned off and all air bled from air hoses before such drill is moved from one (1) working area to another and at the end of each shift.

(e) The Director of the Department of Energy shall be responsible for the examinations and certification of persons engaging in or directly responsible for blasting or use of explosives in surface mining operations.

§56-3-32. Explosives and Blasting.

32.1. Transportation vehicles. Motor vehicles used to haul explosives shall comply with the following provisions:

(a) Portable fire extinguisher. A portable fire extinguisher shall be a multi-purpose dry chemical type, containing a nominal weight of five (5) pounds of dry powder and enough expellant to apply the powder; or a foam-producing type

containing at least two (2) and one-half (1/2) gallons of foam-producing liquid and enough expellant to supply foam. Only fire extinguishers approved by the Underwriters Laboratories, carrying appropriate labels as to type and purpose, shall be used.

(b) All electric wiring shall be adequately protected and securely fastened. Damaged insulated wiring shall be repaired or replaced immediately.

(c) Chassis, engine, pan and bottom of vehicle body shall be reasonably clean and free of oil and grease.

(d) Fuel tanks and lines shall have no leaks.

(e) Safety devices including but not limited to lights, horn, brakes, windshield wipers, and steering apparatus shall be functioning properly.

(f) When explosives are not transported in their original closed containers, or in special closed cases constructed of nonconductive material, the vehicle cargo space shall be lined with wood or approved non-sparking material.

(g) The vehicle shall be plainly marked to indicate the nature of the cargo.

(h) The vehicle shall be equipped with suitable side and tailgates. The explosives shall not be piled higher than the side or end.

32.2. Transportation of explosives - precautions. (a) Explosives and/or detonators shall not be transported in the same vehicle unless separated by a substantially fastened four-inch (4") hardwood partition or equivalent approved material.

(b) Explosives and/or detonators shall be transported promptly without undue delays.

(c) Only those persons necessary shall be permitted to ride on or in vehicles containing explosives and/or detonators.

(d) When vehicles containing explosives or detonators are parked on a grade, the parking brakes shall be set and the vehicle blocked securely against rolling.

(e) Vehicles containing explosives and/or detonators shall not be taken to a repair garage or shop.

32.3. General requirements - explosives. (a) After the effective date of the certified blasters rules and regulations, all handling and transporting of explosives shall be under the direct supervision of a certified blaster.

(b) Previously frozen explosives of nitroglycerin base shall not be used.

(c) Open fires and flames are prohibited within fifty (50) feet of the area where explosives are being stored, handled or used. Any person who violates this subsection shall be subject to the maximum assessment of two hundred fifty dollars (\$250).

(d) Explosives, blasting caps and electric blasting caps shall not be carried in pockets of clothing or left lying around unguarded.

(e) The use of explosives and all handling incident thereto, will be discontinued during the approach of and during thunderstorms and/or electrical storms.

(f) All runways, chutes and conveyors used for unloading of explosives shall have no exposed sparking metal parts.

(g) Explosives and detonators shall be kept a safe distance from the highwall and spoil bank.

(h) Driving vehicles or dragging boxes over firing lines, detonator wires, explosives, blasting agents, and detonators shall be prohibited. The backing of drills over loaded holes shall be prohibited.

(i) Deteriorated or damaged explosives and detonators shall be destroyed by an authorized representative of the manufacturing company.

(j) Explosives and/or detonators shall not be transported in a bucket or a dragline or like equipment.

32.4. Shooting preparation. (a) Primers shall not be made up until ready to be inserted in the hole.

(b) Two (2) way radio equipment shall be turned off prior to the handling and use of electric detonators for proposed shot. This rule does not apply to radios operating beyond the distances shown on Table 38-3A found at the end of this regulation.

Adequate warning signs shall be located on all travel roads, distance of not less than one hundred (100) feet from the minimum transmitting distance.

(c) No equipment except the drill and explosive truck, other than necessary equipment for road repairs to remove the drill or explosive truck, shall be permitted to work within fifty (50) feet of loaded holes or holes being loaded. Equipment powered by external electrical sources and power cables shall be prohibited from being within one hundred (100) feet of loaded holes or holes being loaded; where such equipment is being used and electrical detonators are being used, stray current test shall be made on the bench prior to commencing the loading of holes, if current is detected, such power cables shall be moved to a safe distance or the power cables shall be deenergized.

(d) Holes shall not be drilled if there is danger of intersecting a loaded or a misfired hole.

(e) Only wooden or other approved non-sparking implements shall be used to punch holes in an explosive cartridge.

(f) Tamping poles shall be blunt and squared at the end and made of wood or other, non-sparking, approved material.

(g) Tamping shall not be performed directly on a capped primer.

(h) When a surface mine has cut into a known active underground mine, the surface mine inspector of the district and an official representative of the deep mine shall be notified before any blasting is performed. The surface mine

inspector, deep mine representative and surface mine representative shall determine and agree during what hours blasting shall be performed.

(i) Misfires shall be handled only by or under the direction of a designated blaster or certified foreman.

(j) Blasting caps shall be crimped to fuses only with implements designed for that specific purpose.

(k) In no case shall any forty (40)-second-per-foot safety fuse less than thirty-six (36) inches long or any thirty (30)-second-per-foot fuse less than forty-eight (48) inches long be used.

(l) Nothing except a safety fuse is to be inserted in the open end of a blasting cap.

(m) No detonators, detonating cord, igniter cord, safety fuse, or any explosives shall be used if they have been water soaked.

(n) Electric blasting caps shall be fired with an approved blasting device.

(o) Explosives shall be kept separated at least fifteen (15) feet from detonators until loading is started, unless an approved container is utilized.

(p) Ample warning shall be given by an approved audible warning device before blasts are fired. All persons shall be removed from the blasting area.

(q) Detonating caps taken into a pit prior to being used shall be kept in a wooden box or other approved suitable container.

(r) At least a five (5)-foot air gap shall be provided between the blasting circuit and the power circuit when the hole or series of holes are being connected.

32.5. Shooting cables. (a) Shooting cables shall be well insulated and as long as may be necessary to permit persons authorized to fire shots to get in a safe place out of the line of fire.

(b) Shooting cables shall be kept away from power wires and all other sources of electric current.

(c) When shooting highwall and overburden, the shooting cable shall be at least five hundred (500) feet in length when new and never less than four hundred fifty (450) feet.

(d) The shooting cable for use in popping coal shall be of sufficient length to assure the safe location of persons participating in the blasting, and in no event less than one hundred (100) feet in length.

(e) The shooting cable shall be kept shunted until connected to the approved blasting device.

(f) Except when being tested with a blasting galvanometer, or other approved device, electric detonators shall be kept shunted until they are connected to the blasting line or wired into a blasting round.

(g) A wired round shall be kept shunted until connected to the shooting cable.

32.6. Blasting. (a) Any area in which loaded holes are prepared to be fired shall be guarded by a barricade and danger signs, or by a person physically present to prevent unauthorized entry.

(b) The blaster shall make sure that all persons are in a safe place before firing a shot.

(c) The blaster performing the blasting shall be the person who makes the detonating cord connections or connects the leg wires of the detonating caps to the shot cable.

(d) All holes or series of holes containing detonators shall be fired immediately upon completion of loading. However, after connecting the loaded holes, if for any reason the holes cannot be fired immediately, all work shall cease within a radius of three hundred (300) feet of the blasting area and work shall not commence again until the holes have been fired.

(e) The firing of holes shall be conducted during daylight hours.

(f) After a blast the blaster shall examine the area and pronounce it safe before others enter.

32.7. Post firing. (a) Shooting cables shall be disconnected immediately from the blasting unit after each blast and shunted.

(b) No person shall return to the area where blasting has been performed until the dust has settled and the area cleared of smoke.

32.8. Misfires. (a) When electric blasting caps have been used the blaster or no other person shall not return to misfired holes for at least fifteen (15) minutes. Misfires shall be handled only by a designated blaster in the presence of the mine/pit foreman.

(b) When a shot has misfired, extra precaution shall be taken in the handling of the misfires.

(c) The blaster shall wait thirty (30) minutes before returning to a misfired shot, when using blasting caps and fuse.

(d) After shooting a misfired shot, the blasting cable shall be disconnected from the source of power and the battery end short circuited before electric connections are examined.

(e) If explosives or blasting agents are suspected of burning in a hole, all persons in the blasting area shall move to a safe location and no person shall return to the hole for at least one (1) hour.

32.9. Storage of explosives. (a) After loading boreholes all unused explosives shall be returned to the proper explosive storage magazine.

(b) Separate surface magazines shall be provided for storage of explosives, detonators, and blasting heater elements. Surface magazines shall be constructed of incombustible material exposed inside the magazine. Surface magazines shall be provided with doors constructed of at least one-fourth (1/4) inch steel plate lined with a two (2) inch thickness of wood, or the equivalent, provided with adequate and effectively screened ventilation openings near the floor and ceiling, kept locked securely when unattended, posted with suitable danger signs so located that a bullet passing through the face of the sign will not strike the magazine. The location of the magazine shall not be less than two hundred

(200) feet from any active work area, occupied buildings, or public roads unless barricaded. If magazines are illuminated electrically the lamps shall be of vapor-proof type, properly installed and wired. Smoking, open flames, open lights or spark-producing devices shall be prohibited in or within fifty (50) feet of a detonator or explosive magazine or facility.

(c) Explosives magazines shall be located at least one hundred (100) feet away from power lines and fuel storage areas.

(d) Cases or boxes containing explosives shall not be stored on their ends or sides in magazines nor stacked more than six (6) feet high.

(e) An area of twenty-five (25) feet around magazines shall be kept clear of dry leaves, grass, undergrowth, trash and debris.

(f) Detonator and explosives storage magazines shall be separated by at least twenty-five (25) feet.

(g) Ground rods shall be properly installed and secured on explosive storage magazines so as to provide sufficient electrical ground.

(h) Semi-trailer van(s) used for highway or on-site transportation of blasting agents are satisfactory for storing these materials, provided they are located according to the American Table of Distance with respect to inhabited buildings, passenger railroads and public highways. Trailers will be provided with substantial means for locking, and the trailer doors shall be kept locked except during time of placement and removal of blasting agents.

§56-3-33. Underground Workings.

33.1. (a) The operator shall refrain from surface mining within five hundred (500) feet of any active and abandoned underground mines in order to prevent breakthroughs and to protect health or safety of miners: Provided, That the director shall permit an operator to mine near, through or partially through an abandoned underground mine or closer to an active underground mine if: (a) the nature, timing and sequencing of the approximate coincidence of specific surface mine activities with specific underground mine activities are coordinated jointly by the operators involved and approved by the Director of the Department of Energy, and (b) such operations will result in improved resource recovery, abatement of water pollution or elimination of hazards to the health and safety of the public: Provided, That any breakthrough which does occur shall be sealed.

(b) The official representative of any known underground mine shall be notified immediately when a surface mine operation may in any way interfere with the safe operation of the active underground mine.

(c) Special precautions shall be taken to protect the employees where excavating is being performed in the vicinity of a known abandoned underground mine which may contain a dangerous accumulation of water and/or gas.

(d) All cut-through into underground mine workings shall be closed immediately.

§56-3-34. Haulage.

34.1. Roads - traffic directions and warning signs. (a) Traffic directions which differ from standard highway practice shall be posted on signs along the haulage roads at strategic points in letters at least three (3) inches high.

(b) Well marked signs conspicuously placed, shall be properly located to alert drivers to existing danger areas. Such as the approach to a dangerous curve or extreme grade.

(c) Traffic rules, signals, and warning signs shall be standardized at each mine.

(d) Where side or overhead clearances on haulage roads or loading or dumping locations are hazardous to mine workers, such areas shall be conspicuously marked and warning devices shall be installed when necessary to insure the safety of the workers.

(e) Flashers, flares, or other means of signaling shall be used to warn approaching drivers of a hazard created by an obstruction in the roadway.

(f) Regulatory signs shall be used to indicate required method of traffic movement, (Example: "Stop", "Yield", "One Way".)

(g) Posted warning signs shall be used where necessary to indicate potential hazardous conditions. (Example: "Hill", "Curve", "Truck Crossing".)

(h) Object marking shall be used to mark physical obstruction in or near the haulage way that presents possible hazards. (Example: Reflectors and high visibility paint.)

(i) All signs and markings shall be displayed and utilized so as to be effective as possible.

(j) Where side or overhead clearance on any haulage road or at any loading or dumping location at a surface mine is hazardous to any person, such hazard shall be corrected immediately, and all necessary precautions taken while such hazard is being corrected.

34.2. Haulage roads - construction and maintenance. (a) Haulage roads shall be located an adequate distance from highwalls and spoil banks to minimize the danger of falling material onto personnel and equipment.

(b) When dust created by haulage is thrown into suspension in such quantities that may obscure the vision of the operators of vehicles, and adequate means shall be taken to allay such dust.

(c) Only authorized persons shall be permitted on haulage roads and at loading or dumping locations.

(d) Berms or guards shall be provided where required on the outer bank of elevating roadways.

(e) The width and grade to be utilized in haulage road construction shall be determined for each specific situation based upon terrain configuration, vehicle characteristics, and driver visibility for safe haulage.

(f) Haulage roads shall be constructed of sufficient width to permit the driver to maneuver his vehicle to avoid striking unexpected obstacles on the roadway where reclamation regulations permit.

(g) Provisions shall be made to adequately drain and remove excessive water from the haulage roads.

(h) Haulage roads shall be constructed, installed and maintained in a manner consistent with speed and type of haulage operations being conducted to insure safe operation. All roads leading to and from work sites on which persons are expected to travel to and from work or to haul coal or supplies, shall be of sufficient width and be maintained in good condition.

(i) Haulage operations shall be stopped when the haulage surface has deteriorated to the extent that it presents a danger to the safety of the haulage operation.

(j) All haulage vehicles placed into service after the effective date of these rules and regulations shall be equipped with an approved supplementary emergency braking system.

(k) All power lines constructed over haulage roads after the effective date of this section shall be maintained a minimum of twelve (12) feet above all equipment used on haulage roads including dump trucks in a raised position.

34.3. Haulage equipment - construction and maintenance. (a) Haulage trucks shall not be operated with dirty windshields, cracked, dirty, or broken rear view mirrors.

(b) Supplies, materials, and tools other than small hand tools shall not be transported with persons in vehicles unless such vehicles are specifically designed to make such transportation safe.

(c) All new haulage vehicles placed into service shall be equipped with an emergency steering and braking system.

(d) Where required by the director, trucks used for haulage of coal, men or supplies shall be equipped with two (2) way communication instruments.

(e) Where required by the director or his authorized representative runaway roads or "J" roads shall be provided on all haulage roads on which coal is first hauled from such surface mine after the effective date of this section.

34.4. Haulage equipment - operation. (a) Haulage truck operators shall make sure their truck path is unobstructed, especially when starting or moving the trucks forward or backward.

(b) Radio or visual contact shall be made with an operator of a haulage truck to insure that it is safe to approach the truck.

(c) Vehicles shall follow at a safe distance: passing shall be limited to areas of adequate clearance and visibility.

(d) Men shall not work or pass under the buckets or booms of loaders in operation.

(e) Drivers shall drive their trucks according to the condition of the road and the weather. At no time shall truck speeds exceed the safe predetermined speed limit that has been established on that haul road.

(f) Haulage trucks traveling in the same direction, shall not pass any vehicle until signals have been exchanged between both drivers and the vehicle to be passed pulls to the right side of the road.

(g) Haulage trucks shall maintain a safe distance between the truck they are following. Other vehicles shall maintain a minimum of one (1) car length for each ten (10) m.p.h. of travel in back of the vehicle they are following.

(h) When approaching a state or county road, drivers shall maintain their trucks under control to stop, yield right of way, or obey the signals of a flagman.

(i) When the body of a haulage unit is being raised, no person will be permitted in close proximity where they may be endangered.

(j) Materials or equipment required in the cab of haulage equipment shall be adequately secured.

34.5. Parked vehicles. (a) Lights, flares, or other approved warning devices shall be adequately located when parked equipment creates a hazard to vehicular traffic.

(b) Mobile equipment shall not be left unattended unless the brakes are set, the wheels shall be turned into a bank or berm, or shall be blocked, when such equipment is parked on a grade.

34.6. Employee parking and mantrips. (a) On all active surface mines, a designated area shall be provided for parking of employee's vehicles.

(b) No vehicle or other conveyance used to transport persons to and from work areas at surface mines shall be overcrowded and all persons shall ride in a safe position.

(c) All mantrips shall have ten (10) unit first aid kits, and audible warning devices.

§56-3-35. Auger Mining.

35.1. Proximity to underground workings. (a) Auger mining should not be done in proximity to active underground workings unless the work is coordinated with the underground plan or workings. Auger holes should not be drilled so as to: (1) disrupt the ventilation systems of active underground mines; (2) create inundation hazards to active underground mines; and (3) cause damage to the roof and ribs of active and underground roadways.

(b) Auger holes should not intersect underground mine workings known to contain or suspected to contain dangerous quantities of impounded water, except to de-water such areas under controlled conditions and then only after all necessary precautions have been taken to safeguard life and property.

35.2. Safeguards - auger areas generally. (a) Adequate approved means shall be provided to prevent unauthorized persons from entering areas where coal has been removed.

(b) Warning signs shall be posted conspicuously at the entrances to abandoned auger operations.

(c) Completed auger holes shall be blocked with highwall spoil to a minimum height of one (1) foot above the coal bed and to within one thousand (1,000) feet of the active holes.

(d) Adequate precaution shall be taken when any auger hole or holes are not blocked with highwall spoil to insure unauthorized entry.

(e) All haulroads entering auger pits shall be barricaded to insure against unauthorized vehicles when auger holes are left unguarded.

35.3. Protection of workers. (a) No person or persons shall enter an auger hole until a qualified employee has determined by recognized means of detection whether the air within the hole is of good quality and does not contain methane or is deficient in oxygen. The examiner shall wear a lifeline that extends to the hands of a person on the surface.

(b) Persons entering an auger hole should examine and test its walls for danger from falling materials. Any hazardous conditions found should be corrected before any other work is done or the hole vacated and suitable danger boards placed across its entrance.

(c) Augers which are provided with walkways or platforms, where practicable shall be equipped with safe handrails.

35.4. Auger operations. (a) Haulage trucks awaiting loading shall park a safe distance from the highwall and spoil bank.

(b) No person or persons other than the auger crew shall be allowed on or around the auger when in operation unless in line of duty.

(c) Only the truck being loaded and one (1) other truck shall be in the auger pit.

(d) Open lights and smoking materials are prohibited in auger holes.

(e) "No Smoking" signs shall be posted in close proximity where auger holes are being drilled.

(f) When auger holes first penetrate abandoned or mined out underground workings, and as frequently thereafter as these workings are penetrated a qualified employee should determine, by recognized means of detection, whether or not methane or oxygen deficient air is present or is being emitted in dangerous quantities.

(g) The operator shall not leave the controls while the auger is being operated.

(h) No person or persons shall be allowed to be on the top of the cab of the carriage engine for any reason while it is moving, or when the auger train is in motion.

(i) Partitions of coal between auger holes shall be adequate enough to support highwall when augering operations are being performed.

(j) Partitions of coal between auger holes shall not be recovered by other methods of mining without the approval of the Director of the Department of Energy.

(k) Adequate illumination shall be provided for work areas after dark.

(l) Persons shall keep clear of the auger train while it is in motion and shall not pass under or over an auger train, except where suitable crossing facilities are provided. Persons shall keep clear of auger sections being swung into position.

(m) Where practicable, no persons shall be in a direct line with the boreholes during mining operations.

35.5. Methane and oxygen. (a) Auger mining equipment shall not be operated in the vicinity of auger holes emitting dangerous quantities of methane or air until the atmosphere has been rendered harmless.

(b) Internal combustion engines in the vicinity of auger holes shall be stopped while auger holes are being inspected.

(c) Combustible materials, dinner pails, or other supplies shall not be stored in auger holes.

(d) Auger mining machines shall be equipped with a permissible flame safety lamp or other detector approved by the director.

(e) In each auger mining crew there shall be a person qualified in the care and use of permissible flame safety lamp or other approved oxygen detecting measuring device.

(f) Tests for oxygen deficiency shall be conducted with a permissible flame safety lamp or other means approved by the director and all tests for methane shall be conducted with an approved methane detector.

(g) When an auger hole penetrates an abandoned or mined out area of an underground mine, tests for methane and oxygen deficiency shall be made at the collar of the hole by a qualified person, using approved devices to determine if dangerous quantities of methane or oxygen deficient air are present or being emitted. If such is found no further work shall be performed until the atmosphere has been made safe.

35.6. Inspections. (a) Auger operators shall inspect their machine before starting and operating to determine such machine is in a safe operating condition and all safety equipment is provided.

(b) No work shall be performed under any overhang. When a crew is engaged in connecting or disconnecting auger sections for maintenance, repair, or other reasons besides regular operations, at least one (1) person shall be assigned to observe the highwall for possible movement.

(c) The face of all highwalls, for a distance of one hundred (100) feet on both sides of each drilling site, shall be inspected by the auger operator and the foreman before any augering operation is performed. All loose hazardous material shall be removed from the highwall before persons are permitted to enter the drilling area.

§56-3-36. General Provisions.

36.1. Horseplay - Horseplay, practical jokes, wrestling, fighting or other actions which threaten persons with personal injury, causing them to fear for their personal safety or causing damage resulting in interference with safe operations shall be prohibited.

36.2. Alcohol and drugs - Persons under the influence of alcohol or drugs shall not be permitted on a surface mine or attendant facility.

36.3. Housekeeping - Paths, walkways, stairways, and roadways shall be kept free of obstructions. Structures and inside work areas shall be kept free of oil, coal spillage, litter, and coal dust accumulations.

36.4. Smoking - Smoking or open flames shall not be permitted in the following areas:

Within 50 feet of explosive storage area;

Within 150 feet of flammable liquid storage areas;

Within 150 feet of liquified and non-liquified gas storage areas;

Within 150 feet of the proximity of auger holes.

36.5. Compressed air or gases. (a) Safety chains or suitable locking devices shall be used at connections to machines or high-pressured hose lines where a connection failure would create a hazard.

(b) Compressors and compressed-air receivers shall be equipped with automatic pressure relief valves, pressure gauges, and drain valves.

(c) All hoses exceeding one-half (1/2) inch inside diameter shall have a safety device at the surface of supply at the branch line to reduce pressure in case of hose failure.

36.6. No working alone - No person shall be assigned, or allowed, or be required to perform work alone in any area where hazardous conditions exist that would endanger his safety unless he can communicate with others, can be heard, or can be seen.

36.7. Stockpiles - Coal shall not be stockpiled at or near exposed or buried gas lines.

36.8. Reclaiming hazards - No person shall be permitted to walk or stand immediately above a reclaiming area at or near a slurrage or storage pile where the reclaiming operations may expose him to a hazard.

§56-3-37. Electricity.

37.1. Performance of electrical work. (a) No electrical work shall be performed on low-, medium-, or high-voltage distribution circuits or equipment, except by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices shall be locked out and suitably tagged by the person who performs such work, except that in cases where locking out is not possible, such devices shall be open and suitably tagged by such person. They shall be removed only by the person who installed them or if such person is unavailable, by a qualified person authorized by the operator or his agent. Suitably tagged, as used in these sections, means that a sign such as, "Danger, Hands Off, Do Not Close, Men Working On Line", shall be attached to the locked switches. The signs or tags shall bear the name, date, and certification of the workman who installed the tag. Keys used to lock out switches shall be kept only on the person who is performing the work on the equipment and his immediate supervisor. Such locks shall be provided by the operator.

(b) All power circuits and electrical equipment shall be de-energized before work is performed on such circuits and equipment, except when necessary for troubleshooting or testing.

37.2. Transformers. (a) All surface transformers, unless of the construction which will eliminate shock hazard, or unless installed at least eight (8) feet above ground, shall be enclosed in a house or surrounded by a fence at least six (6) feet high. If the enclosure is of metal, it shall be grounded effectively, the gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

(b) Transformers shall be provided with adequate overload protection.

(c) "Danger - High Voltage" signs with voltage indicated shall be posted conspicuously at all transformer enclosures, high potential switch boards, and other high potential installations.

37.3. Electrical equipment generally. (a) Capacitors used for power factor connections shall have suitable drain off resistors or other means to protect workmen against electrical shock following removal of power.

(b) Dry insulated platforms of rubber or other suitable nonconductive material shall be kept in place at each switchboard and at stationary machinery where shock hazards exists.

(c) Reverse current protection shall be provided at storage battery charging stations to prevent the storage batteries from energizing the power circuit in the event of power failure.

(d) All electric conductors shall be sufficient in size and have adequate current carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating materials. In no case will the requirements be less than set forth in the current National Electric Code.

(e) All electrical connections or splices and conductors shall be mechanically and electrically efficient and suitable connectors shall be used. All electric connections or splices and insulating wires shall be reinsulated at least to the same degree of protection as the remainder of the wire. Splices made shall provide continuity of all components.

(f) All power wires, except trailing cables on mobile equipment, specially designed cables conducting high voltage power shall be supported on well installed insulators and shall not contact different potential passes within eighteen (18) inches of each other, such cables shall be insulated to the potential of the highest voltage wire or cable.

(g) All electrical equipment shall be provided with switches or controls that are safety designed, constructed, and installed. Power cable, trailing cable or conductor couplings or connections cannot be connected or disconnected while under load.

(h) Single phase loads such as transformer primaries shall be connected phase to phase.

37.4. Testing maintenance and repair of electrical equipment. (a) All electrical equipment, except circuit breakers, shall be examined daily, by a competent person to assure safe operating condition. All electrical equipment shall be examined monthly, tested and properly maintained by a certified electrician. When a potential dangerous condition is found on electrical equipment, such equipment shall be removed from service until the condition is corrected

by a certified electrician. A record of such examination and the action taken when the potential dangerous condition is found shall be kept and made available to an authorized representative of the Director of the Department of Energy and to the miners at such mine.

(b) Circuit breakers and their auxiliary devices shall be tested and examined at least once each month by a qualified person and a record of such examination shall be kept and made available to an authorized representative of the Director and to the miners at such mine. Circuit breaker tests shall include:

- (1) Breaking continuity of the ground check conductor where ground check monitoring is used.
- (2) Actuating all of the auxiliary protective relays, and;
- (3) Visual observation of all components of the circuit breaker and its auxiliary devices.

Such repairs or adjustments as are indicated by such tests and examination shall be carried out immediately.

37.5. Circuit breakers. (a) Automatic circuit breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electrical equipment and circuits against short circuit and overload. Three (3) phase motors on electrical equipment shall be provided with overload protection that will de-energize all three (3) phases in the event that any phase is overloaded. As used in this section, adequate current interrupting capacity requires that the fuse or circuit breaker is capable of interrupting the maximum short circuit current that the circuit may conduct without destruction to the device.

(b) Electric equipment shall be provided with devices that will permit the equipment to be de-energized quickly in the event of an emergency.

(c) One (1) circuit breaker may be used to protect two (2) or more branch circuits if the circuit breaker is adjusted to afford over current protection for the smallest conductor.

(d) When not in use, power circuits shall be de-energized on idle days and idle shifts except that rectifiers and transformers may remain energized.

(e) Power circuits serving three (3) phase alternating current equipment serving portable or mobile equipment shall be protected by suitable circuit breakers of adequate interrupting capacities which are properly tested and maintained as prescribed by the director. Such breakers shall be equipped with devices to provide protection against under voltage, grounded phase, short circuit and over current.

(f) Disconnecting devices shall be installed at the beginning of branch lines in high voltage circuits and equipped or designed in such a manner that it can be determined by visual observation that the circuit is de-energized when the switches are open.

(g) Circuit breakers and disconnecting switches shall be marked for identification.

37.6. Cables. (a) Cables shall enter metal frames of motors, splice boxes and electrical compartments only through proper fittings. When insulated wire, other than cables pass through metal frames, the hole shall be substantially bushed with insulated bushings.

(b) Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections. No cable will be hung in a manner which will damage the insulation or conductors.

(c) Trailing cables shall be adequately protected to prevent damage by mobile equipment.

(d) Short circuit protection for trailing cables shall be provided by an automatic circuit breaker or other no less effective device, approved by the director, of adequate current interrupting capacity in each ungrounded conductor. Disconnecting devices used to disconnect power from trailing cables shall be plainly marked and identified and such devices shall be equipped or designed in such a manner that it can be determined by visual observation that the power is disconnected and shall be labeled to show which unit they control.

(e) Cable couplers shall be constructed so that the ground check continuity conductor shall be broken first and the ground conductor shall be broken last when the coupler is being uncoupled.

(f) When two (2) or more trailing cables junction to the same distribution center, means shall be provided to assure against connecting the trailing cable to the wrong size circuit breaker.

(g) Temporary splices in trailing cables shall be made in a workmanlike manner and shall be mechanically strong and well insulated. Trailing cables or hand cables which have exposed wires or which have splices that heat or spark under load shall not be used. As used in this section, the term splice means a mechanical joining of one (1) or more conductors that have been severed.

(h) When permanent splices in trailing cables are made, they shall be:

- (1) Mechanically strong with adequate electrical conductivity and flexibility;
- (2) Effectively insulated and sealed so as to exclude moisture;
- (3) Vulcanized or otherwise treated with suitable materials to provide flame-resistant qualities and good bonding to the outer jacket, and;
- (4) Made in accordance with the manufacturers specifications.

(i) Trailing cables for medium voltage circuits shall include grounding conductors, a ground check conductor, and grounded metallic shields around each power conductor or a grounded metallic shield over the assembly, except that on equipment employing cable reels, cables without shields may be used if insulation is rated two thousand (2,000) volts or more.

37.7. Grounding. (a) All metallic shields, armors and conduits enclosing power conductors will be electrically continuous throughout and shall be grounded by method approved by an authorized electrical representative of the

Director. Where grounding wires are used to ground metallic shields, armors, conduits, frames, casings and other metallic enclosures, such grounding wire will be approved if:

(1) Where the power conductor used is #6 A.W.G. or larger, the cross sectional area of the grounding wire is at least one-half (1/2) the cross sectional area of the power conductor.

(2) Where the power conductor used is less than 6 A.W.G., the cross sectional area of the grounding wire is equal to the cross sectional area of the power conductor.

(b) The attachment of grounding wires to other grounded power conductors will be approved if separate clamps, suitable for such purpose, are used and installed to provide a solid connection.

(c) Metallic frame, casing, and other enclosures of electrical equipment that can become alive through failure of insulation or by contact with energized parts shall be grounded, and shall have a ground monitoring system, to monitor continuously the grounding circuit, to assure continuity, such ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken, or other not less effective device approved by the director or his authorized electrical representative, to assure such continuity, except a temporary waiver may be permitted by the Director of the Department of Energy, on a mine to mine basis if he determines that such equipment is not available.

(d) In instances where single phase one hundred ten (110)-two hundred twenty (220) volt circuits are used to feed electrical equipment, the only method of grounding that will be approved is the connection of all metallic frames, casings or other enclosures of such equipment to a separate grounding conductor which established a continuous connection to a grounded center tap of the transformer.

(e) Where batteries are being charged without removing them from mobile equipment, or are sitting on wooden blocks, the frames of the machine or battery case shall be grounded to the grounded frame of the charger to prevent the machine from becoming alive through failure of insulation in the charger. All ground conductor connections shall be clamped or bolted connections.

(f) All buildings and structures shall be earth grounded if they are constructed of metal. Also, any building or structures which could become alive with electrical energy shall be effectively grounded.

(g) Guy wires from poles supporting high voltage power lines shall be securely connected to the system grounding medium or shall be provided with insulators rated at the highest voltage installed near the pole end.

37.8. Energized lines generally. (a) All guy wires shall be marked or flagged when equipment is working in the area.

(b) Energized power lines crossing an access road or work area shall be identified by warning signs visible from each direction. Warning signs shall include height if lines for clearance and made of reflective material. In no event shall any high voltage power line be installed less than fifteen (15) feet above ground, walkways, or working areas.

(c) All equipment near energized power lines with the following voltages shall maintain the following clearances: one hundred (100) to sixty-nine thousand (69,000) - ten (10) feet; sixty-nine thousand (69,000) to one hundred fourteen thousand (114,000) - twelve (12) feet; one hundred fifteen thousand (115,000) to two hundred twenty-nine thousand (229,000) - fifteen (15) feet; two hundred thirty thousand (230,000) to three hundred forty-four thousand (344,000) - twenty (20) feet; three hundred forty-five thousand (345,000) to four hundred ninety-nine thousand (499,000) - twenty-five (25) feet; five hundred thousand (500,000) or more - thirty-five (35) feet.

(d) All personnel, except those directly involved in the operation, shall stay clear of the equipment working near energized lines.

(e) If equipment comes in contact with an energized line, the operator shall stay in the equipment until notified by a certified electrician or foreman that the line is de-energized.

(f) All electrical wiring and equipment installed shall meet the requirements of the current National Electrical Code.

37.9. High voltage. (a) High voltage lines on the surface shall be de-energized and grounded before work is performed on them, except that repairs may be permitted, in the case of energized surface high voltage lines, if such repairs are made by a qualified person in accordance with the procedures and safeguards, including, but not limited to, a requirement that the operator of such mine provide tests, and maintain protective devices in making such repairs. No work shall be performed on any high voltage line on the surface which is supported by any pole or structure which also supports other high voltage lines until all lines supported on that pole are de-energized and grounded.

(b) No high voltage lines shall be regarded as de-energized for the purpose of performing work on it until it has been determined by a qualified person that such high voltage line has been de-energized and grounded. Such qualified person shall, by visual observation, determine that the connecting devices on the high voltage circuit are in open position and insure that each ungrounded conductor of the high voltage circuit upon which work is to be done is properly connected to the system grounding medium.

(c) An energized high voltage line may be repaired only when the operator has determined that such repairs cannot be scheduled during period when the power circuit could be properly de-energized and grounded. Such repairs will be performed on power circuits with a phase to phase nominal voltage no greater than fifteen thousand (15,000) volts. The weather conditions shall be noted so that it would not interfere with such repairs or expose those persons assigned to such work to an imminent danger. The operator shall designate a person qualified to perform such work as the person responsible for carrying out such repairs. In order to insure protection for himself and other interested persons assigned to perform such repairs from the hazards of said repairs, he must prepare and file with the operator;

(1) a general description of the nature and location of the damage or defect to be repaired;

(2) the general plan to be followed in making of such repairs;

(3) a statement that a briefing of all qualified persons assigned to make such repairs was conducted informing them of the general plan, their individual assignments, and the dangers inherent in such assignments;

(4) a list of proper protective equipment and clothing that will be provided and such other information as the person designated by the operator feels necessary to describe properly the means or methods to be employed in such repairs. All statements obtained by the operator shall be recorded and contain a notation of the time, date, location and general nature of the repairs.

(d) When two (2) or more persons are working on an energized high voltage surface line simultaneously and anyone of them is within reach of another, such persons shall not be allowed to work on different phases or equipment with different potentials.

(e) All persons performing work on energized surface high voltage lines shall wear protective rubber lineman's gloves, sleeves, and climber guards if climbers are worn. Protective rubber gloves shall not be worn wrong side out or without protective leather gloves. Protective devices worn by a person assigned to perform work on high voltage surface lines shall be worn continuously from the time he leaves the ground until he returns to the ground and if such devices are employed for extended periods, such persons shall visually inspect the equipment assigned him for defects before each use and in no case, less than twice each day.

(f) All rubber protective equipment used for work on energized high voltage surface lines shall be electrically tested by the operator in accordance with ASTM Standards, part 28 published February, 1968.

(g) Disconnecting or cutout switches on energized high voltage surface lines shall be operated only with insulated sticks, fuse tongs or pullers which are adequately insulated and maintained to protect the operator from the voltage to which he is exposed. When such switches are operated from the ground, the person operating such devices shall wear protective rubber gloves.

(h) No new additional circuits may be tied to a high voltage surface line when such line is energized.

(i) Solely for purposes of grounding ungrounded high voltage power systems grounded messenger wires used to suspend the cable of such system may be used as a grounding medium.

(j) All high voltage circuits supplying portable, mobile or stationary equipment shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the source transformer and a grounding circuit originating at the grounded side of the grounding resistor shall extend along the power conductors and serve as a grounding conductor for the frames which receives power from that circuit. The grounding resistor shall be of the proper ohmic value to limit the voltage drop in the grounding circuit external to the resistor to not more than one hundred (100) volts under fault conditions, the grounding resistor shall be rated for maximum volt current continuously and insulated from ground for a voltage equal to the phase to phase voltage of the system.

(k) High voltage resistant grounded system serving portable or mobile equipment shall include a fail safe ground check circuit to monitor continuously the grounding circuit to assure continuity and the fail safe ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken or other no less effective device approved by the director or his authorized representatives to assure such continuity.

(l) High voltage cables used in resistant grounded systems shall be equipped with metallic shields around each power conductor with one (1) or more ground conductors having a total cross sectional area of not less than one-half (1/2) the power conductor and with an insulated internal or external conductor not smaller than #10 A.W.G. for the ground continuity check circuit.

37.10. Movement of electrical equipment. (a) Power centers, portable transformers, cable couplings and enclosures shall be de-energized before they are moved from one (1) location to another. Except that when equipment powered by source other than such centers or transformers is not available the director may permit such centers or transformers to be moved while energized if he determines that such equivalent or greater hazard may otherwise be created and if they are moved under the supervision of a qualified person, and if such centers and transformers are examined prior to such movement by such person and found to be grounded by methods approved by an authorized representative of the director and otherwise protected from hazard to the miner. A record shall be kept of such examination.

(b) High voltage cables other than trailing cables shall not be moved or handled at any time while energized as permitted under this section.

(c) Energized high voltage trailing cables may be moved only by a qualified person and the operator of such mines shall require that such person wear approved and tested insulated workmen's gloves.

37.11. Other electrical apparatus or areas. (a) Ladders for electrical work shall be of non-metal type.

(b) No electrical machinery or apparatus shall have unguarded exposed energized parts.

(c) Lighting plants shall be located so as not to obstruct or be a safety or health hazard to any part of the mining operation or miners.

(d) Employees performing work that requires them to come in contact with electrical equipment involving shock hazards shall be provided with suitable insulating gloves. Suitable insulation shall be of approved type that will protect such person from voltage to which he is exposed. All such protective equipment shall be furnished by the operator.

(e) Rooms in which circuit breakers or controls are installed shall have two (2) separate and distinct travelable passageways, designated as escapeways.

(f) Open flame in or about surface structures shall be restricted to locations where it will not cause fire or an explosion.

(g) All lights with less than eight (8) feet overhead clearance shall be guarded and the lamps be installed in weatherproof sockets. Lamps installed in a hazardous area must be of substantial construction and fitted with a glass enclosure.

§56-3-38. Hand-Held Electric Drills and Rotating Tools; Trailing Cables.

38.1. Electric drills and other electrically operated rotating tools intended to be held in the hand shall have the electric switch constructed so as to break the circuit when the hand releases the switch or shall be equipped with friction or safety clutches.

§56-3-39. Installation of Lighting.

39.1. Electric lights or other approved methods of lighting shall be installed so that they do not come in contact with combustible materials, and the wires shall be supported by suitable insulators and fastened securely to the power conductors.

§56-3-40. Compressed Gases and Welding.

40.1. Handling and use of welding or cutting equipment generally. (a) The clothing of any person using any welding or cutting equipment in or about a surface mine shall be reasonably free of petroleum products. When handling oxygen cylinders or apparatus the use of oily hands or gloves is prohibited.

(b) Compressed gases shall not be used under direct pressure from tanks or cylinders but must be used under reduced pressures not exceeding that recommended by the manufacturers.

(c) At no time shall compressed air be directed toward a person when in use.

(d) A suitable wrench designed for compressed tanks shall be in the possession of the person authorized to use the equipment.

(e) Oxygen and gas cylinders and their contents shall be used solely for their intended purposes.

(f) Only an approved type spark-lighter shall be used for lighting torches.

(g) All welding and cutting equipment shall be continuously maintained in a safe condition.

40.2. Storage of compressed gas cylinders. (a) Cylinders shall be securely stored in an upright position with valve protection caps hand tight. The storage area shall be well ventilated, protected and at least twenty (20) feet from highly combustible materials such as oil or other flammables.

(b) Signs at storage areas of cylinders shall be conspicuously posted, "Danger No Smoking, Matches or Open Flame".

(c) When storing oxygen cylinders and acetylene or other fuel gas cylinders inside buildings, a minimum distance of twenty (20) feet or a noncombustible barrier at least five (5) feet high having a fire resistance rating of at least one-half (1/2) hour shall be maintained between the oxygen cylinders and other fuel gas cylinders.

40.3. Transportation of compressed gas cylinders. (a) When tanks and cylinders are not used and they are being transported, valve protection caps shall be placed on all tanks or cylinders. Oxygen tanks, gas tanks, or cylinders shall not be transported with the hoses or gauges attached.

(b) When transporting cylinders, they shall be securely mounted with regulators removed, cylinder valves closed and protective valve caps replaced.

(c) Gas cylinders shall not be transported on vehicles used to transport employees unless separate approved compartments are provided.

40.4. Welding preparations. (a) Person or persons assigned to use and work with welding and cutting tools shall be properly instructed of their uses and fully understand the danger of their misuse.

(b) All persons welding, cutting, heating, brazing or soldering shall be provided with goggles or shields, gloves, safe type spark-lighter and proper torch tip cleaner.

(c) Prior to welding, cutting, heating, brazing or soldering in areas likely to contain methane, an examination shall be made by a qualified person with an approved device. Examinations for methane shall be made immediately before and periodically during welding, cutting, heating, brazing or soldering and such work shall not commence or continue in air which contains one percent (1%) or more methane.

(d) Welding operations shall be shielded when necessary and the area shall be well ventilated.

(e) Fire watchers shall be used whenever welding, cutting, heating, brazing or soldering is performed at locations where a fire hazard exists.

(f) Adequate fire protection shall be provided at the location where welding, cutting, heating, brazing and soldering is performed.

40.5. Acetylene welding. (a) Only approved apparatus such as torches, regulators, pressure reducing valves, hoses, back flow check valves and gas cylinders shall be used.

(b) Back-flow check valves shall be attached to the exhaust side of a regulator before using.

(c) Repairs involving the pressure system of compressors, receivers, or compressed-air-powered equipment shall be prohibited until the pressure has been relieved from the part of the system to be repaired.

(d) Gas cylinders shall be protected from contacting sparks, hot slag or flame during welding, cutting, heating, brazing or soldering.

(e) Regulators shall be adequately attached to the cylinders before using their contents.

(f) The cylinder valve shall be opened partially for an instant, then closed before connecting a regulator. Such person performing said act shall stand to one (1) side (not in front) of the outlet when opening the cylinder valve.

(g) When removing a regulator from a cylinder bottle valve, such valve shall be closed and the gas released from the regulator.

(h) Empty cylinders shall be marked as such and removed from the work area immediately.

(i) Oxygen and acetylene tanks or cylinders or compressed gases shall be protected from power lines or energized electrical machinery or equipment. These tanks or cylinders shall be kept away from the place where the cutting is being done in order to prevent damage or accident and to prevent heat from affecting such tanks or cylinders.

40.6. Electrical welding. (a) All connections at the welding machine shall be checked before starting such operations.

(b) The ground lead shall be adequately attached to the work.

(c) Magnetic work clamps shall be free of adherent metal particles or spattex on contact surfaces.

(d) Coiled welding cable shall be adequately separated to avoid serious overheating and damage to cable insulation.

(e) The welding machine frame shall be adequately grounded.

(f) The welding machine shall be free of leaks, cooling water, shielding gas and engine fuel.

(g) Proper switches shall be provided for de-energizing the welding machine.

(h) Electrode holders shall be located so they do not make electrical contact with persons, conducting objects, fuel or compressed gas cylinders. Energized electrode holders may be laid down or placed only in approved nonconductive trays or holders.

(i) There shall be splice-free cables within ten (10) feet of the electrode holder.

(j) The welding cable shall not coil or loop around parts of the welder's body.

(k) When welding has ceased for any substantial period of time, all electrodes shall be removed from holders. Holders shall be located so that accidental contact cannot occur.

(l) Where work permits, arc welders shall be enclosed by individual booths or non-combustible screens painted with a finish of low reflectivity such as zinc oxide or lamp black.

40.7. Safety Hazards. (a) Welding, cutting, and burning shall be prohibited in dusty areas.

(b) After welding operations, the area where metal particles could come into contact with other workers, shall be posted with signs to provide warning.

(c) Welders shall report any equipment defect or safety hazard to their supervisor and discontinue welding until safety has been assured.

40.8. Maintenance and repairs. (a) Cylinders, valves, couplings, regulators, hoses and apparatus shall be kept free from oil, dirt, greasy substances, and maintained in good condition.

(b) Test for leaks on hoses, valves, or gauges shall be made with a soft brush and soapy water or soap suds.

(c) Welding machines, electrodes, and cables shall be examined weekly for wear and/or damage.

§56-3-41. When Respiratory Equipment to be Worn; Control of Dust.

41.1. Men exposed for short periods to gas, dust, fume, and mist inhalation hazards shall wear permissible respiratory equipment. Dust shall be controlled by the use of permissible dust collectors or other approved methods.

§56-3-42. Nontitled.

42.1. (a) Immediately prior to the beginning of each working shift, all equipment except licensed vehicles subject to state highway inspection requirements shall be examined by the equipment operator or a mechanic if designated by the foreman in charge of the operation daily for safety defects. The person performing such examination shall record his findings in ink or indelible pencil on a form approved by the director; such form shall be given to the mine foreman or his assistant within four (4) hours after the beginning of the start of the working shift. The person performing the above examination shall sign the report form and the foreman receiving such form, shall initial upon receipt. A record of all above such examinations shall be maintained for thirty (30) days and made available to an authorized representative of the director and to the miners at the mine.

(b) Immediately prior to the beginning of each working shift, equipment operated by independent contractors in the removal of coal and overburden on a surface mine shall be examined by the equipment operator for safety defects. The person performing such examination shall record his findings in ink or indelible pencil on a form approved by the Director; such form shall be signed by the person performing the examination and such form shall remain with the vehicle for thirty (30) days and upon request be made available to an authorized representative of the Director.

(c) Imminent danger equipment defects shall be corrected before the equipment is put into operation.

42.2. Operation of shovel, draglines, tractors, backhoes, loaders, etc. (a) Equipment operators shall cease operating their equipment when any person is within such proximity as to be endangered.

(b) Operators of shovels, draglines, and backhoes shall sound a signal distinguishable from the surrounding noise level such as a whistle, bell, horn or other approved device, before moving forward or backward, and all persons not in the clear shall respond immediately.

(c) Equipment operators shall not leave their cabs without lowering all raised equipment to the ground.

(d) When the equipment operator is present, men shall notify him before getting on or off his equipment.

(e) Persons shall not be permitted in the immediate vicinity of shovels, draglines, and backhoes unless in the line of duty.

(f) Walkways and platforms on shovels, draglines and backhoes shall be maintained in a safe condition and shall be equipped with safe handrails, toe boards, walkways and platforms.

(g) Equipment that revolves in a horizontal arc on a turntable shall have a minimum clearance of four (4) feet from the highwall or other obstructions.

(h) The operator of shovels, draglines, and backhoes shall have a general knowledge of the location of his oiler at all times.

(i) Operators of shovels and draglines shall not leave their cabs to wet the digging brake or dog, unless the master clutch is in the "off" position. Operators of shovels and draglines shall have visual contact, when possible, with the person assigned to setting the digging brake or dog.

(j) Operators shall not leave the cab of the shovel, dragline or crane without placing the controls into the "Off" position. If the power should fail, the controls shall be placed in the "Off" position.

(k) All ropes shall be securely attached to the drum and the dipper by at least four (4) suitable wire rope clips or properly wedged. Drums shall have at least three (3) wraps of cable on at all times.

(1) Riding a dipper or bucket shall be prohibited.

42.3. Maintenance and repairs. (a) All safety equipment on all machinery shall be maintained in a safe working condition.

(b) Mobile and stationary equipment shall be maintained in safe operating condition and equipment in unsafe condition shall be removed from service immediately.

(c) Good housekeeping shall be practiced on all equipment. All heavy duty equipment shall be cleaned as necessary to maintain the equipment reasonably free of combustible substances.

(d) Men shall not work on or from a piece of mobile equipment in a raised position until it has been securely blocked in place.

(e) No work shall be performed under machinery or equipment that has been raised until such machinery or equipment has been securely blocked in place.

(f) While greasing or doing repair work on a boom of a shovel, dragline, or backhoe, the boom shall be lowered to a position whereby the work can be done from the ground or the workmen shall use safety belts. This does not apply on shovels, draglines, or backhoes that are equipped with safe handrails or ladders.

(g) Dippers of buckets or shovels, draglines and backhoes shall be lowered for repairs.

(h) Repairs or maintenance shall not be performed on equipment until the power is off and the equipment is blocked against motion, except where the movement of the machine or parts is necessary to make adjustment.

42.4. Warning devices, lights, brakes. (a) Dump trucks used to haul coal or other material shall be equipped with an approved automatic warning device which shall give a clearly distinguishable alarm when such equipment is in reverse.

(b) Equipment such as fork lifts, front-end loaders, tractors, dozers, and graders shall be provided with an approved audible warning device.

(c) Lights shall be provided on both ends of equipment when equipment is being worked other than during daylight hours. Also lights on both ends of equipment shall be provided during other existing conditions such as fog, etc.

(d) Power driven mobile equipment shall be equipped with adequate brakes. All trucks and front-end loaders shall be equipped with adequate parking brakes.

42.5. Dump trucks and dumping. (a) Dump bodies of trucks shall be properly blocked when raised for any purpose except dumping of load.

(b) No person shall be permitted in or on the cargo space of dump trucks while being loaded with coal or other materials.

(c) No person shall be allowed in the cab or a dump truck while the truck is being loaded with power shovel, front-end loader, or backhoe unless the cab is shielded.

(d) Truck cabs where rear vision is impaired shall be equipped with adequate rear view mirrors on both sides.

(e) The dipper of a loading shovel shall be swung over the body of the truck and not the cab.

42.6. Dippers. (a) Riding on a dipper or bucket shall be prohibited.

(b) Workmen shall keep out from under suspended dippers at all times.

(c) Trailing cables on shovels shall not be moved with the shovel dipper unless cable slings or sleds are used.

(d) Operators shall not swing a dipper or bucket over passing haulage equipment.

42.7. Equipment generally. (a) No equipment or machinery shall be altered or modified in a manner that reduces the level of safety.

(b) Road maintenance equipment such as graders or other equipment normally used shall be equipped with roof mounted approved flashing lights.

(c) All equipment, when equipped with a safety bar for automatic transmission, shall be set in locked position before the operator leaves the cab. Operators of dozers that are equipped with standard transmission, shall lock the park brake, place the transmission in a neutral position, and lock the clutch in before leaving the cab.

(d) All steps and handrails on surface mining equipment shall be maintained in a safe condition.

(e) Electrically powered mobile equipment shall not be left unattended unless the master switch is in the "Off" position. All operating controls shall be placed in neutral position, and the brakes set or other equivalent precautions taken against rolling.

(f) A tow bar or other approved device shall be used for towing equipment. A safety chain shall be used in conjunction with a tow bar.

(g) All exhaust tail pieces shall be positioned and properly maintained to prevent carbon monoxide and other toxic fumes from entering an operator's compartment.

(h) The operator of a grader shall face in the direction of travel except during grading operations in a local area.

42.8. Glass and doors. (a) Cab windows of glass on equipment shall be safety glass or equivalent material with good visibility, in good condition, not broken or cracked to such extent that it can be felt, and kept clean.

(b) When required by the director, all mobile equipment shall be provided with windshield wipers and such wipers shall be maintained in good operating condition.

(c) All doors on mobile equipment shall be maintained in good operating condition.

42.9. Guards. (a) Fan blades, shafts, gears, flywheels, coupling, and similar exposed moving machine parts which may be contacted by persons shall be adequately guarded.

(b) Guards installed on equipment to prevent accidental contact with moving parts shall:

(1) Be of substantial construction;

(2) Not have openings large enough to admit a person's hand;

(3) Be firmly bolted or otherwise installed in stationary position; and

(4) Be of sufficient dimension to exclude the possibility of bodily contact while in motion.

42.10. Operation of mobile equipment. (a) Mobile equipment operators shall have full control of the equipment while in motion.

(b) The type of equipment and posted operating speeds shall be prudent and consistent with conditions of roadways, grades, clearance, visibility and traffic.

(c) All mobile equipment shall be completely stopped before a person gets on or off.

(d) No person other than the operator shall be permitted to ride in or on equipment unless in line of duty, and only then when adequate safe seating facilities are provided.

(e) Cabs of mobile equipment shall be kept free of extraneous materials and adequately ventilated.

(f) When necessary to protect the operator of the equipment, all rubber tired or crawler mounted self-propelled scrapers, front-end loaders, dozers, graders, and tractors that are used on surface coal mines shall be provided with substantial falling object protective structures.

(g) Equipment shall be operated only by persons trained in the use of and authorized to operate such equipment.

(h) Operators of all equipment shall keep a reasonable safe distance from the edge of all vertical or abrupt excavations or fills.

42.11. Loads. (a) Equipment which is to be hauled shall be secured.

(b) Any load extending more than four (4) feet beyond the rear of the vehicle body shall be marked clearly with a red flag.

(c) Dump trucks shall be trimmed properly when they have been loaded higher than the confines of their cargo space.

42.12. Track type dozers - track type dozers shall meet the following standards:

(a) Adequate fan blade guards.

(b) Track brakes shall be working properly.

(c) Steering clutches shall be in operating condition.

(d) Portable fire extinguisher of at least five (5) pounds.

(e) All floor boards shall be kept secured in place.

(f) Safety bar lever for automatic transmission shall be in working condition.

(g) Approved warning device which the operator can operate manually.

(h) Cab protection when the dozer is being operated near the highwall or where there is a hazard from falling material.

42.13. Front-end loaders - rubber tire front-end loaders shall meet the following standards:

(a) Portable fire extinguishers, of at least five (5) pounds.

(b) Fan blade guards.

(c) Adequate lights.

(d) Approved warning devices.

(e) If loader is provided with a windshield type cab, the windshield shall be of safety type glass, or the equivalent with good visibility and shall be equipped with windshield wipers.

(f) Steering apparatus shall be functioning properly.

(g) Adequate foot brakes - each individual wheel brake shall be working properly.

(h) The parking brake shall have capability equivalent to hold the vehicles stationary on the twelve percent (12%) dry swept concrete grade under all conditions.

(i) The service braking system using stored energy shall be equipped with a warning device that activates when the system energy drops below fifty percent (50%) of the manufacturer's specified minimum operating energy level.

42.14. Machinery. (a) All overhead belts shall be adequately guarded if the whipping action from a broken belt could be hazardous to a person below, or if within seven (7) feet of a person's work area or where persons may pass.

(b) Belt conveyors in locations where fire would create a hazard to personnel shall be provided with switches to stop the drive pulley automatically in the event of excessive slippage.

(c) Unguarded conveyor belt walkways, less than five (5) feet in width, shall be equipped with emergency stop switches or pull cord along their entire length.

42.15. Hand-held tools, power tools and safety devices. (a) Conditions of tools - all tools, power tools and similar equipment shall be maintained in a safe condition.

(b) Hand-held power tools shall be equipped with controls requiring constant hand or finger pressure to operate the tools or shall be equipped with friction or other equivalent safety device.

(c) Employers shall not issue or permit the use of unsafe hand tools.

(d) Adjustable, pipe, end and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.

(e) Impact tools such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

(f) The wooden handles of tools shall be kept tight and free of splinters or cracks and shall be kept tight in the tool.

(g) Electric power operated tools shall be approved double-insulated or grounded type.

(h) Only proper hoisting equipment shall be used for hoisting or lowering tools. The use of hoses or electric cords for such purpose is prohibited.

(i) Pneumatic power tools shall be secured to the hose by some positive means to prevent the tools from becoming accidentally disconnected.

(j) Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools.

(k) The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.

(l) All fuel powered tool engines shall cease operations while being refueled, serviced, or maintained.

(m) When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment shall apply.

(n) Only approved fuel containers shall be used, and such containers shall be safely stored.

42.16. Jacks. (a) The manufacturer's rated capacity shall be legibly marked on all lifting jacks and shall not be exceeded.

(b) All lifting jacks shall have a positive stop to prevent over-travel.

(c) Blocking - When it is necessary to provide a firm foundation, the base of the lifting jack shall be blocked or cribbed. Where there is a possibility of slippage of the metal cup or the jack, a wood block shall be placed between the cap and the load. Work shall not be performed under any machinery until the proper blocking is in place and, with the exception of a jack, tight.

42.17. Stationary grinding machines, protective devices. (a) Mechanically operated grinding wheels shall be equipped with safety washers, substantial retaining hoods and goggles or approved eye shields.

(b) Adjustable tool rests shall be set as close as required to manufacturer's specifications.

(c) Grinding wheels shall be operated according to the specification of the manufacturer.

42.18. Stationary grinding machines. (a) Grinding wheels shall be equipped with (1) safety washers of adequate size; (2) substantial retaining hoods with maximum angular exposure of the grinding wheel periphery and sides of not more than ninety (90) degrees except that when work requires contact with the wheel below the horizontal plane of the spindle, an angular exposure shall begin not more than forty-five (45) degrees above the horizontal plane of spindle, which safety guards shall be strong enough to withstand the effect of a bursting wheel, (3) face shields or goggles, in good condition, to be worn by all operators, (4) work rests on floor and bench mounted grinders which are rigidly supported, readily available, and which shall be kept at a distance not to exceed one-eighth (1/8) from the surface of the wheel; (5) all other applicable requirements of the American National Standards Institute Safety Code for the use, care, and protection of abrasive wheels; and (6) dust collectors or exhaust ventilation systems vented to the outside of the building. Safety hoods, (guards or flanges) shall be mounted so as to maintain proper alignment with the wheel, and shall be of sufficient strength to retain fragments of the wheel in the case of accidental breakage. All abrasive wheels shall be ring-tested before mounting to insure they are free from cracks or defects, and shall fit freely on the spindle and not be forced on.

(b) All grinding wheels shall be operated in accordance with the manufacturer's specifications.

42.19. Protective structures fall object and roll over protective structures - All rubber tired or crawler mounted self-propelled scrapers, front-end loaders, dozers, graders, and tractors, manufactured after January 1, 1969 shall be provided with roll over protective structures.

42.20. Tires and repairs. (a) A safety tire rack, cage, or equivalent protection shall be provided when inflating tires installed on split or rims equipped with locking rings or similar devices. Tires shall be deflated before repairs on them are started and means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation.

(b) Heat shall not be applied to lug bolts, rims or wheels while tires are inflated.

(c) When work is being performed on models that are equipped with dual wheels both tires must be deflated for heating lugs before repair work begins.

(d) No person shall be permitted in front of a tire being inflated either on or off equipment and persons engaged in inflating or deflating tires shall perform such work in an area isolated from other persons.

(e) When fork lift trucks are used in mounting or transporting of tires, adequate means shall be taken to assure that tires are secured properly. No person shall be permitted to stand between the hub of a vehicle and fork lift truck when used to change a tire.

(f) A clip-on-air chuck shall be provided at all tire airing stations. At least six (6) feet of air hose shall be provided between the valve stem and inflation gauge.

(g) All tires shall be maintained in a safe condition. Any tire with a defect which could be a hazard to the safe operations of a vehicle or to other persons shall be replaced immediately.

§56-3-43. Ramps, Tipples, Cleaning Plants, and other Surface Areas.

43.1. Surface installations generally. (a) Surface installations, generally all mine structures, enclosures, and other facilities (including custom coal preparation) shall be maintained in good condition.

(b) In unusually dusty locations, electric motors, switches and controls shall be of dust-tight construction, or enclosed with reasonable dust-tight housings or enclosures.

(c) Opening in surface installations through which men or material may fall shall be protected by railings, barriers, covers or other protective devices.

(d) Illumination sufficient to provide safe working conditions shall be provided in and on all surface structures, paths, walkways, switch panels, loading and dumping sites, working areas and parking areas.

(e) Materials shall be stored and/or stacked in a manner to prevent stumbling or falling.

(f) Compressed and liquid gas cylinders shall be secured in a safe manner.

43.2. Machinery guards. (a) Gears, sprockets; chains, drive, head, tail and take-up pulleys; flywheels; couplings; shafts; saw blades; fan inlets; and similar exposed moving machine parts which may be contacted by persons, shall be guarded adequately.

(b) Except when testing is necessary, machinery guards shall be secured in place while being operated.

(c) Belt rollers shall not be cleaned while belts are in motion.

43.3. Ramps and dumping. (a) Both sides of any tippie or cleaning plant dumping ramp shall be provided with securely anchored rubbing boards of ample dimensions.

(b) An adequate dumping block at least eight (8) inches high shall be installed at all dumping points, excluding stockpiles.

(c) Adequate protection shall be provided at dumping locations where persons may be endangered by falling material.

(d) Dust control measures shall be taken where dust significantly reduces visibility of equipment operators.

(e) After the effective date of these regulations, all power lines in dumping areas shall, be maintained at least a minimum of six (6) feet above the largest piece of equipment used at such facility, including a dump truck in a raised position.

(f) All dumping ramps shall be of sufficient width to insure safe operation of vehicles used thereon.

(g) At no time shall any person be permitted to enter onto any coal bin, coal crusher, or any other coal dumping facility for means of breaking or removing coal or other materials that is of such a size that it will not drop through the grizzly, or screening device of said dumping facility, unless the equipment has been tagged out, de-energized, and locked out with a key or other approved adequate safeguards approved by the director.

(h) Ramps and dumps shall be of solid construction and have ample width, clearance and head room and be kept reasonably free of accumulations of material and spillage.

(i) Truck spotters shall be used when required by an authorized representative of the director.

(j) When car couplers are to be aligned in such rotary dump areas, a hook or other device shall be used. A suitable lifting jack and handle shall be provided at any rotary dump.

43.4. Fire protection. (a) Where cutting or welding is performed at any location, means of prompt extinguishment of any fire accidentally started shall be provided.

(b) Adequate fire-fighting facilities, required by the Department of Energy, shall be provided on all floors. At least two (2) exits shall be provided for every floor of tipples and cleaning plants constructed after the effective date of these regulations.

(c) Signs warning against smoking and open flames shall be posted so they can be readily seen in areas or places where fire or explosion hazards exists.

(d) Smoking or open flame in or about surface structures shall be restricted to locations where it will not cause fire or an explosion.

43.5. Repairs of machinery. (a) Machinery shall not be lubricated or repaired while in motion, except where safe remote lubricating devices are used. Machinery shall not be started until the persons lubricating or repairing it has given a clear signal.

(b) Means and methods shall be provided to assure that structures and the immediate area surrounding the same shall be reasonably free of coal dust accumulations.

(c) Where repairs are made to tipples, or cleaning plants, proper scaffolding and proper overhead protection shall be provided for workmen when necessary.

(d) Where overhead repair work is being performed at surface installations, adequate protection shall be provided for all persons working or passing below.

43.6. Stairs, platforms, etc. (a) Stairways, elevated platforms and runways shall be equipped with handrails. Railroad car trimmer platforms are exempted from such requirements.

(b) Where required, elevated platforms and stairways shall be provided with toeboards. They shall be kept clear of refuse and ice and maintained in good condition.

43.7. Belts, etc. (a) Drive belts shall not be shifted while in motion unless such machines are provided with mechanical shifters.

(b) Belt dressing shall not be applied while in motion.

(c) Belt, chains and ropes shall not be guided onto power-driven moving pulleys, sprockets, or drums with the hand except equipment especially designed for hand feeding.

43.8. Conveyors and crossovers. (a) When the entire length of a conveyor is visible from the starting switch, the operator shall visually check to make certain that all persons are in the clear before starting the conveyor. When the entire length of the conveyor is not visible from the starting switch, a positive audible or visible warning system shall be installed and operated to warn persons when the conveyor will be started.

(b) Crossovers shall be provided where necessary to cross conveyors. All crossovers shall be of substantial construction with rails and maintained in good condition. Moving conveyors shall be crossed only at designated crossover points.

(c) A positive audible or visible warning system shall be installed and operated to warn persons that a conveyor or other tippie equipment is to be started.

(d) Pulleys of conveyors shall not be cleaned manually while the conveyor is in operation.

(e) Guards, nets, or other suitable protection shall be provided where tramways pass over roadways, walkways or buildings.

(f) Where it is required to cross under a belt, adequate means shall be taken to prohibit a person from making contact with a moving part.

43.9. Tippie or cleaning operations. (a) At least two (2) persons shall be continuously employed in the operation of a tippie or cleaning plant.

(b) Good housekeeping shall be practiced in and around tipples and cleaning plants. Such practices include cleanliness, orderly storage of materials, and the removal of possible sources of injury, such as stumbling hazards, protruding nails and broken glass.

(c) Adequate ventilation shall be provided in tipples and preparation plants.

(d) Coal dust in or around tipples or cleaning plants shall not be permitted to exist or accumulate in dangerous amounts.

43.10. Travelways. (a) Safe means of access shall be provided and maintained to all working places.

(b) Travelways, platforms and other access to areas where persons are required to travel or work, shall be kept free of all extraneous material and other stumbling or slipping hazards.

(c) Inclined travelways shall be constructed of nonskid material or equipped with cleats.

(d) Regularly used travelways shall be salted, sanded or cleared of snow and ice as soon as practicable.

43.11. Ladders. (a) All ladders shall be securely fastened. Permanent ladders more than ten (10) feet in height shall be provided with backguards.

(b) Ladders shall be of substantial construction and maintained in good condition.

(c) Wooden ladders shall not be painted.

(d) Fixed ladders shall not incline backward at any point unless equipped with backguards.

(e) Fixed ladders shall be anchored securely and installed with at least three (3) inches of toe clearance.

(f) Side rails of fixed ladders shall project at least three (3) feet above landings, or substantial handholds shall be provided above the landing.

(g) No person shall be permitted to work off of the top step of any ladders.

(h) Metal ladders shall not be used with electrical work, where there is danger of the ladder coming into contact with power lines or an electrical conductor.

(i) The maximum length of a step ladder shall be twenty (20) feet and an extension ladder sixty (60) feet.

43.12. Hoisting.

(a) Hitches and slings used to hoist materials shall be suitable for handling the type of material being hoisted.

(b) Persons shall stay clear of hoisted loads.

(c) Tag lines shall be attached to hoisted materials that require steadying or guidance.

(d) A hoist shall not lift loads greater than the rated capacity of the hoist being used.

43.13. Drawoff tunnels. (a) When it is necessary for a tunnel to be closed at one (1) end, an escapeway not less than thirty (30) inches in diameter (or of the equivalent, if the escapeway does not have a circular cross section) shall be installed which extends from the closed end of the tunnel to a safe location on the surface; and if the escapeways is inclined for more than thirty (30) degrees from the horizontal, it shall be equipped with a ladder which runs the full length of the inclined portion of the escapeway.

(b) Tunnels located below stockpiles, and coal storage silos, shall be adequately ventilated to maintain concentrations of methane below one percent (1%) percentum.

43.14. Ventilation and methane. (a) Tests for methane in structures, enclosures, or other facilities where coal is stored shall be conducted by a qualified person with an approved methane detector at least once during each operating shift.

(b) Methane content in surface structures -If, at any time, the air in any enclosure contains 1.0 percent or more of methane, changes or adjustments in the ventilation of such installation shall be made at once so that the air shall contain less than one (1.0) percent methane.

(c) Dust accumulation in surface installations - Coal dust on surface structures, enclosures, or other facilities shall not be permitted to exist or accumulate in dangerous quantities.

43.15. Railroad equipment. (a) Railroad cars shall be maintained under control at all times. Cars shall be dropped at a safe rate of speed and in such a manner that will insure that the car dropper maintains a safe position while working and traveling around the cars. The car dropper shall control the trip from one (1) location and not drop more cars than can be controlled from such location. A car dropper shall not drop more than three (3) cars at one (1) time with one (1) brake.

(b) Railroad cars shall not be coupled or uncoupled manually from the inside of curves unless the railroad and cars are so designed to eliminate any hazard from coupling or uncoupling cars from inside curves.

(c) No person shall ride the drawhead or coupler of a railroad car. No person other than the car dropper shall ride cars. No car dropper shall ride the end of a car about to be coupled with another car if other brakes are available.

(d) Employees handling railroad cars shall have access to and use an approved distinct audible signaling device to give warning when cars are in motion. A car dropper shall only in case of an emergency, get on or off a moving car.

(e) Rail cars shall not be left on side tracks unless ample clearance is provided for traffic on adjacent tracks. Parked rail cars, unless held effectively by brakes, shall be blocked securely.

(f) Railroad cars shall be trimmed properly when they have been loaded higher than the confines of their cargo space.

(g) A minimum of thirty (30) inches continuous clearance from the farthest projection of moving railroad equipment shall be provided on at least one (1) side of the tracks; all places where it is not possible to provide thirty (30) inch clearance shall be marked conspicuously.

(h) Roadbeds, rails, joints, switches, frogs, and other elements on railroads shall be designed, installed and maintained in a safe manner consistent with the speed and type of haulage.

(i) Positive - acting stopblocks, derail devices, track skates, or other adequate means shall be installed where ever necessary to protect persons from runaway railroad equipment.

(j) Switch throws shall be installed so as to provide adequate clearance for switchmen.

(k) Where necessary, bumper blocks or the equivalent shall be provided at all track dead ends.

(l) Cars shall be inspected for broken steps, platforms and brake wheels and for defective brakes before dropping.

(m) Equipment operating speeds shall be consistent with conditions of roadways, grades, clearance, visibility, traffic and the type of equipment used.

(n) Safety belts shall be worn and properly attached by all car droppers handling railroad cars. All such belts shall be of a design to allow maximum safety to provide for immediate uncoupling.

43.16. Railroad track construction and maintenance. (a) All parts of the track haulage road under the ownership or control of the operator shall be strictly constructed and maintained. Rails shall be secured at all points by means of plates or welds. When plates are used, plates conforming with the weight of the rail shall be installed and broken plates shall be replaced immediately. Appropriate bolts shall be inserted and maintained in all bolt holes. The appropriate number of bolts conforming with the appropriate rail plate for the weight of the rail shall be inserted, tightly secured, and maintained.

(b) All points shall be installed and maintained so as to prevent bad connections. Varying weights of rail shall not be joined without proper adapters. Tracks shall be blocked and leveled and so maintained so as to prevent high and low joints.

(c) Tracks shall be gauged so as to conform with the track mounted equipment. Curves shall not be constructed so sharp as to put significant pressure on the trucks of the track mounted equipment.

(d) Severely worn or damaged rails and ties shall be replaced immediately.

(e) When mining operations are performed within any twenty-four (24) hour period, operations shall be inspected at least every twenty-four (24) hours to assure safe operation and compliance with the law and regulations. The results of which inspection shall be recorded.

(f) Personnel who are required frequently and regularly to travel on belts or chain conveyors extended to heights of more than ten (10) feet shall be provided with adequate space and protection in order that they may work safely. Permanent ladders extending more than ten (10) feet shall be provided with back guards. Walkways around thickeners that are less than four (4) feet above the walkway shall be adequately guarded. Employees required to work over a thickener shall wear a safety harness adequately secured, unless walkways or other suitable safety devices are provided.

§56-3-44. Coal Storage Bins; Recovery Tunnels; Coal Storage Piles.

44.1. (a) Coal storage bins hereafter constructed with vertical sides fifty (50) feet or over in height shall be provided with ventilators or louvers or both to provide adequate ventilation. Where roofs are constructed over coal storage bins, adequate ventilation shall be provided by stacks, ventilators, louvers or mechanical means.

(b) Where cutting or welding is performed at any location where coal is stored, means of prompt extinguishment of any fire accidentally started shall be provided, and the area where cutting or welding is performed shall be adequately watered down and rock-dusted.

(c) An escapeway shall be provided from any recovery tunnel hereafter constructed to a safe place on the surface; such escapeway shall be at least thirty (30) inches in diameter and where inclined, a ladder shall be provided to extend full length of the escapeway to facilitate emergency exit.

(d) Extreme caution shall be exercised by all employees required to work at or near coal storage piles during coal recovery operations to avoid injury by coal slides or by being in or drawn into a chute.

§56-3-45. Fire Protection.

45.1. Fire extinguishers. (a) A portable fire extinguisher containing a nominal weight of at least five (5) pounds shall be kept on each piece of mobile equipment.

(b) All portable fire extinguishers on equipment shall be properly secured.

45.2. Flammable liquids. (a) Flammable liquids, such as oils, greases, gasoline and such other like materials shall be stored in buildings, compartments or closed containers used for this purpose only.

(b) The storage of surplus gasoline, oil, or other fuels, other than that which is in the fuel tank, shall be prohibited on any piece of equipment except for diesel equipment using gasoline starting engines, in this instance one (1) extra gallon of gasoline in an approved safety can (flash arresting screen with self-closing lid) may be stored on the equipment securely fastened in a location on the equipment out of the way of moving objects.

(c) Flammable liquids shall not be used to clean machinery.

(d) Combustible materials, grease, lubricants, paints, flammable liquids, shall not be permitted to accumulate where fire hazards exist.

45.3. Fueling and storage. (a) Internal combustion engines, except diesels, shall be shut off and stopped before being fueled.

(b) Areas surrounding flammable liquid storage tanks, electric substations and transformers shall be kept free from grass, (dry) weeds, underbrush, and other combustible materials, for at least twenty-five (25) feet in all directions.

(c) Fuel lines on fuel storage tanks shall be equipped with valves to cut off fuel at the source and shall be located and maintained to minimize fire hazard.

(d) Smoking and use of open lights are prohibited in all places in which flammable materials are stored and in other places where there is a fire hazard.

45.4. Maintenance of fire fighting equipment. (a) Fire fighting equipment shall be continuously maintained in a usable and operative condition. Fire extinguishers shall be examined at least once every six (6) months. The date of such examination shall be recorded on a permanent tag attached to the extinguisher.

45.5. Warnings - Warning signs prohibiting smoking and open flames shall be posted where they can be readily observed in areas or locations where fire or explosion hazards exist.

45.6. Drills - Fire drills and demonstrations with various types of available fire-fighting equipment shall be held for employees at least once annually. A record of such demonstration shall be recorded.

§56-3-46. Duties of Persons Subject to Article; Rules and Regulations of Operators.

46.1. (a) It shall be the duty of the operators, mine foremen, supervisors, mine examiners, and other officials to comply with and to see that others comply with the provision of these rules and regulations.

(b) It shall be the duty of all employees to comply with these rules and regulations and to cooperate with management and the Department of Energy in carrying out the provisions hereof.

(c) Reasonable rules and regulations of an operator for the protection of employees and preservation of property that are in harmony with the provisions of these rules and regulations shall be complied with. They shall be printed on cardboard or in book form in the English language and posted at some conspicuous place about the mine or mines, and given to each employee upon request.

§56-3-47. Protective Equipment and Clothing.

47.1. Eye protection. (a) Welders and helpers shall use adequate shields or goggles to protect their eyes.

(b) All employees shall have approved goggles or shields and use the same where there is a hazard from flying particles, or other eye hazards.

47.2. Clothing. (a) Employees engaged in haulage operations and all other persons employed around moving equipment shall wear snug-fitting clothing.

(b) Protective gloves shall be worn when material which may injure hands is handled. Gloves with gauntleted cuffs shall not be worn around moving equipment.

47.3. Safety hats and safety toed shoes. (a) Safety hats and safety toed shoes shall be worn by all persons while in or around tipples or cleaning plants. Safety toed shoes shall be worn by all persons while in or around a surface mine tippie or cleaning plant.

(b) All surface mine employees shall be required to wear safety helmets when working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns: Provided, That such employees shall not be required to wear such safety helmet while operating machinery equipped with a falling object protective structure which satisfies the impact and penetration requirements established by the American National Standards Institute, Safety Requirements for Industrial Head protection, Standard Z89.1, unless the Director of the Department of Energy finds that the dangers set forth herein may be present: Provided, however, That such employees shall be required to wear safety helmets while not operating such equipment including periods of travel to and from such equipment. The safety helmets required hereunder shall meet the specifications for such helmets as prescribed by the mine health and safety administration.

47.4. Life jackets and belts. (a) Persons shall wear safety belts and lifelines where there is a danger of falling. A person shall continuously tend the lifeline when bins, tanks, auger holes, or other dangerous areas are entered.

(b) Life jackets or belts shall be worn where there is a danger from falling into water.

§56-3-48. First Aid Equipment.

48.1. First aid stations and equipment - Each operator of a surface coal mine, tippie, and preparation plant shall maintain a supply of first aid equipment. First aid equipment shall be located within one thousand (1,000) feet of the working pit, unless a ten (10) unit first aid kit is provided in the pit. When ten (10) unit kits are provided in the pit, such first aid equipment may be maintained within two thousand (2,000) feet of the pit area.

First aid equipment shall contain the following:

- (1) One stretcher.
- (2) One broken-back board, or approved combination stretcher.
- (3) Twenty-four triangular bandages.
- (4) Eight four-inch bandage compresses.
- (5) Sixteen two-inch bandage compresses.
- (6) Twelve one-inch adhesive compresses.
- (7) One foille.
- (8) Two approved blankets.
- (9) One rubber blanket.
- (10) Two tourniquets.
- (11) One one-ounce bottle of aromatic spirits of ammonia.
- (12) Two inflatable plastic leg splints.
- (13) Two inflatable plastic arm splints.
- (14) Six small splints, metal or wooden.
- (15) Two cold packs.

48.2. Proper storage of first aid supplies. All first aid supplies required to be maintained shall be stored in suitable sanitary, dust-tight, moisture proof containers. First aid supplies shall be accessible to the miners.

48.3. Emergency arrangements. (a) Each operator of a mine shall make arrangements with a licensed physician, medical service, medical clinic, or hospital to provide emergency medical assistance while any person is on duty at a mine.

(b) Each operator of a mine shall make arrangements with an approved ambulance service or otherwise provide for an approved emergency transportation while any person is on duty at a mine.

(c) Each operator shall have arrangements made with an ambulance service, or other emergency transportation facilities for injured persons to be transported from the work site to a licensed physician, medical service, medical clinic, or hospital provided pursuant to subsection (b) above, while people are actually employed at the operation.

(d) Each operator of a surface coal mine shall immediately after making arrangements required under this section, or immediately after any change of such agreement, post at the appropriate places at the mine, the names, titles, addresses, and telephone numbers of all persons and/or services currently available under such arrangements to provide medical assistance and transportation of injured persons at the mine.

48.4. Emergency communications. (a) Each operator of a surface mine shall provide two (2)-way communication at all times miners are present between all work sites at the mine and an emergency communication center which may be at the mine office or elsewhere at the mine.

(b) Each operator of a surface coal mine shall establish and maintain a direct two(2)-way communication system from such emergency communication center at the mine to the nearest point of medical assistance for use in an emergency. Except as hereinafter provided, such emergency communication system shall be by telephone. If telephone communication from the emergency communication center to the nearest point of medical assistance is not possible at any one (1) mine, the director may allow by permit such communication by radio transmission to any emergency assistance facility (e.g. state police, sheriff, local hospital) which has available the means of communication with the person or persons providing the requisite emergency medical assistance or transportation.

§56-3-49. Thermal Coal Dryers and Plants.

49.1. Thermal coal dryer plants shall be hereafter constructed, maintained and operated in compliance with the following provisions.

(a) Good housekeeping shall be practiced in and around thermal dryer plants.

(b) Adequate fire-fighting facilities shall be provided on all floors.

(c) When welding and cutting operations are to be performed in a dryer structure, the area shall be wetted down thoroughly and adequate fire-fighting apparatus shall be readily available during the operation.

(d) Only qualified persons shall be permitted to operate dryers; however, this provision shall not prohibit qualified persons from training other persons to become qualified operators.

(e) Dryer control panels shall be provided with audible and visible alarm devices; such devices should be adjusted to function at somewhat less than maximum dryer temperature.

(f) A bypass or relief stack equipped with an automatically operated damper shall be provided for by passing gases from the heating units to the outside atmosphere during emergency or normal shutdown operations.

(g) Thermal coal dryers hereafter installed shall not be enclosed except that roof may be used. Whenever it is deemed necessary to enclose thermal dryers, such equipment shall be in a fire proof structure.

(h) Dryer installations and discharge stacks shall be protected with adequate explosion release vents that open to the outside atmosphere.

(i) Thermal coal dryers shall be located at a safe distance from tipples, cleaning plants, mine openings and surface buildings, such as oil storage areas, explosive magazines, and other buildings where coal dust, sparks and flames are likely to enter and become ignited or otherwise cause danger of fires.

(j) Dryers shall be equipped with quick-response heat control devices which in the event of super elevated temperatures, will automatically divert the hot inlet gases into a bypass stack, thereby bypassing the drying chamber and at the same time stopping the fuel from being supplied to the air heater.

(k) All dryers, conveyors and other fine coal transporting machines shall be constructed as dust-tight as practicable. Where necessary, such equipment shall be provided with removable covers for inspection and cleaning and shall be provided with vent pipes to the outside atmosphere to permit the escape of distilled gases.

(l) Dryers shall be examined thoroughly after normal and emergency shutdown for fires and coal dust accumulations.

(m) Dryer controls, valves, and mechanical equipment shall be frequently inspected, and no dryer shall be operated with defective mechanical equipment.

(n) The gauges of temperature control instruments shall be of the recording type.

(o) Operating rules suitable for the characteristics of each dryer system and the materials processed shall be developed and shall be available at the control panel.

(p) Electrical equipment, electrical wiring and lighting fixtures shall be of dust-tight construction.

(q) Adequate illumination shall be provided.

(r) Dryers shall not be operated beyond their rated evaporation capacity.

(s) Fluid bed dryers shall be provided with water sprays of sufficient capacity for use in event of fire.

(t) After shutdown, thermal dryers shall be cleared of hot coals so as to minimize ignitions on succeeding start-ups.

(u) Thermal coal dryers previously installed in a tiple of cleaning plant shall be separated where practicable from other working areas by substantial partitions capable of providing greater resistance to explosion pressures than an exterior wall or walls.

(v) When it is necessary to use extension cables for emergency illumination, such lighting devices shall be dust-tight and adequately guarded. When it becomes necessary to perform work in dryer bins or any other dusty area, permissible cap lamps shall be used for illumination.

§56-3-50. Explosion or Accident; Notice: Investigation by Department of Energy.

50.1. Whenever, by reason or any explosion or other accident in or about any coal mine or the machinery connected therewith, loss of life, or serious personal injury shall occur, it shall be the duty of the superintendent of the mine, and in his absence, the mine foreman in charge of the mine, to give immediate notice to the Director of the Department of Energy and the inspector of the district, stating the particulars of such accident. If anyone is killed, the inspector shall immediately go the scene of such accident and make such recommendations and render such assistance as he may deem necessary for the future safety of the men, and investigate the cause of such explosion or accident and make a record thereof which he shall preserve with the other records of his office, the cost of such records to be paid by the Department of Energy, and a copy shall be furnished to the operator and other interested parties. To enable him to make such investigation, he shall have the power to compel the attendance of witnesses and to administer oaths or affirmations. The Director of the Department of Energy shall have the right to appear and testify and to offer any testimony that may be relevant to the question and to cross-examine witnesses.

§56-3-51. Preservation of Evidence Following Accident or Disaster.

51.1. Following a mine accident resulting in the death of one (1) or more persons and following any mine disaster, the evidence surrounding such occurrence shall not be disturbed after recovery of bodies or injured persons until an investigation by the Department of Energy has been completed.

§56-3-52. Monthly Report by Operator.

52.1. The operator of every surface mine shall, on or before the end of each calendar month, file with the Director of the Department of Energy a report covering the preceding calendar month on forms furnished by the director. Such reports shall state the number of accidents which have occurred, the number of persons employed, the days worked and the actual tonnage mined, on each permit issued by the Department of Natural Resources.

§56-3-53. Emergency Medical Personnel.

53.1. Emergency personnel in coal mines, emergency medical personnel shall be employed in every mine in the state. On or before the first day of July, one thousand nine hundred seventy-eight (1978), at least one (1) emergency medical attendant as defined in section 2(16-4C-2), article 4C, chapter 16 of this Code, paramedic as defined in section 2(30-3b-2), article 3B, chapter 30 of this code, or physician assistant as defined in section 1(30-3a-1), article 3A, chapter 30 of this code, shall be employed at a mine for every seventy (70) employees or any part thereof who are engaged at one (1) time, in the extraction, production or preparation of coal: Provided, That the provision of this section shall not apply to mines employing no more than ten (10) employees.

Said emergency medical attendants shall be employed at their regular duties at a central location convenient for quick response to emergencies, and further shall have available to them at all times such equipment as shall be prescribed by the director, in consultation with the director of the Department of Health.

§56-3-54. First Aid Training of Coal Mine Employees.

54.1. Each coal mine operator shall provide every new employee within six (6) months of the date of his employment with the opportunity for first aid training as prescribed by the director unless such employee has previously received such training. Each coal mine employee shall be required to take refresher first aid training of not less than five (5) hours within each twenty-four (24) months of employment. The employee shall be paid regular wages, or overtime pay if applicable, for all periods of first aid training.

§56-3-55. Certificate of Competency and Qualification or Permit of Apprenticeship Required of all Surface and Underground Mines.

55.1. Except as hereinafter provided, no person shall work or be employed for the purpose of performing normal duties as a surface or underground miner in any mine in this State unless he holds at the time he performs such duties a certificate of competency and qualification or a permit of apprenticeship issued under the provisions of Chapter 22, Article 2 of the West Virginia Code.

§56-3-56. Permit of Apprenticeship - Surface Miner.

56.1. A permit of apprenticeship - surface miner, shall be issued by the director to any person who has demonstrated by examination a knowledge of the subjects and skills pertaining to employment in the surface mining industry, including, but not limited to general safety, first aid, miner and operator rights and responsibilities, general principles of electricity, health and sanitation, heavy equipment safety, high walls and spoil banks, haulage, welding safety, tippie safety, state and federal mining laws and regulations and such other subjects as may be required by the board of miner training, education and certification: Provided, That each applicant for said permit shall complete a program of education and training of at least forty (40) hours, which program shall be determined by the board of miner training, education and certification and provided for and implemented by the director of the Department of Energy: Provided, however, That if a sufficient number of qualified applicants having successfully completed the state training provided by the state Department of Energy are not available, the operator may request approval from the director to conduct his own pre-employment training program so long as such training adequately covers the minimum criteria determined by the board and such trainees shall be eligible for the same certification as provided by the state.

§56-3-57. Supervision of Apprentices.

57.1. Each holder of a permit of apprenticeship shall be known as an apprentice. Any miner holding a certificate of competency and qualification may have one (1) person working with him, and under his supervision and direction, as an apprentice, for the purpose of learning and being instructed in the duties and calling of mining. Any mine foreman or assistant mine foreman may have three (3) persons working with him under his supervision and direction, as apprentices, for the purpose of learning and being instructed in the duties and calling of mining: Provided, That a mine foreman, assistant mine foreman supervising apprentices in an area where no coal is being produced or which is outby the working section may have as many as five (5) apprentices under his supervision and direction, as apprentices for the purpose of learning and being instructed in the duties and calling of mining or where the operator is using a production section under program for training of apprentice miners, approved by the board of miner training, education and certification.

57.2. Every apprentice working at a surface mine shall be at all times under the supervision and control of at least one (1) person who holds a certificate of competency and qualification. In all cases, it shall be the duty of every miner operator who employs apprentices to ensure that such persons are effectively supervised and to instruct such person in safe mining practices. Each apprentice shall wear a red hat which identifies him as such while employed at or near a mine. No person shall be employed as an apprentice for a period in excess of eight months, except that in the event of illness or injury, time extensions shall be permitted as established by the Director of the Department of Energy.

§56-3-58. Certificate of Competency and Qualification - Underground or Surface Miner.

58.1. A certificate of competency and qualification as an underground miner or as surface miner shall be issued by the director to any person who has at least six (6) months total experience as an apprentice and demonstrated his competence as a miner by successful completion of an examination given by the director or his representative in a manner and place to be determined by the board of miner training, education and certification: Provided, That all examinations shall be conducted in the English language and shall be of a practical nature, so as to determine the competency and qualifications of the applicant to engage in the mining of coal with reasonable safety to himself and his fellow employees: Provided, however, That notice of the time and place of such examination shall be given to management at the mine, to the local union there if there is a local union, and notice shall also be posted at the place or places in the vicinity of the mine where notices to employees are ordinarily posted. Examinations shall also be held at such times and places, and after such notice, as the board finds necessary to enable all applicants for certificates to have an opportunity to qualify for certification.

§56-3-59. Refusal to Issue Certificate; Appeal.

59.1. If the director or his representative find that an applicant is not qualified and competent, he shall so notify the applicant not more than ten (10) days after the date of examination. Any applicant aggrieved by an action of the director in failing or refusing to issue a certificate or qualification and competency may, within ten (10) days of notice of the action complained of, appeal to the director who shall promptly give the applicant a hearing and either affirm the action or take such action as should have been taken.

§56-3-60. Limitations of Article.

60.1. All persons possessing certificates of qualification issued by the Department of Energy of this State, entitling them to act as mine foreman fire bosses; or assistant mine foreman fire bosses; shall be eligible to engage at any

time as miners in the mines of this State. Supervisory and technically trained employees of the operator, whose work contributes only indirectly to mine operations, shall not be required to possess a miner's certificate. Notwithstanding the provisions of Chapter 22, Article 3, every person working as a surface miner in this State on or before the first day of July, one thousand nine hundred and seventy-four (1974) shall, upon application to the director, be issued a certificate of competency and qualification.

§56-3-61. Violations; Penalties.

61.1. Any person who knowingly works in or at a mine without a certificate issued under the provisions of this article, any person who knowingly employs an uncertified miner to work in or at a coal mine in this State, or, any operator who fails to insure the supervision of miners holding a certificate of apprenticeship as provided for in section five (22-6-5) of this article, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars (\$50) nor more than five hundred dollars (\$500).

§56-3-62. Operators Filing of Plans - Oil and Gas Wells.

62.1. Before a coal operator conducts surface or strip mining operations as defined in article 6, chapter 20 of this code, within two hundred (200) feet of any well, including the removal of coal and other material, the operator shall file with the Department of Energy and furnish to the well operator by certified mail, return receipt requested, its mining maps and plans (which it is required to prepare, file and update to and with the regulatory authority) for the area within two hundred (200) feet of the well, together with a notice, or a form furnished by the Department of Energy, informing them that the mining maps and plans are being filed or mailed pursuant to the requirements of this section, and representing that the planned operations will not unreasonably interfere with access to or operation of the well and will not damage the well. In addition, the coal operator shall furnish the well operator with evidence that it has in force public liability insurance, with at least the minimum insurance coverage required by Article 6, Chapter 20 of this code, and the rules and regulations promulgated thereto and thereunder. Once these mining maps and plans are filed with the Department of Energy, the coal operator may proceed with its surface or strip mining operations in the manner and as projected on such plans or maps, so long as such surface mining operations do not unreasonably interfere with access to, or operation of, the well or do not damage the well.

§56-3-63. Annual Examination of Persons Using Flame Safety Lamps; Record of Examination; Maintenance of Methane Detectors, Etc.

63.1. No person shall be qualified for testing for methane and for oxygen deficiency unless such person has been trained and demonstrates to the satisfaction of an authorized representative of the Director of the Department of Energy that he is qualified to test for methane with a flame safety lamp or other approved methane detector. Records of such examinations shall be kept by the operator and the Director of the Department of Energy. Persons whose duties require them to use a flame safety lamp and other approved detector, that have been qualified by the Department of Energy to test for methane and oxygen deficiency, shall be examined at least annually to their competence by a certified surface mine foreman, and a record that such examination was given, together with pertinent data relating thereto, shall be kept on file by the operator and a copy shall be furnished to the Department of Energy. Persons whose duties require them to administer the annual examinations for methane and oxygen deficiency shall be examined annually by a qualified official from the Department of Energy. Each operator shall provide for the proper maintenance and care of the permissible flame safety lamp or any other approved device for detecting methane and oxygen deficiency by a person trained in such maintenance, and before each shift, care shall be taken to insure that such lamp or other device is in a permissible condition. Flame safety lamps shall be given proper maintenance and inspection before each working shift in a manner recommended by the manufacturing company and approved by the director of the Department of Energy. Other approved gas detectors shall be given proper maintenance and shall be tested in accordance with the manufacturer's recommendations before each working shift and calibrated each thirty (30) calendar days.

TITLE 56 SERIES 4

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

EMERGENCY RULES GOVERNING PROTECTIVE CLOTHING AND EQUIPMENT

§56-4-1. General.

1.1 Scope. These emergency rules pertain to the implementation of provisions of W. Va. Code 22A-2-55, relating to the regulation of protective clothing and equipment worn by persons underground by the Office of Miners' Health, Safety and Training.

1.2 Authority. W. Va. Code § 22A-2-55.

1.3 Filing Date. April 26, 2007

1.4 Effective Date. April 26, 2007

§56-4-2. Preamble.

2.1. Purpose The primary goal of section fifty-five, article two, chapter twenty-two-a of the Code is to protect the health and safety of this State's coal miners by requiring minimum standards for the protective clothing and equipment worn by each underground miner. The purpose of these rules is to implement the mandate of section fifty-five, article two, chapter twenty-two-a of the Code by requiring coal mine operators to provide each underground miner with certain protective equipment and by detailing the requirements for such protective equipment. In implementing such mandate, it is recognized that different types of protective equipment may be developed to satisfy the minimum requirements for

protective equipment for each mine, depending upon the number of employees of the particular mine, the location of the particular mine, the physical features of the particular mine, and technological advances.

2.2 Escape is the primary procedure to be used by miners in the event of an emergency underground. Self-contained self-rescue devices ("SCSRs") are intended to isolate miners from hazardous gases and provide breathable air while attempting to escape the mine during an emergency. In the event that escapeways are impassable emergency shelters/chambers provide a source of breathable air for miners unable to escape from the mine. Wireless emergency communication and tracking/locating devices are intended to assist in exchanging information between escaping miners and between them and those on the surface following an accident and in locating miners to aid their escape. In addition to the purposes stated above, the intended purpose of this rule is to establish a regulatory regime enabling the advancement of mine safety and health technologies and the proper implementation of these technologies in West Virginia's underground mines.

§56-4-3. Definitions.

3.1 Unless herein defined, all terms used in this rule shall have the same meaning used in WV Code Chapter 22A, Articles 1-2 and 2-55, and in WV Code of State Rules Title 36, Series 3 – 13.

3.2 "Code" means the Code of West Virginia, 1931, as amended.

3.3 "Director" means the Director of the Office of Miners' Health, Safety and Training.

3.4 "Operator" means any firm, corporation, partnership, or individual operating any coal mine or part thereof, or engaged in the construction or maintenance of any facility associated with a coal mine, and shall include any independent contractor at a coal mine.

3.5 "Independent Contractor" means any firm, corporation, partnership or individual that contracts to perform services or construction at a coal mine, excluding mine vendors, office equipment suppliers, service or delivery personnel; Provided they or their employees do not go underground.

3.6 "Self-Contained Self-Rescuer" (SCSR) means a type of closed-circuit self-contained breathing apparatus or its equivalent approved by the Mine Safety and Health Administration of the United States Department of Labor for the purpose of isolating a miner from hazardous gases and providing breathable air to aid in an escape.

3.7 "SCSR Storage Cache" means a non-combustible container constructed to withstand normal mine conditions, protect a number of SCSRs, and allow easy access for inspection of the SCSRs and easy access for miners who are escaping.

3.8 "Emergency Shelter/Chamber" means an enclosed space located within 1,000 feet of the nearest working face with all sides made from man-made materials whose function is to protect the occupants from hazardous gases and provide breathable air in the event escape is not possible.

3.9 "Emergency communications" means the transmission and reception of voice, data and/or information regarding an unexpected event requiring immediate action.

3.10 "Wireless" means allowing individual communications by a miner through a mine communication and tracking/locating system without a physical connection.

3.11 "Communication device" means equipment that is a component of an integrated mine communication and tracking/locating system for purposes of emergency communication.

3.12 "Physical location" means the position of a miner in relation to a tracking device at a known location to enhance escape and/or rescue.

3.13 "Tracking/location" means knowing the physical location of miners at the moment of an accident and as escape progresses if the tracking/location system being used is still functional.

3.14 "Tracking/locating device" means equipment that is a component of an integrated mine communication and tracking/locating system for the purpose of providing the physical location of a miner during an emergency.

3.15 "Apparent-Temperature" means a heat stress indicator that considers the effects of temperature and humidity.

§56-4-4. Mine Safety Technology Task Force.

4.1. Within seven (7) calendar days of the effective date of these rules, the Director shall establish a Mine Safety Technology Task Force to provide technical and other assistance related to the implementation of the new technological requirements set forth in section fifty-five, article two, chapter twenty-two-a of the Code. The task force shall be comprised of three persons from the major employee organization representing coal miners in this state and three persons from the major trade association representing underground coal operators in this state. All actions of the task force shall be by unanimous vote.

4.2. The task force, working in conjunction with the Director, shall immediately commence a study to determine the commercial availability and functional and operational capability of the SCSRs, emergency shelters/chambers, wireless communication devices and wireless tracking devices required hereunder. The task force shall also study issues related to the implementation, compliance and enforcement of the safety requirements contained herein. Additionally, the task force may study related safety measures, including the provision of additional surface openings and/or escapeways in lieu of or in addition to the provision of SCSRs or emergency shelters/chambers. In conducting its study, the task force shall, where possible, consult with, among others, mine engineering and mine safety experts, radio communication and telemetry experts and relevant state and federal regulatory personnel.

4.3. The Director, or his designee, shall preside over all meetings of the working group.

4.4. Within ninety (90) calendar days of the effective date of these rules, the task force shall provide the Director with a written report summarizing its findings regarding the commercial availability and functional and operational capability of the SCSRs, emergency shelters/chambers, wireless communication devices, wireless tracking devices and related safety measures required hereunder. The report shall also include the task force's findings and recommendations regarding implementation, compliance and enforcement of the safety requirements contained herein. The report also shall set forth the task force's recommended implementation, compliance and enforcement plans regarding the aforementioned technologies.

4.5. Prior to approving any emergency shelter/chamber, wireless communication device or wireless tracking device pursuant to the provisions of sections 5.4, 8.1, and 9.1 of these rules, respectively, the Director shall review the task force's written report and the findings set forth therein and shall consider such findings in making any approval determination.

4.6 The Director shall convene the Mine Safety Technology Task Force not less than once per month.

§56-4-5. Self-Contained self-rescue devices provided for escape from mines.

5.1. Each miner underground shall be provided a SCSR in accordance with the provisions of WV Code Chapter 22A, Article 2 – 55(f). In addition, the operator shall provide caches of additional SCSRs throughout the mine in accordance with a Storage Cache Plan approved by the Director pursuant to WV CSR Title 56, Series 4 – 6.

5.2 Each SCSR shall be approved for at least sixty (60) minutes by the Mine Safety and Health Administration (MSHA) of the United States Department of Labor; Provided, that nothing contained herein shall preclude an operator from providing each miner underground a SCSR with an MSHA approved rating less than sixty (60) minutes of breathable air that is adequate to provide for twice the travel time as defined in the chart in WV CSR Title 56 Series 4 – 6, or an escape facility.

5.3 Each operator shall provide training in the proper use of SCSRs in simulated emergency situations in all required SCSR training; Provided, that such simulations may be conducted on the surface. Training shall be in compliance with all manufacturers' requirements and shall include but not limited to: the risks of toxic gases, manufacturers' required daily inspections, donning and starting the SCSR, limitations of the SCSR, ways to maximize duration of the unit, changing between SCSRs, communication without removing the mouthpiece, importance and use of goggles, how to know if the device has failed and what to do if it does.

5.4 Pursuant to WV Code Chapter 22A, Article 1 – 23, operators and independent contractors shall report to the Director all SCSRs in-service by manufacturer, model, serial number, mine/contractor ID#, service dates, and results of required inspections. This information shall be submitted electronically as defined by the Director, updated quarterly and will include information on any units removed from service along with the reasons.

5.5 The Director shall compile and analyze the results of the information and distribute a report within 30 days by posting the report on the MHS&T web page, <http://www.wvminesafety.org>.

§56-4-6. Self-Contained Self-Rescue Device Storage Cache Plan.

6.1. Within thirty (30) calendar days of the effective date of this rule, all operators of all mines shall submit a SCSR Storage Cache Plan for approval by the Director in accordance with WV Code Chapter 22A, Article 1 - 36. The design, development, submission, and implementation of the SCSR Storage Cache Plan shall be the responsibility of the operator of each mine.

6.2. Operators shall revise all approved SCSR storage cache plans and submit those to the Director no later than 60 days after any amendments to this rule become final.

6.3 Within thirty (30) calendar days after submission of the SCSR Storage Cache Plan, the Director shall either approve the plan as submitted, or shall reject and return the plan to the operator for modification and resubmission, stating in detail the reasons for such rejection. If the plan is rejected, the Director shall give the operator a reasonable length of time, not to exceed fifteen (15) calendar days, to modify and resubmit such plan.

6.4 In developing the SCSR Storage Cache Plan, the operator shall take into consideration the needs for SCSRs, in the accidents described in WV Code Chapter 22A, Article 2 – 66, the number of employees of the particular mine, the location of the particular mine, the physical features of the particular mine, and any other aspect of the particular mine the operator deems relevant to the development of the Storage Cache Plan.

6.5 Each SCSR Storage Cache shall be housed in a container constructed as to protect the SCSRs from normal operational damage, be made of a material that is non-combustible, shall be easy to open during an emergency escape, shall be noted on the escapeway map, required by WV Code Chapter 22A, Article 2 – 1, and included in the mine rescue plan pursuant to WV Code Chapter 22A, Article 1 – 35(q).

6.6 One SCSR storage cache shall be placed at a readily available location within five hundred (500) feet of the nearest working face in each working section of the mine and each active construction or rehabilitation site. Distances greater than five hundred (500) feet not to exceed one thousand (1,000) feet, are permitted with approval of the Director. However, where miners are provided with personal SCSRs MSHA rated for less than sixty (60) minutes, travel to these storage caches are not to exceed five (5) minutes as determined by the height/travel time table as specified in WV Code of State Rules Title 56 Series 4 – 6.9(2).

6.7 Each of the storage caches specified in Section 6.6 shall contain two (2) SCSRs that will provide at least sixty (60) minutes of MSHA rated duration per unit for each miner. When each miner carries a SCSR that is MSHA rated for less than sixty (60) minutes, the storage cache shall hold devices equivalent to three (3) sixty (60) minute MSHA rated SCSRs for each miner. The total number of SCSRs in a stationary storage cache location will be based on the total

number of miners reasonably likely to be in that area. During crew changes involving a mantrip at a working section or an active construction or rehabilitation site, a number of mantrip cached sixty (60) minute or greater MSHA rated SCSRs equal to the total number of miners reasonably likely on the mantrip shall satisfy the total number of SCSRs required for such personnel.

6.8 Operators shall ensure that storage caches required in Section 6.6 contain an escape kit containing a hammer, a tagline, a supply of chemical light sticks, and an escapeway map required by WV Code Chapter 22A, Article 2 – 1.

6.9 Additional storage caches of sixty (60) minute or longer MSHA rated SCSRs shall also be placed in readily available locations throughout the remainder of the mine as follows:

(1) Beginning at the storage cache located at the working section or active construction or rehabilitation site and beltlines, pumping and bleeder area, and continuing to the surface or nearest escape facility leading to the surface pursuant to WV Code Chapter 22A, Article 2 – 60, the operator shall station additional storage caches of sixty (60) minute or longer MSHA rated SCSRs containing a number of additional SCSRs equal to or exceeding one each for the total number of miners reasonably likely to be in that area at calculated intervals that a miner may traverse in no more than thirty (30) minutes traveling at a normal pace, taking into consideration the height of the coal seam and utilizing the travel times as specified in WV CSR Title 56, Series 4 – 6 – 9.2. If a SCSR has an MSHA approved duration greater than sixty (60) minutes, the intervals between storage caches shall be calculated at the distance traveled in one-half the approved duration.

(2) Said intervals shall be calculated in accordance with the following:

Height	Travel/Minute	Height	Travel/Minute
28 inches	70 feet	56 inches	180 feet
32 inches	90 feet	60 inches	220 feet
36 inches	100 feet	64 inches	270 feet
40 inches	120 feet	68 inches	280 feet
44 inches	135 feet	72 inches	290 feet
48 inches	150 feet	76 inches	295 feet
52 inches	160 feet	80 inches	300 feet

6.10 The Storage Cache Plan shall include the following:

- (1) The size and physical features of the mine;
- (2) The maximum number of miners underground during each working shift;
- (3) The proposed location of the various storage caches and the emergency shelter/chamber in relation to miners underground; and
- (4) (a) A schedule of compliance, which shall include:
 - (1) A narrative description of how the operator will achieve compliance with 56 CSR 4 – 6.
 - (2) A schedule of measures, including an enforceable sequence of actions with milestones, leading to compliance; and
 - (3) A statement indicating when the implementation of the proposed plan will be complete.

6.11 Each operator shall submit as attachments to its SCSR Storage Cache Plan the following:

- (1) A statement that the analysis and evaluation required by Section 6.3 of these rules has been completed;
- (2) A statement indicating the training dates for the use of the SCSRs; and
- (3) The name of the person or persons representing the operator, including his or her title, position, mailing address and telephone number, who can be contacted by the Director for all matters relating to the Storage Cache Plan and the weekly inspections of each storage cache.

6.12 Within thirty (30) calendar days of the Director's approval of the plan, the operator shall submit to the Director a copy of any contract, purchase order, or other proof of purchase of any such number of additional SCSRs consistent with the operator's schedule of compliance.

6.13 After the Director has approved an operator's SCSR Storage Cache Plan, the operator shall submit revisions to the plan at any time that changes in the operational conditions result in substantive modifications. In addition, at any time after the Director has approved an operator's Storage Cache Plan, the operator may submit proposed modifications or revisions to its plan along with the reasons therefore to the Director.

(1) Within thirty (30) calendar days after receipt by the Director of any proposed revisions or modifications to the Storage Cache Plan, the Director shall either approve or reject the revisions, stating in detail the reasons for such rejection.

(2) The Director may require modifications to a Storage Cache Plan at any time following the investigation of a fatal accident or serious injury, as defined by WV CSR Title 36, Section 19 – 3.2, if such modifications are warranted by the findings of the investigation.

6.14 If the Director, in his sole discretion, determines that an operator has failed to provide a SCSR Storage Cache Plan or progress report, has provided an inadequate SCSR Storage Cache Plan or progress report, has failed to comply with its approved SCSR Storage Cache Plan or compliance schedule, or has failed to provide a copy of any contract, purchase order or other proof of purchase required under this section, in an effort to delay, purchase required under this section, an effort to delay, avoid or circumvent compliance with WV Code Chapter 22A, Article 2 – 55 or this

rule, the Director shall issue a cessation order to the operator for the affected mine in accordance with WV Code Chapter 22A, Article 1 – 15.

§56-4-7. Placement of Intrinsically Safe Battery-Powered Lights and Lifeline Cords.

7.1. Intrinsically safe battery-powered strobe lights approved by the Director shall be affixed to each storage cache of SCSRs and shall operate continuously or be capable of automatic activation in the event of an emergency.

(1) All intrinsically safe battery-powered strobe lights affixed to each storage cache of SCSRs shall be approved by the Director and MSHA and maintained in accordance with applicable MSHA requirements.

(2) Prior to approval of any MSHA certified intrinsically safe battery-powered strobe light, the Director shall have prepared an independent analysis of the added risk incurred from battery-powered devices throughout the mine in the event of a catastrophic explosion.

(3) The Director, if determining that intrinsically safe battery-powered strobe light present an acceptable risk, shall review those rated intrinsically safe by MSHA and may approve them for use in West Virginia mines. A list of approved intrinsically safe battery-powered strobe lights shall be maintained on the MHS&T web site.

7.2. A reflective sign with the words "SELF-RESCUER" or "SELF-RESCUERS" shall be conspicuously posted at each such cache and reflective direction signs shall be posted leading to each cache.

7.3. Lifeline cords installed in primary escapeways shall be attached to each storage cache container and extend from the last permanent stopping to the surface or nearest escape facility, excluding belt and track entries, and must:

(1) be made of durable material;

(2) be marked with reflective material every twenty-five (25) feet;

(3) be located in such a manner for miners to use effectively to escape; and

(4) have directional indicators signifying the route of escape placed at intervals not exceeding one hundred (100) feet.

(5) In lieu of installed lifelines in track or belt entries, markers such as floor mats with arrows, fish plate reflectors, red/green lasers shall be installed at distances not to exceed 1,000 feet or line of sight, or other equivalent devices may be used if approved by the Director.

§56-4-8. Emergency Shelters/Chambers.

8.1 An emergency shelter/chamber shall be maintained within one thousand (1,000) feet of the nearest working face in each working section. Such emergency shelter/chamber shall be approved by the Director and shall be constructed and maintained in a manner prescribed by the Director.

8.2 The Director may approve, as an alternative to a shelter/chamber, an additional surface opening located no more than 1,000 feet from the nearest working face and accurately located on escapeway maps as required in WV Code Chapter 22A, Article 2 – 1.

8.3 The Director shall acquire, no later than July 1, 2006, the necessary technical/engineering support needed to evaluate the performance of emergency shelter/chamber components/systems, and to review the effectiveness of emergency shelter/chamber plans.

8.4 The Director shall, no later than July 10, 2006, issue an open opportunity for emergency shelter/chamber providers to submit products for approval. The Director shall maintain a current list of pending and approved emergency shelter/chambers on the West Virginia MHS&T web site <http://www.wvminesafety.org>.

8.5 Providers of emergency shelter/chamber seeking approval shall submit documentation prescribed by the Director that shall include a certification by an independent West Virginia licensed professional engineer that the proposed product meets the requirements set forth in Section 8, a description of the process used in making that determination and a certification in the following form: "I, the undersigned, hereby certify that this product, to the best of my knowledge and belief, meets or exceeds all requirements set forth in WV CSR Title 56 Series 4 – 8."

8.6 Any emergency shelter/chamber approved by the Director shall:

(1) Provide a minimum of 48 hours life support (air, water, emergency medical supplies, and food) for the maximum number of miners reasonably expected on the working section;

(2) Be capable of surviving an initial event with a peak overpressure of 15 psi for 3 seconds and a flash fire as defined by National Fire Protection Association standard NFPA-2113 of 300 degrees Fahrenheit for 3 seconds;

(3) Be constructed such that it will be protected under normal handling and pre-event mine conditions;

(4) Provide for rapidly establishing and maintaining an internal shelter atmosphere of oxygen above 19.5%, carbon dioxide below 0.5%, carbon monoxide below 50 ppm, and an apparent-temperature of 95 degrees Fahrenheit;

(5) Provide the ability to monitor carbon monoxide and oxygen inside and outside the shelter/chamber;

(6) Provide a means for entry and exit that maintains the integrity of the internal atmosphere;

(7) Provide a means for MSHA certified intrinsically safe power if power required;

(8) Provide a minimum eight quarts of water per miner;

(9) Provide a minimum of 4,000 calories of food per miner;

(10) Provide a means for disposal of human waste to the outside of the shelter/chamber;

(11) Provide a first aid kit as defined at WV Code Chapter 22A, Article 2 – 59(3)(b) independent of the section first aid kit required by WV Code Chapter 22A, Article 2 – 59(3) and 2 – 60(f);

(12) Have provisions for inspection of the shelter/chamber and contents;

(13) Contain manufacturer recommended repair materials;

(14) Provide a battery-powered occupant-activated strobe light of a model approved by the Director that is visible from the outside indicating occupancy;

(15) Provide provisions for communications to the surface; and

(16) Provide proof of current approval for all items and materials subject to MSHA approval.

8.7 No later than April 15, 2007 all underground mine operators shall submit an emergency shelter/chamber plan for approval by the Director in accordance with WV Code Chapter 22A, Article 1 – 36. The design, development, submission, and implementation of the shelter/chamber plan shall be the responsibility of the operator of each mine.

8.8 Within thirty (30) calendar days after submission of the emergency shelter/chamber plan, the Director shall either approve the emergency shelter/chamber plan or shall reject and return the plan to the operator for modification and resubmission, stating in detail the reason for such rejection. If the plan is rejected, the Director shall give the operator a reasonable length of time, not to exceed fifteen (15) calendar days, to modify and resubmit such plan.

8.9 Within 15 days of approval of the emergency shelter/chamber plan by the Director, the underground mine operator shall submit as an addendum to its emergency shelter/chamber plan a copy of any contract, or purchase order, or other proof of purchase of any equipment required to complete the emergency shelter/chamber and for installation and ongoing maintenance.

8.10 The operator shall submit certified progress reports no less frequently than every sixty (60) calendar days until full compliance is achieved.

8.11 After the Director has approved an operator's emergency shelter/chamber plan, the operator shall submit revisions to the emergency shelter/chamber plan at any time that changes in operational conditions result in substantive modification. In addition, at any time after approval, the operator may submit proposed modifications or revisions to its plan along with reasons therefore to the Director. Within thirty (30) days after receipt by the Director of any proposed revisions or modifications to the emergency shelter/chamber plan, the Director shall either approve or reject the revisions, stating in detail the reasons for such rejection.

8.12 In developing the emergency shelter/chamber plan and any revisions, the operator shall take into consideration the physical features of the particular mine, emergency plans, advances in emergency shelter/chamber technologies and any other aspect of the particular mine the operator deems relevant to the development of the emergency shelter/chamber plan.

8.13 A copy of the approved emergency shelter/chamber plan shall be provided to the mine rescue teams providing coverage for the mine and included in the mine rescue program required by WV Code 22A, Article 1 – 36(q). Copies of the most recent version shall be available at the mine for emergency responders. As changes are made to the approved emergency shelter/chamber plan, updated versions shall be submitted to the above parties.

8.14 The proposed emergency shelter/chamber plan shall:

(1) Describe the structure and operations of the emergency shelter/chamber, the surveyed location of the shelter drilling operations to the shelter/chamber and the shelter/chamber's role in emergency response;

(2) Ensure that proper emergency shelter/chamber use is included in initial mine hazard training in such a manner that it is in compliance with all manufacturer's requirements and is provided yearly in addition to annual refresher training. All training shall be recorded and made available upon request;

(3) Ensure weekly inspections of emergency shelters/chambers and contents shall be conducted by a certified mine foreman and/or mine examiner and recorded in weekly ventilation examination book;

(4) Ensure that weekly safety meetings review the current location of applicable emergency shelters/chambers and results of the latest inspection;

(5) Ensure that all opening to emergency shelters/chambers shall be equipped with easily removable tamper-proof tags such that a visual indication of unauthorized access to the emergency shelter/chamber can be detected; and

(6) Ensure that the mine's communication center shall monitor any communication systems associated with the emergency shelter/chamber at all times that the mine is occupied.

8.15 If the Director, in his sole discretion, determines that an operator has failed to provide an emergency shelter/chamber plan or progress report, has provided an inadequate emergency shelter/chamber plan or progress report, has failed to comply with its approved emergency shelter/chamber plan or compliance schedule, or has failed to provide a copy of any contract, purchase order or other proof of purchase required under this section, in an effort to delay, avoid or circumvent compliance with WV Code Chapter 22A, Article 2 – 55 or this rule, the Director shall issue a cessation order to the operator for the affected mine.

8.16 If there are no emergency shelters/chambers approved by May 29, 2007, operators shall install in lieu of an emergency shelter/chamber, within one thousand (1,000) feet of the nearest working face in each working section, storage caches of SCSRs sufficient to provide each miner reasonably expected to be at the working section with no less than sixteen (16) additional SCSRs rated by MSHA each for a duration of sixty (60) minutes or greater, or an equivalent amount of breathable air and barricading materials described at WV Code Chapter 22A, Article 2 – 58(n).

8.17 As provided in WV Code Title 22A, Articles 2 – 55(f)(3), 2 – 55(g)(2), and 2 – 55(h)(2) any person that, without the authorization of the operator or the Director, knowingly removes or attempts to remove emergency shelter/chamber or its contents approved by the Director from the mine or mine site with the intent to permanently deprive the operator of the device or knowingly tampers with or attempts to tamper with such a device shall be deemed guilty of a felony and, upon conviction thereof, shall be imprisoned in a state correctional facility for not less than one year nor more than ten years, or fined not less than ten thousands dollars nor more than one hundred thousand dollars, or both.

§56-4-9. Wireless Emergency Communication and Tracking/Locating systems.

9.1 The Director shall require, in each underground mine, an integrated communication and tracking/locating system maintained consistent with WV CSR Title 36, Series 5 – 3.2 and a component of which shall be a communication center monitored at all times during which one or more miners are underground. A wireless emergency communication and tracking/locating device approved by the Director shall be worn by each miner underground and shall be provided by the operator.

9.2 As soon as practicable, the Director shall notify all operators of the wireless emergency communication and tracking/locating devices approved by the Director for use by each miner underground pursuant to WV Code Chapter 22A, Article 2 – 55.

9.3 The Director shall acquire, no later than July 1, 2006, the necessary technical/engineering support to evaluate the performance of individual communication/tracking devices and review the effectiveness of proposed communication/tracking plans.

9.4 The Director shall, no later than July 10, 2006, issue an open opportunity for emergency communication and tracking/locating providers to submit products for approval.

9.5 The Director shall require providers seeking approval submit documentation certified by a license West Virginia professional engineer that the product has been tested for functionality in West Virginia underground mines, that the product has been or is in the process of being approved as intrinsically safe by MSHA and other criteria as the Director determines, a description of the process used in making that determination and a certification in the following form: “I, the undersigned, hereby certify that this product, to the best of my knowledge and belief, meets or exceeds all requirements set forth in WV CSR Title 56, Series 4 – 9”, that the product has been tested for functionality in West Virginia underground mines, that the product has been or is in the process of being approved as intrinsically safe by MSHA and other criteria as the Director determines.

9.6 No later than July 31, 2007 all underground mine operators shall submit a communication/tracking plan for approval by the Director in accordance with WV Code Chapter 22A, Article 1 – 36. The design, development, submission, and implementation of the communication/tracking plan shall be the responsibility of the operator of each mine.

9.7 Within thirty (30) calendar days after submission of the communication/tracking plan, the Director shall either approve the communication/tracking plan, or shall reject and return the plan to the operator for modification and resubmission, stating in detail the reason for such rejection. If the plan is rejected, the Director shall give the operator a reasonable length of time, not to exceed fifteen (15) calendar days, to modify and resubmit such plan.

9.8 Within fifteen (15) days of approval by the Director, the underground mine operator shall submit as an addendum to its plan, a copy of any contract, or purchase order, or other proof of purchase of any equipment required to complete the communication/tracking system and for installation and ongoing maintenance.

9.9 The operator shall submit certified progress reports no less frequently than every sixty (60) calendar days until full compliance is achieved.

9.10 If the Director, in his sole discretion, determines that an operator has failed to provide a communication/tracking plan or progress report, has provided an inadequate communication/tracking plan or progress report, has failed to comply with its approved communication/tracking plan or compliance schedule, or has failed to provide a copy of any contract, purchase order or other proof of purchase required under this section, in an effort to delay, avoid or circumvent compliance with WV Code Chapter 22A, Article 2 – 55 or this rule, the Director shall issue a cessation order to the operator for the affected mine under WV Code Chapter 22A, Article 1 – 15.

9.11 In developing the communication/tracking plan and any revisions, the operator shall take into consideration the needs for emergency communications and tracking/locating resulting from accidents as described at WV Code Chapter 22A, Article 2 – 66(a), physical features of the particular mine, emergency plans, existing communication infrastructure, communications required under WV Code Chapter 22A, Article 1 – 35(k) and 2 – 42, and WV CSR Title 26, Series 2 – 2 and 5 – 2, advances in communication/tracking technologies and any other aspect of the particular mine the operator deems relevant to the development of the communication/tracking plan.

9.12 The proposed communication/tracking plan shall describe the structure and operations of the separate or integrated communication/tracking system(s) and its role in emergency response specific to the mine shall be detailed and submitted to the Director and, once approved, to the mine rescue teams providing coverage with an updated mine rescue program pursuant to WV Code Chapter 22A, Article 1 – 35(q). Copies of the most recent version shall be available at the mine for emergency responders. As changes are made to the system, updated versions shall be submitted to the above.

9.13 The proposed communication/tracking system shall include the ability for:

(1) A communication center monitored at all times during which one or more miners are underground.

(a) This center shall be staffed by miners holding a valid underground miners certificate, and trained and knowledgeable of the installed communications/tracking systems, monitoring and warning devices, travelways, and mine layout.

(b) Individuals not possessing a valid underground miner's certificate but working full time as a communication center operator on or before May 25, 2006 shall be allowed to continue as communications center operators at that mine provided they will have successfully completed no later than December 31, 2006 a certified 80 hour underground miners apprentice training program, as defined in WV CSR Title 48, Series 2 – 2.7(a), renewed annually pursuant to WV CSR Title 48, Series 2 – 2.8(a) and documentation is available for inspection consistent with WV CSR Title 36, Series 24 – 5;

- (2) Knowing the location of all miners immediately prior to an event by tracking/locating device in the escapeways, normal work assignments, or notification of the communication center;
- (3) Knowing the location of miners in the escapeways after an event providing the tracking system is still functional;
- (4) Check-in and check-out with the communication center by miners prior to entrance and exit from bleeders and remote or seldom used areas of the mine (all times shall be logged);
- (5) Allowing two-way communications coverage in at least two separate air courses and at least one of which shall be intake;
- (6) Maintaining communication/tracking after loss of outside power and maintain function both inby and outby of the accident event site with suitable supply of equipment for rapid reconnection;
- (7) Maintain a surface supply of communication/tracking devices for use by emergency rescue personnel;
- (8) Allow for communication to surface at all required emergency shelters/chambers;
- (9) All miners and likely emergency responders shall be trained in the use, limitations and inter-operability of all components of the communication and tracking/locating system. This shall be incorporated into ongoing required training. All training shall be recorded and made available upon request.

9.14 The operator shall provide a schedule of compliance for the communication/tracking plan, which shall include:

- (1) A narrative description of how the operator will achieve compliance with above requirements;
- (2) A schedule of measures, including an enforceable sequence of actions with milestones, leading to compliance; and
- (3) A statement indicating when the implementation of the proposed plan will be complete.

9.15 The operator shall provide as attachments to its communication/tracking plan:

- (1) A statement of the analysis and evaluation required in developing its plan;
- (2) A statement indicating the initial training dates for implementation of the communication/tracking system and how the communication/tracking system will be incorporated in other required training;
- (3) A statement regarding how the communications/tracking system will be tested and maintained; and
- (4) The name of the person or persons representing the operator, including his or her title, mailing address, e-mail address and telephone number, who can be contacted by the Director for all matters relating to the communication/tracking plan and weekly testing of the system.

9.16 After the Director has approved an operator's communication/tracking plan, the operator shall submit revisions to the communications plan at any time that changes in operational conditions result in a substantive modification in the communication/tracking system. In addition, at any time after approval, the operator may submit proposed modifications or revisions to its plan along with reasons therefore to the Director. Within thirty (30) days after receipt by the Director of any proposed revisions or modifications to the communications/tracking plan, the Director shall either approve or reject the revisions, stating in detail the reasons for such rejection.

9.17 The Director may require modifications to a communication/tracking plan at any time following the investigation of a fatal accident or serious injury, as defined by WV CSR Title 36 Series 19 – 3.2, if such modifications are warranted by the findings of the investigation.

TITLE 56 SERIES 5
STANDARDS FOR CERTIFICATION OF BLASTERS FOR SURFACE COAL MINES AND
SURFACE AREAS OF UNDERGROUND MINES
(REPEALED)

Editor's Note: This rule has been repealed by Title 38, Series 2C, Section 1.8 a Legislative Rule of the Division of Environmental Protection (38-2C-1.8). Series 2C sets forth the standards for certification of blasters for surface coal mines. Authority under Series 5 was transferred to the Division of Environmental Protection by executive order under the authority of West Virginia Code §22-1-9.

TITLE 56 SERIES 6
OPEN PIT MINES, EXCLUSIVE OF SURFACE MINES

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

§56-6-1. General.

- 1.1 Scope. Rules and Regulations Governing open Pit Mines, Exclusive of Surface Mines.
- 1.2 Authority. W. Va. Code 22A-6-3, 29A-3
- 1.3 Filing Date. August 11, 1969
- 1.4 Effective Date. September 11, 1969

§56-6-2. Excavating.

- 2.1. Highwall overburden shall be sloped to minimize slides and overhanging ledges and all loose material scaled.
- 2.2. If the highwall shows evidence of movement, or appears to be weakened in any way, the area shall be made safe or abandoned and dangered off.
- 2.3. When open pit mines work at night, the vicinity in which the work is performed shall be well illuminated.

2.4. When an open pit mine is worked over an underground mine, the interval between mines shall be adequate to insure the safety of persons in the mine.

2.5. In the event of the collapse of the floor of an open pit mine into an underground mine, both mines shall be immediately closed, until this condition is made safe.

2.6. Persons scaling highwalls shall wear a safety harness that is adequately secured.

2.7. Blasted materials shall be loaded in such manner as to minimize the danger of rock slides endangering workmen.

§56-6-3. Drilling.

3.1. While a drill is operating, the operator shall not leave the machine.

3.2. Employees shall keep in the clear of any drill stem while it is in motion.

3.3. When a churn drill or a vertical rotary drill is used, the driller shall not work under its suspended tools.

3.4. Vertical drillholes shall be blocked before moving the drill to a new location. ventilated and in which miners are extracting coal from its natural deposit.

3.5. Drilling equipment shall be inspected daily and hazardous defects corrected promptly.

§56-6-4. Explosives and Blasting.

4.1. Permissible explosives applicable to local conditions shall be used exclusively.

4.2. Primers shall not be made up until the charge is ready to be inserted in the hole. All holes, or series of holes, containing electric detonators shall be fired immediately after being charged or at end of shift: Provided, **however**, That if, for any reason, the holes cannot be fired immediately or at end of shift, all work shall cease within a radius of two-hundred (200) feet of blast area, and work shall not commence again until the holes have been fired. This rule does not apply if primer cord is used.

4.3. Frozen explosives shall not be used.

4.4. The shot firer shall wait fifteen (15) minutes before returning to a misfired shot, except when using an electric blasting cap.

4.5. Extra precaution shall be taken in recovering of the explosive and blasting cap from a misfired shot.

4.6. Immediately after each blast the shot firing cables shall be immediately disconnected from the blasting unit and shunted.

4.7. Explosives shall not be handled or used during an electrical storm.

4.8. Magazines shall be located at least two hundred (200) feet from the face and roadway and out of the line of blasting.

4.9. Trailer vans may be used for the temporary storing of explosives: Provided, however, That it is located in accordance with the American Table of Distances to inhabited buildings, passenger railroads and public highways. The trailer vans shall be provided with substantial means for locking, and the doors shall be kept locked, except for the placement and removal of stock.

4.10. Only competent persons designated by management shall handle explosives and do blasting.

4.11. Only electric detonators of proper strength shall be used and they must be fired with permissible shot firing units.

4.12. Drill holes shall be cleaned of cuttings before being charged.

4.13. Ample warning shall be given and care taken that all persons are in the clear before firing any shot.

4.14. After firing a shot the shotfirer, or any other person, shall not return to the working face until the smoke has cleared.

4.15. The number of holes fired in any one round shall not exceed the limit of the permissible firing unit used.

4.16. The shot firing circuit shall be tested with a galvanometer before firing.

4.17. While bore holes are being charged, equipment shall not be operated in the immediate area.

4.18. All shooting shall be done at the end of the working shift.

4.19. Two-way radio on motor vehicles shall not be used in a mine while shots are being loaded.

4.20. Tamping poles shall be made of wood or other non-sparkable material.

4.21. Shooting stations shall be kept locked when not in use and only authorized persons shall have the keys.

4.22. Prill loading machines shall be of an approved type and equipped with static strip hose and grounded.

4.23. When caps and fuse are used an approved cap crimper shall be used.

4.24. When shots are fired by means of caps and fuse, two or more persons shall do the firing.

§56-6-5. Operation of Equipment.

5.1. Operators of shovels, draglines, tractors, and head-end bucket loaders shall not operate such equipment when a person or persons are within proximity to be endangered.

5.2. Operators of equipment which have a dipper or bucket shall not swing the dipper or bucket over passing haulage units.

5.3. The dipper of a shovel, or dragline, or head-end bucket loader shall always be swung over the body of the truck.

5.4. No person or persons shall remain in the cab of a truck while said truck is being loaded, unless the cab is shielded.

5.5. Workmen shall not get on or off draglines or shovels without first notifying the operator.

5.6. Before greasing or repairing a boom, the boom shall be lowered to permit the work to be performed from the ground, if the boom is not equipped with a handrail or ladder.

5.7. Operators shall practice good housekeeping.

5.8. Dump bodies of trucks shall be properly blocked when raised for any purpose except dumping.

§56-6-6. Fire Protection.

6.1. Fire extinguishers of correct type and ample capacity shall be kept on each piece of mobile equipment and in all buildings.

6.2. Flammable liquids, such as oils, greases, gasoline and such other like materials, shall be stored in buildings, compartments, or closed containers used for this purpose only.

6.3. Smoking and use of open lights are prohibited in all places in which flammable materials are stored and in other places where there is a fire hazard.

6.4. The storage of surplus gasoline, oil, or other fuels, other than that which is in the fuel tank, shall be prohibited on any piece of equipment, except diesel equipment using gasoline starting engines. In this instance one extra gallon of gasoline in an approved safety can (flash arresting screen with self-closing lid) may be stored on the equipment securely fastened in a specific location on the equipment out of the way of moving objects.

6.5. Flammable liquids shall not be used to clean machinery.

§56-6-7. Haulage.

7.1. Traffic directions which differ from standard highway practice shall be posted on signs with letters at least two inches high along the haulage roads at strategic points.

7.2. Safety equipment on trucks shall be maintained in a safe operating condition.

7.3. When dust created by haulage is thrown into suspension in quantities that obscure the vision of operators of vehicles, an adequate means shall be taken to allay such dust.

7.4. Haulage roads shall be constructed and maintained in a manner consistent with vehicular speed to insure safe operation.

7.5. Each haulage unit shall be equipped with an audible warning device.

7.6. When working at night, all mobile equipment shall be provided with headlights and back-up lights.

7.7. Only authorized persons shall ride haulage equipment.

7.8. Ample clearance shall be provided wherever supplies are loaded or unloaded.

TITLE 56 SERIES 7

OPEN PIT LIMESTONE AND SANDSTONE MINES AND UNDERGROUND LIMESTONE AND SANDSTONE MINES

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

§56-7-1. General.

1.1 Scope. These rules govern open pit and underground limestone and sandstone mining operations.

1.2 Authority. W. Va. Code 22A-6-3 and 29A-3

1.3 Filing Date. August 11, 1969

1.4 Effective Date. September 11, 1969

§56-7-2. Surface structures.

2.1. Dust shall not accumulate on roof of tipples and buildings to an excess that would endanger workmen.

2.2. Dust shall be controlled by the use of permissible dust collectors, water or other approved methods, within practicable limits.

2.3. Belt conveyors shall be equipped with side boards or other protective devices, where necessary, to protect persons from falling material.

2.4. Ladders shall be securely fastened.

2.5. Ramps shall be provided with securely anchored rubbing boards of ample dimensions.

2.6. A dumping block at least 8 inches high shall be installed at all dumping points, excluding stockpiles.

2.7. Lights shall be provided as needed in or around surface structures.

2.8. Electrical wiring in tipples and buildings shall be done in a safe and workman-like manner.

2.9. Persons working over or in open bins or silos shall use a safety harness.

2.10. Each open bin or silo shall be equipped with an inside ladder.

§56-7-3. Excavating.

3.1. Highwall overburden shall be sloped to minimize slides and overhanging ledges and all loose material scaled.

3.2. If the highwall shows evidence of movement, or appears to be weakened in any way, the area shall be made safe, or abandoned and dangered off.

3.3. When open pit mines work at night, the vicinity in which the work is performed shall be well illuminated.

3.4. When an open pit mine is worked over an underground limestone or sandstone mine, cooperation between the underground and surface shall be established to assume the safety of persons in the mines.

3.5. When taking up the floor of an "open pit" mine over top of a limestone or sandstone mine, the opening of the mine shall be scaled and kept safe at all times.

3.6. In the event of the collapse of the floor of an open pit mine into a limestone or sandstone mine, both mines shall be immediately closed, until this condition is made safe.

3.7. Removal of any overburden from a limestone or sandstone mine within 100 feet of an active opening is prohibited while the mine is working.

3.8. The driving of coyote tunnels shall be governed as follows:

(a) A volume of 600 cubic feet of air per minute shall be circulated to the headings.

(b) Explosives adaptable to the general location shall be used.

(c) Explosives shall be detonated by permissible firing devices.

(d) Entrance to tunnel shall be kept free of loose rock and over-hanging ledges.

(e) Roof and walls shall be properly scaled.

(f) Work in and around the tunnel shall be done in a safe manner.

3.9. Persons scaling highwalls shall wear a safety harness that is adequately secured.

3.10. Blasted materials shall be loaded in such a manner as to minimize the danger of rock slides endangering workmen.

§56-7-4. Drilling.

4.1. While a drill is operating, the operator shall not leave the machine.

4.2. Employees shall keep in the clear of any drill stem while it is in motion.

4.3. When a churn drill or a vertical rotary drill is used, the driller shall not work under its suspended tools.

4.4. Vertical drillholes shall be blocked before moving the drill to a new location.

4.5. Drilling equipment shall be inspected daily and hazardous defects corrected promptly.

§56-7-5. Explosives and blasting.

5.1. Permissible explosives applicable to local conditions shall be used exclusively.

5.2. Underground storage of explosives and detonators shall be in approved magazines.

5.3. Primers shall not be made up until the charge is ready to be inserted into the hole. All holes, or series of holes, containing electric detonators shall be fired immediately after being charged or at end of shift: Provided, however, That if, for any reason, the holes cannot be fired immediately or at end of the shift, all work shall cease within a radius of 200 feet of blast area, and work shall not commence again until the holes have been fired. This rule does not apply if primer cord is used.

5.4. Frozen explosives shall not be used.

5.5. The shot firer shall wait fifteen (15) minutes before returning to a misfired shot, except when using an electric blasting cap.

5.6. Extra precaution shall be taken in recovering the explosive and blasting cap from a misfired shot.

5.7. Immediately after each blast the shot firing cables shall be disconnected from the blasting unit and shunted.

5.8. The roads and entrances to any mine shall be barricaded and guarded where such roads or entrances to said mine are located within 1,000 feet of a blast. Homes within 1,000 feet shall be notified by a prearranged plan.

5.9. Explosives shall not be handled or used during an electrical storm.

5.10. Underground magazines shall be located at least 300 feet from the face and roadway and out of the line of blasting.

5.11. The maximum quantity of explosives and detonators stored underground at any time shall not exceed the amount required for one shift.

5.12. Trailer vans may be used for the temporary storing of explosives: Provided, however, That it is located in accordance with the American Table of Distances to inhabited buildings, passenger railroads and public highways. The trailer van shall be provided with substantial means for locking, and the doors shall be kept locked, except for the placement and removal of stock.

5.13. Underground temporary magazines shall be constructed to the standard of surface magazines.

5.14. When explosives and detonators are transported underground they shall be handled in either the original unopened cases or in special closed cases constructed of nonconductive material. Prills shall be in the original bag or box.

5.15. Explosives and detonators shall not be transported on drill trucks or scale cars. When explosives and detonators are transported in the same container, they shall be separated by a 4-inch hardwood partition or the equivalent; bodies of trucks transporting explosives shall be lined with nonconductive material.

5.16. Only competent persons designated by management shall handle explosives and do blasting.

5.17. Drill holes shall be cleaned off cuttings before being charged.

5.18. Ample warning shall be given and care taken that all persons are in the clear before firing any shot.

5.19. Shots shall not be fired in any place known to liberate explosive gas until such place has been properly examined by a competent person designated by a mine management for that purpose.

5.20. Shots shall not be fired in any place where gas is detected with a permissible flame safety lamp until such gas has been removed.

5.21. After firing a shot, the shotfirer, or any other person, shall not return to the work face until the smoke has cleared. A careful examination of the face, pillars and roof shall be made before any work is performed.

- 5.22. The number of holes fired in any one round shall not exceed the limit of the permissible firing unit used.
- 5.23. The shot firing circuit shall be tested with a galvanometer before firing.
- 5.24. While underground bore holes are being charged, equipment shall not be opened in the immediate area.
- 5.25. All underground shooting shall be done at the end of the working shift.
- 5.26. Two-way radios on motor vehicles shall not be used in a mine while shots are being loaded.
- 5.27. Tamping poles shall be made of wood or other non-sparkable material.
- 5.28. Shooting stations shall be kept locked when not in use and only authorized persons shall have the keys.
- 5.29. Prill loading machines shall be of an approved type and equipped with static strip hose and grounded.
- 5.30. Mudcaps (adobes) may be used in taking down loose slabs from roof and pillars.
- 5.31. When caps and fuses are used, an approved cap crimper shall be used.
- 5.32. When shots are fired by means of caps and fuses, two (2) or more persons shall do the firing.
- 5.33. Premixed ammonium nitrate and prills are classified as explosives and shall be handled and stored as such.

5.34. Only electric detonators of proper strength shall be used and they must be fired with permissible shot firing units.

§56-7-6. Underground workings.

6.1. The superintendent or mine foreman of any limestone or sandstone mine shall be notified immediately when an open pit mine may interfere with the safe operation of the said active mine.

6.2. Precautions shall be taken to protect employees where excavating is being done in the vicinity of an abandoned limestone or sandstone mine, or portion thereof, which may contain an accumulation of water.

6.3. All cut-throughs into an abandoned limestone or sandstone mine shall be immediately closed or fenced.

§56-7-7. Operation of equipment.

7.1. Operators of shovels, draglines, tractors and head-end bucket loaders shall not operate such equipment when a person or persons are within proximity to be endangered.

7.2. Operators of equipment which have a dipper or bucket shall not swing the dipper or bucket over passing haulage units.

7.3. The dipper of a shovel, dragline or head-end bucket loader shall always be swung over the body of the truck.

7.4. No person or persons shall remain in the cab of a truck while said truck is being loaded, unless the cab is shielded.

7.5. Workmen shall not get on or off draglines or shovels without first notifying the operator.

7.6. Before greasing or repairing a boom, the boom shall be lowered to permit the work to be performed from the ground if the boom is not equipped with a handrail or ladder.

7.7. Operators shall practice good housekeeping.

7.8. Dump bodies of trucks shall be properly blocked when raised for any purpose except dumping.

§56-7-8. Ventilation.

8.1. Natural ventilation shall provide not less than 6,000 cubic feet of air per minute through the last open crosscut, otherwise the ventilation shall be produced by a mechanically operated fan.

8.2. Air currents shall always be adequate to carry away smoke and harmful gases.

8.3. Active working places shall be ventilated with air containing a minimum of nineteen and five tenths percent (19.5%) of oxygen, not containing more than one percent (1%) of carbon dioxide and without harmful amounts of noxious or poisonous gases.

8.4. Auxiliary fans may be used, but recirculation of air is prohibited.

8.5. Bore holes are permitted for ventilation.

§56-7-9. Roof support.

9.1. Pillars shall be of adequate size to support the roof.

9.2. Pillars shall not be split without prior approval of the Commission of the Department of Energy.

9.3. Roof and ribs shall be scaled in a safe manner.

9.4. Mine openings shall be kept free of fallen rocks or other objects that may endanger workmen.

9.5. A copy of the adopted roof support plan shall be posted at the mine and a copy given to the state mine inspector.

§56-7-10. Transportation of men.

10.1. Equipment transporting men shall always travel at a safe rate of speed.

10.2. Underground and outside mobile transportation units shall be maintained in a safe operating condition.

§56-7-11. Fire protection.

11.1. Fire extinguishers of correct type and ample capacity shall be kept on each piece of mobile equipment and in all buildings.

11.2. Flammable liquids, such as oils, greases, gasoline and such other like materials, shall be stored in buildings, compartments or closed containers used for this purpose only.

11.3. Smoking and use of open lights are prohibited in all places in which flammable materials are stored and in other places where there is a fire hazard.

11.4. The storage of surplus gasoline, oil or other fuels, other than that which is in the fuel tank, shall be prohibited in any piece of equipment, except diesel equipment using gasoline starting engines. In this instance one (1)

extra gallon of gasoline in an approved safety can (flash arresting screen with self-closing lid) may be stored on the equipment securely fastened in a specific location on the equipment out of the way of moving objects.

11.5. Flammable liquids shall not be used to clean machinery.

§56-7-12. Haulage.

12.1. Traffic directions which differ from standard highway practice shall be posted on signs with letters at least 2 inches high along haulage roads at strategic points.

12.2. Safety equipment on trucks shall be maintained in a safe operating condition.

12.3. When dust created by haulage is thrown into suspension in quantities that obscure the vision of operators of vehicles, an adequate means shall be taken to allay such dust.

12.4. Haulage roads shall be constructed and maintained in a manner consistent with vehicular speed to ensure safe operation.

12.5. An adequate clearance space on all haulage roads shall be kept clean.

12.6. Haulage equipment shall be maintained in good condition.

12.7. Each underground haulage unit shall be equipped with headlights and backup lights.

12.8. All underground mobile equipment shall be provided with headlights and backup lights.

12.9. Only authorized persons shall ride haulage equipment.

12.10. Ample clearance shall be provided wherever supplies are loaded or unloaded.

TITLE 56 SERIES 8

SUBMISSION AND APPROVAL OF A COMPREHENSIVE MINE SAFETY PROGRAM FOR COAL MINING OPERATIONS

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

§56-8-1. General.

1.1 Scope. Rules and Regulations Governing the Submission and Approval of a Comprehensive Mine Safety Program for Coal Mining Operations in the State of West Virginia.

1.2 Authority. W. Va. Code 22A-1A-34

1.3 Filing Date. March 30, 1990

1.4 Effective Date. April 1, 1990

§56-8-2. Preamble - Comprehensive Safety Program for Coal Mining Operations in the State of West Virginia.

2.1. Purpose -- The primary goal of Section 34, Article 1A, Chapter 22A of the Code is to protect the health and safety of this State's coal miners by increasing safety awareness and by providing a safe work place through the development and implementation of comprehensive safety programs for each coal mine in the State. The purpose of these regulations is to implement the mandate of Section 34, Article 1A, Chapter 22A of the Code by requiring each coal operator and each independent contractor to develop a comprehensive safety program for each active mine, and by detailing the requirements for such programs. In implementing such mandate, it is recognized that different types of safety programs may be developed for each mine, depending upon the output of the particular mine, the number of employees of the particular mine, the location of the particular mine, and the physical features of the particular mine.

§56-8-3. Definitions.

3.1. Unless the context in which a word or phrase appears clearly requires a different meaning, all terms used in these rules and regulations, which are not defined herein, shall have the meanings set forth in Section 1, Article 1A, Chapter 22A of the Code.

(1) Active Mining Operation. The term "active mining operation" shall mean, when used herein, any active surface mining operation or active underground mining operation.

(a) The term "active underground mining operation" shall mean an underground coal mine which is ventilated, and in which miners are employed.

(b) The term "active surface mining operation" shall mean a surface coal mine where miners are employed.

(2) Comprehensive Mine Safety Program. The term "comprehensive mine safety program" "comprehensive safety program," or "program" shall mean the particular safety program at each mine as required in Section 34, Article 1A, Chapter 22A of the Code, which is developed and submitted by the coal operator or independent contractor, approved by the Director, and includes such level of the safety program components set forth in Section 7.2 of these rules and regulations as the Director deems appropriate. Such program shall include and address the extraction, production, processing and preparation activities conducted by the mine operator or independent contractors.

(3) Code. The term "code" shall mean the West Virginia Code of 1931, as amended.

(4) Director. The term "Director" shall mean the Director of the Division of Health, Safety and Training of the West Virginia Department of Energy.

(5) Independent Contractor. The term "Independent Contractor" shall mean any firm, corporation, partnership, or individual that contracts to engage in the extraction, production, processing or preparation activities associated with a coal mine.

(6) Mine. The term "mine," when used herein, shall mean any surface coal mine or underground coal mine as defined herein.

(7) Operator. The term "operator" means any firm, corporation, partnership, or individual operating any coal mine or part thereof, or engaged in the construction of any facility associated with a coal mine.

(8) Surface Coal Mine. The term "surface coal mine" shall mean a surface area of land, and all structures, facilities, machinery, tools, equipment, excavations, and other property, real or personal, placed upon or above the surface of such land by any person, which are used in, or to be used in, or resulting from the work of extracting coal from its natural deposits in the earth by any means or method, and the work of preparing the coal so extracted, and includes custom coal preparation facilities. It is identified by one federal identification number.

(9) Underground Coal Mine. The term "underground coal mine" shall mean a mine as defined in Section 1 (a) (6), Article 1A, Chapter 22A of the Code.

§56-8-4. Responsibility for Comprehensive Mine Safety Program.

4.1. The design, development, submission, implementation, evaluation and modification of the comprehensive mine safety program shall be the responsibility of the operator or independent contractor of each mine.

§56-8-5. Submission of Initial Comprehensive Mine Safety Program.

5.1. All operators and independent contractors of new mines shall submit a comprehensive mine safety program, and have such program approved by the Director prior to commencement of work or operations by miners at the mine site.

5.2. After the effective date of these regulations, all mines, which are temporarily inactive but which have an approved comprehensive safety program, shall resume operations under the comprehensive safety program for that mine in effect at the time such mine was temporarily closed. If the operator or independent contractor elects to retain the existing comprehensive safety program, the operator or independent contractor shall notify the Director prior to the resumption of work by miners at the mine. If the operator or independent contractor elects to modify the existing comprehensive safety program, the operator or independent contractor shall submit such modifications to the Director within ninety (90) calendar days after resuming active mining operations.

§56-8-6. Mine Evaluation for Development of the Initial Comprehensive Mine Safety Program; Submittals to Commissioner.

6.1. In developing the initial comprehensive safety program, the operator or independent contractor shall analyze the various program components, contained in Section 7 of these rules and regulations, in conjunction with the evaluation criteria provided in Section 8.2 of these rules and regulations, and shall take into consideration the output of the particular mine, the number of employees of the particular mine, the location of the particular mine, or any other aspect of the particular mine deemed relevant by the operator or independent contractors.. Based upon this analysis and evaluation of the type of safety program needed at a particular mine, the operator or independent contractor shall proceed to develop a comprehensive mine safety program composed of the appropriate components contained in section 7 of these rules and regulations and a plan and appropriate procedures for implementing each of the components of the program.

6.2. Each operator or independent contractor shall submit to the Director for approval, a comprehensive mine safety program in accordance with these rules and regulations. In addition each operator or independent contractor shall submit the following:

- (1) A statement that the analysis and evaluation required by Section 6.1 of these rules and regulations has been completed;
- (2) A statement indicating which process the operator or independent contractor has selected, consistent with Section 11.1 of these rules and regulations, to ensure that all employees at the mine are aware of all components of the comprehensive mine safety program prior to commencement of work at the mine;
- (3) A list of safety instructors and their certifications, and/or qualifications, who will have primary responsibility for planning and conducting safety training at the mine;
- (4) The name of the person or persons representing the operator or independent contractor, including his title or position and mailing address or telephone number, who can be notified by the Director for all matters concerning the operator or independent contractor's comprehensive mine safety program.

6.3. Within thirty (30) calendar days after submission of the initial comprehensive safety program, the Director shall either approve the program as submitted, or shall reject and return the program to the operator or independent contractor for modification and resubmission, stating in detail the reasons for such rejection. If the program is rejected, the Director shall give the operator or independent contractor, a reasonable length of time to modify and resubmit such program.

§56-8-7. Primary Safety Program Components.

7.1. Depending upon the safety program needs of a particular mine or independent contractor, the comprehensive mine safety program may include any of all of the components contained in Section 7.2 of these rules and regulations. Comprehensive mine safety programs submitted by independent contractors shall address only the specific type of work to be performed by the contractor.

7.2. A comprehensive mine safety program may include:

- (1) The operator or independent contractor's safety policy for each mine;
- (2) The operator or independent contractor's policies regarding personal safety protection of each worker (hard hats, shoes, etc);
- (3) Safety training programs and objectives, including any or all of the following:

- (a) Classroom training
 - (b) Workplace training
 - (c) Safety meetings, and
 - (d) Informal training
- (4) The operator or independent contractor's practices and procedures for promoting:
- (a) Safe working practices for personnel;
 - (b) Safe working conditions in the mine environment;
 - (c) Safe working practices for machinery, equipment, and systems
- (5) The operator or independent contractor's emergency provisions and procedures at the mine.
- (6) The operator or independent contractor's procedures for accident investigation and reporting, which may include:
- (a) Investigation;
 - (b) Filing;
 - (c) Analysis; and
 - (d) Follow-up.
- (7) The operator or independent contractor's practices and procedures for comprehensive mine safety program promotion and enforcement; and
- (8) Such other components deemed necessary by the operator or independent contractor to effectuate the goals of Section 34, Article 1A, Chapter 22A of the Code.

§56-8-8. Annual Review of the Comprehensive Mine Safety Program.

8.1. Each operator or independent contractor shall conduct an annual review of the comprehensive mine safety program in effect at each mine. The purpose of the review shall be to determine the effectiveness of the comprehensive mine safety program by evaluating the components of the program to determine whether modifications to the existing program are necessary and desirable.

(1) Each operator or independent contractor shall submit to the Director within thirty (30) days after the anniversary date of the program, a report which shall contain the findings of the annual review, a statement indicating whether as a result of such review, modifications to the existing program are necessary, and if applicable, proposed modifications to the existing program. When modifications to the existing program are submitted, the operator or independent contractor may request, and the Director may issue, temporary approval of requested modifications pending the Director's final review and approval.

(2) The Director will review the annual report submitted by the operator or independent contractor and will either approve the report, or reject the report, stating in detail the reasons for rejection. The reasons for rejection may include proposed changes to the program deemed necessary by the Director and not included by the operator or independent contractor.

(3) If rejected, the Director shall give the operator or independent contractor a reasonable period of time to modify and resubmit such report and proposed modifications. If within thirty (30) calendar days subsequent to receipt of the report or proposed modifications by the Director, no action has been taken by the Director, the proposed report and modifications shall be considered approved.

(4) The anniversary date of the program shall be the date the initial program was approved by the Director.

8.2. The annual evaluation conducted pursuant to subsection 8.1 of these rules and regulations shall include a review of the following items relating to a particular mine:

- (1) Accident rate;
- (2) Accident distributions;
- (3) A review of violations written under Section 13a, Article 1A, Chapter 22A of the Code; and
- (4) Fatal accidents and serious injuries as defined by Title 36, Series 19, Section 3.2(2).

8.3. At the discretion of the mine operator or independent contractor, other sources of information may be used to ascertain performance of the safety program in the annual evaluation. They may include, but are not limited to:

- (1) Mine conditions or changes in mine conditions;
- (2) Mining methods or equipment or changes in mining methods or equipment at the mine;
- (3) Number of working sections at a mine or changes in the number of working sections at the mine;
- (4) Personnel or management, or changes in personnel or management;
- (5) Instructors responsible for safety training or changes in instructors responsible for safety training; and
- (6) Findings from safety observations conducted by responsible mine officials.

§56-8-9. Modifications.

9.1. The operator or independent contractor, in addition to any revisions or modifications to the mine safety program made in accordance with Section 8.1 of these rules and regulations, may submit at any time, proposed modifications or revisions along with the reasons thereof, to the Director.

9.2. Within thirty (30) days after receipt by the Director of any proposed revisions or modifications to the program, the Director shall either approve the revisions, or reject the revisions, stating in detail the reasons for such rejection. If within thirty (30) days of receipt of such revisions by the Director no action has been taken, the proposed revisions shall be taken as approved.

9.3. When revisions to a program are submitted to the Director, the operator or independent contractor may request and the Director may issue temporary approval of such revisions pending the Director's final review and approval.

9.4. The Director may require modifications to a comprehensive mine safety program at any time following the investigation of a fatal accident or serious injury, as defined by Title 36, Series 19, Section 3.2(2), if such modifications are warranted by the findings of the investigation.

§56-8-10. Review Procedure.

10.1. If a comprehensive mine safety program, modifications thereto, or an annual report is rejected by the Director pursuant to Sections 6.3, 8.1, or 9.2 of these rules and regulations, the operator or independent contractor shall be entitled to a hearing before the Director to contest such rejection.

10.2. The operator or independent contractor shall notify the Director within fifteen (15) days of the receipt of such rejection that he is requesting a hearing and shall state specifically his reasons thereto. A hearing shall be scheduled within ten (10) days of the receipt of the request for hearing, and shall be held within twenty (20) days of such request.

10.3. Any operator or independent contractor adversely affected by a decision rendered by the Director pursuant to subsection 10.2 of these rules and regulations may appeal such decision in accordance with Sections 5 and 6, Chapter 29A of the Code.

§56-8-11. Right of Mine Employees to Review and Comment on the Comprehensive Mine Safety Program; Posting Requirements.

11.1. Each employee of the mine shall be afforded an opportunity to review and submit comments to the Director regarding the annual review to the comprehensive mine safety program, any modifications or revisions to the program and the annual report. The operator or independent contractor shall satisfy this requirement by selecting one of the two methods set out in (1) or (2) below.

(1) The operator or independent contractor may establish a safety committee at the mine. This committee shall consist of at least three (3) non-supervisory employees. Where feasible, the committee should have representation on each working shift. The requirements for such committee may be satisfied with an existing committee for the mine. It shall be the responsibility of the operator or independent contractor to provide this committee with the opportunity to review the initial comprehensive safety program, any modifications or revisions thereto, and the annual report, and to provide written comments and suggestions to the Director with copies to the operator or independent contractor. Such opportunity to review shall be satisfied by compliance with subsection 11.4 of these rules and regulations. It shall be the responsibility of the committee to ensure that all employees of the mine have the opportunity to review and comment on the proposed comprehensive safety program, any proposed modifications or revisions thereto, and the annual report.

(2) The operator or independent contractor may hold a meeting for all employees of the mine at which meeting the operator or independent contractor shall provide an in-depth review of each of the components of the comprehensive safety program for the mine. The purpose of such meeting is to provide each employee of the mine the opportunity to review and comment on the proposed comprehensive safety program, any modifications or revisions thereto, and the annual report. Such meeting shall be held prior to the submittal of the initial program, the submittal of any modifications or revisions to such program, and the submittal of the annual report. The operator or independent contractor shall notify the Director and post notice on the mine bulletin board of the time and place of the meeting at least ten (10) calendar days prior to the meeting. The Director or his authorized representative has the right to attend such meeting.

11.2. If the operator or independent contractor selects a safety committee (11.1.1) to satisfy the requirements of this subsection 11.1, he shall provide a minimum of eight (8) hours annual instruction for each member of the safety committee at each mine, which instruction shall include materials and training relevant to the review and evaluation of the components of the comprehensive safety program. This instruction may be satisfied through other instruction and training programs the operator or independent contractor is required to provide, as approved by the Director.

11.3. Notwithstanding which option the operator or independent contractor elects to satisfy the requirements of this section, each employee of the mine has the right to review the proposed comprehensive mine safety program, any modifications or revisions thereto, and the annual report, and to provide comments to the Director.

11.4. A copy of the proposed modifications or revisions of the existing comprehensive mine safety program and the annual report, shall be posted on the mine bulletin board, as provided in Section 16(a), Article 1A, Chapter 22A of the Code, for at least fifteen (15) days prior to the date of submittal to the Director.

11.5. A copy of the current approved comprehensive mine safety program shall be made available to any employee of the mine upon request and shall also be posted on the mine bulletin board as provided in Section 16(a), Article 1A, Chapter 22A of the Code.

§56-8-12. Miscellaneous.

12.1. The Director may develop forms and guidelines to facilitate development, review, and approval of the comprehensive safety program submitted by each operator or independent contractor; provided, however, that such forms and guidelines cannot modify or expand the requirements of these rules and regulations.

TITLE 56 SERIES 9

REQUESTS FOR INFORMATION (FREEDOM OF INFORMATION ACT)

Editor's Note: Wherever this rule refers to "Director of the Department of Energy" it should be referenced to "Director of the Office of Miners' Health, Safety and Training" effective October 16, 1991.

§56-9-1. General.

1.1 Scope. These rules and regulations establish procedures whereby any person may inspect and copy any public record prepared, owned, and retained by the West Virginia Department of Energy, except as provided in Section 4, Article 1, Chapter 29B of the Code of West Virginia.

1.2 Authority. W. Va. Code 29B-1-3

1.3 Filing Date. April 27, 1988

1.4 Effective Date. May 1, 1988

1.5 Purpose. -- This rule repeals and repromulgates existing Title 38 Series 9.

§56-9-2. Definitions.

As used in these regulations, unless used in a context that clearly requires a different meaning, the term:

2.1 Act means the "Freedom of Information Act" Chapter 29B-1-1 et seq.

2.2. Commissioner means the Commissioner of the West Virginia Department of Energy.

2.3. Department means the West Virginia Department of Energy.

2.4. Public Record means any books, papers, maps, photographs, cards, tapes, recordings and other documentary materials, regardless of physical forms or characteristics, containing information relating to the conduct of the public's businesses which are proposed, owned, and retained by the West Virginia Department of Energy and which are not held in confidence pursuant to federal or state laws.

§56-9-3. Form Of Request.

3.1. Each request to inspect or copy any public record of the Department of Energy shall be made, in writing, directly to the Commissioner and shall include the following:

(a) The name of the person making the request.

(b) The person's affiliation.

(c) The address and telephone number where the person may be contacted.

(d) A statement describing, with reasonable specificity, the information sought and whether or not the person will be requiring reproductions of the public record. The statement shall include a description of each document sought and if available, the title, date, and author of each such document.

(e) A statement that the person is prepared to pay any fees covering the actual cost to the Department of Energy for making reproductions of the public record.

3.2. Requests may be filed either in person or by mail at the Office of the Commissioner, West Virginia Department of Energy, 1615 Washington Street East, Charleston, West Virginia 25311. Requests made in person shall only be made during the Department's regular business hours.

§56-9-4. Responsibilities of the Department.

4.1. The Department shall, upon receipt of a properly filed request, affix the date of receipt and initiate a search for the requested information.

4.2. The Department shall respond to each request, in writing, as soon as practicable but within a maximum of five (5) working days of receipt of the request. Such response shall:

(a) Provide the requested information;

(b) Advise the requestor of the time and place at which he may inspect and/or copy the information;

(c) Advise the requestor that the description of the information sought is not sufficient to allow the Department to identify and locate the information and that the request cannot be further processed until additional identification is made available to the Department. Upon receipt by the Department of additional identification, the five (5) day time limit shall begin anew; or

(d) Deny the request stating in writing the reason for such denial and informing the requester that he may appeal the agency's action in accordance with the provisions of Chapter 29B. The basis for denial shall include, but not be limited to, the following:

(1) The requested record is not known to exist.

(2) The record is not in the Department's possession.

(3) The record is exempt from disclosure under Section 4 of the Act or other provisions of state and federal law.

4.3. The Department may decline to honor requests which require the creation of a record containing a compilation of records, extraction of information from other records, or any statistical analysis of records.

4.4. The Department is under no obligation to assure that requests received by offices other than that of the Commissioner will be responded to in a timely manner or that information received from offices other than the Commissioners are accurate or an official representation of the Department's records.

§56-9-5. Exemptions.

In addition to the exemptions described in Section 4 of the Act, any information required to be kept confidential under the provisions of Chapter 22, Chapter 22A, and Chapter 22B of the Code shall be exempt.

§56-9-6. Fees.

6.1. The Department shall establish fixed rate fees for reproduction of documents, records, and files on the basis of the actual cost of such reproduction and shall document such costs; provided, that where total costs are less than five dollars (\$5.00), no fee shall be charged.

6.2. All fees shall be paid in advance by certified check, cashiers check, or money order made payable to the Department of Energy.

**RATE SCHEDULE
FREEDOM OF INFORMATION REQUESTS
(fees are subject to periodic change)**

Search and Processing Fee	\$25.00 per hr.
Reproduction of Records Fee (copies)	\$15.00 per hr.
Computer Data Conversion Fee	\$25.00 per hr.
Computer Programming Services	\$95.00 per hr.
Copying	\$0.25 per pg.
Transcription Fee	\$2.25 per pg.
Computer Printout	\$15.00 plus \$0.25 per pg.
Computer Download (per disk)	\$1.00
Letter of Certification	\$10.00
Audio Cassette	\$1.00
Video Cassette	\$2.00

**TITLE 56 SERIES 10
REPORTING REQUIREMENTS FOR INDEPENDENT CONTRACTORS**

§56-10-1. General.

1.1 Scope. This rule governs reporting requirements for independent contractors registered with the WV Office of Miners' Health, Safety, and Training.

1.2 Authority. W.Va. Code 22A-1-6.

1.3 Filing Date. August 15, 2002

1.4 Effective Date. October 1, 2002

1.5 Applicability. This rule applies to each independent contractor registered with the WV Office of Miners' Health, Safety and Training as required by West Virginia Code 22A-2-63(e).

§56-10-2. Effect of Law and Rule.

2.1. This rule has the effect of law and violations are a violation of law and so cited with the same effect as law.

§56-10-3 Reporting Requirements.

3.1 On or before the end of each calendar month, each independent contractor registered with the West Virginia Office of Miners' Health, Safety and Training as required by West Virginia Code 22A-2-63(e), shall file with the Director a report covering the preceding calendar month on forms approved by the Director. Such report shall contain the following information for each mine(s) where independent contractors performed work or provided services:

- (1) The total number of employees performing services at a mining operation.
- (2) The total days and employee hours worked at a mining operation.
- (3) The total reported accidents and occupational injuries that occurred to employees while performing services at a mining operation pursuant to Series 19.
- (4) The mine(s)' identification number where employee hours were worked and/or where the accident or occupation injury occurred.

**TITLE 56 SERIES 11
FIRST-AID TRAINING OF SHAFT AND SLOPE EMPLOYEES**

§56-11-1. General.

1.1 Scope. This rule governs first-aid training for shaft and slope employees.

1.2 Authority. W. Va. Code 22A-7-8.

1.3 Filing Date. April 22, 1994

1.4 Effective Date. May 1, 1994

1.5 Applicability. This rule applies to all mine shaft and slope construction and operation sites.

§56-11-2. Effect of Law and Rule.

2.1. This rule has the effect of law and violations are a violation of law and so cited with the same effect as law.

§56-11-3. First-Aid Training of Shaft and/or Slope Employees.

3.1. Each employer at a shaft and slope site shall provide every new employee within six (6) months of the date of hire with the opportunity for first-aid training as prescribed by the Director of the Office of Miners' Health, Safety and Training, unless the employee has previously received such training. Each employee is required to take a refresher first-

aid training of not less than five (5) hours within each twenty-four (24) months of employment. The employee shall be paid regular wages, and overtime pay if applicable, for all periods of first-aid training.

TITLE 56 SERIES 12
ASSESSING HEALTH AND SAFETY VIOLATION PENALTIES

§56-12-1. General.

1.1 Scope. These rules establish the procedure whereby the Office of Miners' Health, Safety and Training assesses civil monetary penalties, pursuant to W. Va. Code 22A-1-21, to those having violated the state's mine health and safety laws.

1.2 Authority. W. Va. Code 22A-1-21.

1.3 Filing Date. May 31, 2002.

1.4 Effective Date. July 1, 2002.

§56-12-2. Definitions.

2.1. Unless herein defined, all terms used in this rule shall have the same meaning as they are defined in W. Va. Code 22A-1-2.

2.2. "Director" means the director of the State of West Virginia Office of Miners' Health, Safety and Training.

2.3. "Knowing violation" means a violation occurring when:

2.3.1. An operator (or miner, for an individual violation) causes a violative condition or practice by exercising reckless and willful disregard of mandatory health and safety standards, or recklessly and willfully failed to correct an unsafe condition or practice which was known to exist; or

2.3.2. An operator refuses to comply with any order issued under W. Va. Code 22A-1-14 or 15; or

2.3.3. An operator refuses to comply with any order issued in a final decision under Chapter 22A, article 1, of the W. Va. Code 22A-1-1, except for an order incorporated in a decision under W. Va. Code 22A-1-21(a) or 22(b).

2.4. "Good faith" means that, in the judgment of the inspector, the operator has demonstrated extraordinary effort above and beyond that which would normally be expected to abate the violation.

2.5. "Mine health and safety laws" means the provisions of articles one, two, five and six of chapter twenty-two-a, and chapter twenty-two of the West Virginia Code, and any rule promulgated thereunder, relating to health and safety standards.

2.6. "Independent contractor" has the same meaning as that term is defined at 36 CSR 20.

2.7. "Annual tonnage" means tonnage produced in the previous calendar year, or, in the case of a mine opened or owned less than one full calendar year, the tonnage thus far produced multiplied to an annual amount based on months of operation.

§56-12-3. Assessment Procedure For Operators.

3.1. Civil monetary penalty assessments are mandatory.

3.2. The amount of a civil monetary penalty assessments will be determined based upon consideration of the following five criteria:

- (1) Gravity of the violation;
- (2) History of previous violations;
- (3) Size of the business charged with a violation; and
- (4) Demonstrated good faith in achieving compliance after notification of the violation.
- (5) Whether the operator was negligent.

3.3. Gravity of the violation will be evaluated by the inspector or representative of the director, and points allocated accordingly.

(1) Points will be allocated in the following four categories:

- (a) Likelihood of an occurrence of an event which the health and safety laws are intended to prevent;
- (b) The severity of the injury which might be expected to result from such an occurrence; and
- (c) The number of persons potentially affected by such an occurrence.
- (d) Whether the operator was negligent.

(2) Points will be allocated in the following manner:

(a) Likelihood of occurrence	
Unlikely	0 points
Reasonably likely	10 points
Occurred	20 points
(b) Severity of injury expected	
None	0 points
No lost work days	6 points
Lost/restricted work days	11 points
Permanently disabling	15 points
Fatal	20 points

(c) Number of persons potentially affected	
0	0 points
1	1 points
2	2 points
3	4 points
4 to 5	6 points
6 to 9	8 points
More than 9	10 points
(d) Negligence	
No negligence	0 points
Low negligence	10 points
Moderate negligence	15 points
High negligence	20 points

3.4. The operator's history of violations over the previous 24 months will be evaluated by the inspector or representative of the director and points allocated accordingly.

(1) For mine operators, points will be calculated based upon the average number of violations per inspection day over the previous 24 months.

(2) For independent contractors, points will be calculated based upon the total number of violations during the previous 24 months.

(3) Points will be allocated in the following manner:

(a) Mine operators:

	Average number violations/ inspection day	
0	0	0 points
Over 0 to 0.3	Over 0 to 0.3	2 points
Over 0.3 to 0.5	Over 0.3 to 0.5	5 points
Over 0.5 to 0.7	Over 0.5 to 0.7	8 points
Over 0.7 to 0.9	Over 0.7 to 0.9	11 points
Over 0.9 to 1.1	Over 0.9 to 1.1	14 points
Over 1.1 to 1.3	Over 1.1 to 1.3	17 points
Over 1.3 to 1.5	Over 1.3 to 1.5	20 points
Over 1.5 to 1.7	Over 1.5 to 1.7	22 points
Over 1.7 to 1.9	Over 1.7 to 1.9	23 points
Over 1.9 to 2.1	Over 1.9 to 2.1	24 points
Over 2.1	Over 2.1	25 points

(b) Independent contractors:

	Total number of violations	
1 to 5	1 to 5	2 points
6 to 10	6 to 10	5 points
11 to 15	11 to 15	8 points
16 to 20	16 to 20	11 points
21 to 25	21 to 25	14 points
26 to 30	26 to 30	17 points
31 to 35	31 to 35	20 points
36 to 40	36 to 40	22 points
41 to 45	41 to 45	23 points
46 to 50	46 to 50	24 points
More than 50	More than 50	25 points

3.5. Size of the business charged with a violation will be evaluated by the inspector or representative of the director, and points allocated accordingly. Size of the mine will be calculated by considering the annual tonnage of the mine. Mines which have not submitted tonnage reports by the dates required by W. Va. Code 22A-2-77 will be assessed the maximum amount of five (5) points.

	Size of Business (annual tonnage)	
0 - 100,000 tons	0 - 100,000 tons	1 point
100,001 - 500,000 tons	100,001 - 500,000 tons	2 points
500,001 - 1,000,000 tons	500,001 - 1,000,000 tons	3 points
1,000,001 - 2,000,000 tons	1,000,001 - 2,000,000 tons	4 points
Over 2,000,000 tons	Over 2,000,000 tons	5 points

3.6. The points allocated in the manner set forth in Sections 3.3, 3.4 and 3.5, above, will be totaled, and the total number converted to a dollar amount, as per Table 1, infra.

3.7. Demonstrated good faith by the operator in achieving compliance after notification of the violation will be evaluated by the inspector or representative of the director, and the total dollar amount of the penalty may be modified accordingly.

(1) If the operator fails to abate the violation within the time prescribed, and there are, in the opinion of the inspector or representative of the director, extenuating circumstances beyond the operator's control which prevent the abatement of the violation within such time, the amount of the assessment will not be affected.

(2) If the operator fails to abate the violation within the prescribed time, and an order is issued pursuant to W. Va. Code 22A-1-15(b), the total dollar amount of the assessment will be increased by fifteen percent (15%).

(3) If the operator was already working to correct the violation when discovered, or, in the judgment of the inspector, the operator has demonstrated extraordinary effort above and beyond that which would normally be expected to abate the violation, the total dollar amount of the assessment will be decreased by fifteen percent (15%), if the original assessment is greater than sixty dollars (\$60).

§56-12-4. Assessment Procedure For Knowing Violations.

4.1. In addition to any monetary assessment determined under section 3 of these rules, any operator issued a knowing violation shall be assessed one (1) knowing point for every twenty (20) civil penalty points accrued. Knowing points are converted to a monetary amount, as per the following table:

Knowing Civil Penalty Conversion Table

Civil Penalty Points	Knowing Points	Penalty
0-20	1	\$1,000
21-40	2	\$2,000
41-60	3	\$3,000
61-80	4	\$4,000
81-100	5	\$5,000

4.2. In addition to any assessment determined under section 3 of these rules, a subsequent knowing violation, issued to the same operator at the same operation during the same inspection within the same quarter, shall result in the assessment of two (2) knowing points for every twenty (20) civil penalty points accrued. Subsequent knowing points are converted to a monetary amount as per the following table:

Subsequent Knowing Civil Penalty Conversion Table

Civil Penalty Points	Knowing Points	Penalty
0-20	2	\$2,000
21-40	4	\$4,000
41-60	6	\$6,000
61-80	8	\$8,000
81-100	10	\$10,000

§56-12-5. Assessment Procedure For Individuals.

5.1. Any miner who knowingly violates the mine health and safety laws shall be assessed a civil penalty not to exceed two hundred fifty dollars (\$250) for each such occurrence.

5.2. The amount of civil monetary penalty assessments will be determined based upon consideration of two criteria:

- (1) Gravity of the violation; and
- (2) History of prior violations.

5.3. Gravity of the violation will be evaluated by the inspector or representative of the director, and points allocated accordingly.

(1) Points will be allocated in the following three categories:

- (a) Likelihood of an occurrence of an event, which the health and safety laws are intended to prevent;
- (b) The severity of the injury which might be expected to result from such an occurrence; and
- (c) The number of persons potentially affected by such an occurrence.

(2) Points will be allocated in the following manner:

- (a) Likelihood of occurrence
 - Unlikely 0 points
 - Reasonably likely 10 points
 - Occurred 20 points
- (b) Severity of injury expected
 - None 0 points
 - No lost work days 5 points
 - Lost/restricted work days 10 points
 - Permanently disabling 15 points
 - Fatal 20 points

(c) Number of persons potentially affected

0	0 points
1	5 points
2	10 points
3	15 points
4 to 5	20 points
6 to 9	25 points
More than 9	30 points

5.4. The miner's history of prior violations over the previous thirty-six (36) months will be evaluated by the inspector or representative of the director, and points allocated accordingly. Points will be allocated in the following manner:

1 violation	15 points
2 or more violations	30 points

5.5. The points allocated in the manner set forth in 5.3 and 5.4, above, will be totaled, and the total number converted to a dollar amount by using the following table:

Civil Penalty Point Conversion Table For Individuals

Points	Penalty
1 to 10	\$50.00
11 to 20	100.00
21 to 30	150.00
31 to 40	175.00
41 to 50	200.00
51 to 60	225.00
61 to 70	240.00
71 to 100	250.00

Table 1
Civil Penalty Point Conversion Table For Operators

Points	Penalty (\$)	Points	Penalty (\$)
0 - 15	60.00	66	504.00
16 - 31	96.00	67	528.00
32	100.00	68	556.00
33	104.00	69	576.00
34	108.00	70	600.00
35	114.00	71	630.00
36	120.00	72	660.00
37	126.00	73	690.00
38	132.00	74	800.00
39	138.00	75	1000.00
40	144.00	76	1080.00
41	152.00	77	1160.00
42	160.00	78	1240.00
43	168.00	79	1320.00
44	176.00	80	1400.00
45	184.00	81	1480.00
46	194.00	82	1560.00
47	204.00	83	1640.00
48	214.00	84	1720.00
49	224.00	85	1800.00
50	234.00	86	1880.00
51	246.00	87	1960.00
52	256.00	88	2040.00
53	266.00	89	2120.00
54	276.00	90	2200.00
55	286.00	91	2280.00
56	300.00	92	2360.00
57	318.00	93	2440.00
58	336.00	94	2520.00
59	354.00	95	2600.00
60	372.00	96	2680.00
61	392.00	97	2760.00
62	412.00	98	2840.00
63	434.00	99	2920.00
64	456.00	100	3000.00
65	480.00		

**TITLE 170 SERIES 1
WEST VIRGINIA DIVISION OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT
MINE AND INDUSTRIAL ACCIDENT RAPID RESPONSE SYSTEM**

§170-1-1. General.

1.1 Scope. The purpose of this rule to coordinate rapid and appropriate response to mining and industrial accidents; to govern participation by public agencies in response to mining or industrial accidents; and, to govern protections of privacy for the state's citizens and of the homeland security during the project, as well as to govern the distribution generally of records and information collected during response operations.

1.2 Authority. W. Va. Code §64-6-3.

1.3 Filing Date. March 30, 2007.

1.4 Effective Date. April 2, 2007.

§170-1-2. Definitions.

The following terms shall have the meaning as used in this Rule unless in a context that requires a different meaning:

2.1. "Accident" means the following:

- (a) Death of an individual at a mine;
- (b) An injury to an individual at a mine which has a reasonable potential to cause death;
- (c) The entrapment of an individual;
- (d) The unplanned inundation of a mine by a liquid or gas;
- (e) The unplanned ignition or explosion of gas or dust;
- (f) The unplanned ignition or explosion of a blasting agent or an explosive;
- (g) An unplanned fire in or about a mine not extinguished within five minutes of ignition;

- (h) An unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage;
- (i) A coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than one hour;
- (j) An unstable condition at an impoundment, refuse pile or culm bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area, or the failure of an impoundment, refuse pile or culm bank;
- (k) Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with the use of equipment for more than thirty minutes; and,
- (l) An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs.

2.2 "Center" means Mine and Industrial Accident Emergency Operations Center, including the facility, communications equipment, personnel and procedures utilized to perform the reporting and initial notification functions of the Mine and Industrial Accident Rapid Response System.

2.3 "Covered facilities" means all underground mining operations, and surface mining operations regardless of the source of the hazard.

2.4 "Director" means the Director of the Division of Homeland Security and Emergency Management.

2.5 "Emergency" means an unexpected situation or event that demands immediate action to protect life and property or that requires a response that exceeds the capabilities of the covered facility or responding agency.

§170-1-3. Notification of Emergency Incidents by Covered Facilities.

3.1 All covered facilities are to report accidents or emergencies to the Division of Homeland Security and Emergency Management at the Mine and Industrial Accident Call Center at 1-866-987-2338 or other such number as may be identified by the Director.

3.2 All calls received on the published line are to be recorded for documentation purposes. Recording of calls is to be automatic, and the recorded call information, including time of call and complete voice transcripts, shall be made available to any representative of a government agency responsible for enforcing rules and regulations and investigating violations relating to mining and industrial safety upon written request. The request must describe why the information is needed and the purpose for which it will be used.

§170-1-4. Requests for Information – General Provisions.

4.1 The Director of the Division of Homeland Security and Emergency Management is the custodian of all records of the Center for the purpose of complying with W. Va. Code §29B-1-1, et seq.

4.2 All requests for information must include the following information in order for the request to be considered sufficiently specific:

- (a) Name of the individual and organizational affiliation of the individual making the request; and,
- (b) Approximate dates and times of incidents on which information records are requested.

4.3 Requests for information shall be processed in accordance with W. Va. Code §29B-1-1, et seq.

§170-1-5. Trade Secrets and Confidential Information.

5.1 Covered facilities requesting protection of information considered trade secrets or proprietary information must provide justification for such requests in writing.

5.2 Information received shall be released to appropriate regulatory or investigative agencies upon written request and upon approval by the Director or his or her designee.

**TITLE 196 SERIES 1
DIESEL EQUIPMENT COMMISSION**

RULES FOR OPERATING DIESEL EQUIPMENT IN UNDERGROUND MINES IN WEST VIRGINIA

§196-1-1. General.

1.1 Scope. This legislative rule establishes the standards, procedural and interpretative guidelines under which diesel powered equipment may be used in an underground coal mine in the state of West Virginia.

1.2 Authority. W. Va. Code 22A-2A-308(b); 29A-3-8.

1.3 Filing Date. March 30, 2004.

1.4 Effective Date. March 30, 2004.

§196-1-2. Definitions.

2.1. For the purposes of this article, the words or phrases defined in this part 2 have the meanings ascribed to them. These definitions are applicable unless a different meaning clearly appears from the context.

2.2. When used in this article, the words and phrases defined in section two, article one of this chapter have the meaning ascribed to them in that section. Those definitions are applicable to this article unless a different meaning clearly appears from the context in which the word or phrase is used in this article.

2.3. "Board" means the board of coal mine health and safety continued by section three, article six of this chapter.

2.4. "Certificate of approval" means a formal document issued by MSHA stating that a complete assembly has met the requirements of part 36, title thirty of the code of federal regulations, 30 C.F.R. 36.1, et seq., for mobile diesel-powered transportation equipment and authorizing the use and attachment of an official approval plate so indicating.

2.5. "Commission" means the West Virginia diesel equipment commission created under the provisions of section three hundred one of this article.

2.6. "Diesel fuel tank" means a closed metal vessel specifically designed for the storage or transport of diesel fuel.

2.7. Diesel fuel transportation unit" means a self-propelled or portable wheeled vehicle used to transport a diesel fuel tank.

2.8. "Diesel engine" means any compression ignition internal combustion engine using the basic diesel cycle where combustion results from the spraying of fuel into air heated by compression.

2.9. "Diesel power package" means a diesel engine with an intake system, exhaust system, and a safety shutdown system installed that meets the specific requirements for MSHA approval of diesel power packages intended for use in approved equipment in areas of underground coal mines where electric equipment is required to be permissible.

2.10. "Exhaust emission" means any substance emitted to the atmosphere from the exhaust port of the combustion chamber of a diesel engine.

2.11. "Exhaust emissions control and conditioning system" means a device or combination of devices that will collect and treat diesel exhaust emissions at the exhaust port of the engine, and will reduce the volume of, or eliminate emissions of, diesel particulate matter, carbon monoxide and oxides of nitrogen in accordance with the requirements and standards of the commission established in accordance with the provisions of section four hundred three of this article.

2.12. "MSHA" means the mine safety and health administration of the United States Department of Labor.

2.13. "Permanent underground diesel fuel storage facility" means a facility designed and constructed to remain at one location for the storage or dispensing of diesel fuel, which does not move as mining progresses.

2.14. "Safety can" means a metal container intended for storage, transport or dispensing of diesel fuel, with a nominal capacity of five gallons, listed or approved by a nationally recognized independent testing laboratory.

2.15. "Temporary underground diesel fuel storage area" means an area of a mine provided for the short-term storage of diesel fuel in a fuel transportation unit, which moves as mining progresses.

§196-1-3. Underground Use.

3.1. Underground use of inby and outby diesel-powered equipment, including mobile equipment, stationary equipment and equipment of all horsepower ratings, may only be approved, operated and maintained as provided in this article, except for emergency fire-fighting equipment to be used specifically for that purpose.

3.2. All diesel-powered equipment shall be attended while in operation with the engine running in under ground mines. For purposes of this subsection, "attended" shall mean a diesel equipment operator is within sight or sound of the diesel-powered equipment.

3.3. Inby and outby diesel-powered equipment may be used in underground mines if the inby or outby diesel-powered equipment uses an engine approved or certified by MSHA, as applicable, for inby or outby use that, when tested at the maximum fuel-air ratio, does not require an MSHA Part 7 approval plate ventilation rate exceeding 75 c.f.m. per rated horsepower. Should MSHA promulgate new regulations that change the MSHA part 7 approval plate ventilation rate, the cfm requirement per rated horsepower will be revised either up or down on a direct ratio basis upon recommendation of the Diesel Commission.

§196-1-4. Diesel-Powered Equipment Package.

4.1. All diesel-powered equipment shall be approved by the commission as a complete diesel-powered equipment package, which shall be subject to all of the requirements, standards and procedures set forth in this article.

4.2. Diesel engines shall be certified or approved, as applicable, by MSHA and maintained in accordance with MSHA certification or approval and commission approval.

4.3. All approved diesel powered equipment packages shall be listed on an inventory sheet submitted to the diesel commission with a copy maintained at the mine. The following information shall be provided on the inventory list:

- (a) Name, Address and Permit Number of the Mine
- (b) The phone number and name of the contact person responsible for maintenance and testing of the diesel equipment.
- (c) The following specific information for each engine:
 - (i) Manufacturer, serial number and model of the equipment using the power-package
 - (ii) Manufacturer, Model number and serial number of the engine
 - (iii) MSHA 7E Approval Number
 - (iv) Rated HP and RPM
 - (v) DPM gr/hr rating and mg over m to the third power
 - (vi) Ventilation Rate

- (d) The following specific information for each Filter System:
- (i) Manufacturer and model of the filter system
 - (ii) MSHA Efficiency Rating of the specific filter system(s) or an accepted third party rating
 - (iii) System type and composition (i.e., Passively Regenerated Cordierite, etc.)
 - (iv) The Manufacturer/Model of Regeneration system (if applicable)

§196-1-5. Exhaust Emissions Control.

5.1. Underground diesel-powered equipment shall include an exhaust emissions control and conditioning system that has been laboratory tested with the diesel engine, except as provided in paragraph (3), using the ISO 8178-1 test and has resulted in diesel particulate matter emissions that do not exceed an average concentration of 0.12 mg over m to the third power when diluted by one hundred percent of the MSHA part 7 approval plate ventilation rate for that diesel engine. Should MSHA promulgate new regulations that change the MSHA Part 7 approval plate ventilation rate, the dilution percentage relative to the approval plate ventilation rate will be adjusted either up or down on a direct ratio basis upon recommendation of the West Virginia Diesel Commission.

5.2. The exhaust emissions control and conditioning system shall be required to successfully complete a single series of laboratory tests conducted at a laboratory accepted by the WV Diesel Commission for each diesel engine, except as provided in subsection 5.3.

5.3. An exhaust emissions control and conditioning system may be approved for multiple diesel engine applications through a single series of laboratory tests, known as the ISO 8178-1 test, only if data is provided to the WV Diesel Commission that reliably verifies that the exhaust emissions control and conditioning system will meet, for each diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. Data provided to satisfy this provision shall include diesel particulate matter production rates for the specified engine as measured during the ISO 8178-1 test, if available. If ISO 8178-1 test data for diesel particulate matter production is not available for a specified engine, comparable data may be provided to the WV Diesel Commission that reliably verifies that the exhaust emissions control and conditioning system will meet, for the specified diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. This standard shall only be used for in-laboratory testing for approval of diesel-powered equipment for use underground.

5.4. The exhaust emissions control and conditioning system shall include the following:

- (a) A diesel particulate matter (DPM) filter that has proven capable of at least a seventy-five percent reduction of diesel particulate matter,
- (b) An oxidation catalyst or other gaseous emissions control device capable of reducing undiluted carbon monoxide emissions to 100 ppm or less under all conditions of operation at normal engine operating temperature range.
- (c) An engine surface temperature control capable of maintaining significant external surface temperatures below three hundred two degrees Fahrenheit.
- (d) A system capable of reducing the exhaust gas temperature below three hundred two degrees Fahrenheit.
- (e) An automatic engine shutdown system that will shut off the engine before the exhaust gas temperature reaches three hundred two degrees Fahrenheit and, if waterjacketed components are used, before the engine coolant temperature reaches two hundred twelve degrees Fahrenheit. A warning shall be provided to alert the equipment operator prior to engine shutdown.
- (f) A spark arrestor system.
- (g) A flame arrestor system.
- (h) A sampling port for measurement of undiluted and untreated exhaust gases as they leave the engine.
- (i) A sampling port for measurement of treated undiluted exhaust gases before they enter the mine atmosphere.
- (j) For inby diesel equipment, any additional requirements of MSHA regulations at 30 CFR Part 36 (relating to mobile diesel-powered transportation equipment for gassy non-coal mines and tunnels).

5.5. On-board engine performance and maintenance diagnostics systems shall be capable of continuously monitoring and giving readouts for paragraphs (a), (b), (c), (d), (e), (f), (g), and (h) of this subsection. The diagnostics system shall identify levels that exceed the engine and/or component manufacturer's recommendation or the applicable MSHA or WV Diesel Commission requirements as to the following:

- (a) Engine speed;
- (b) Operating hour meter;
- (c) Total intake restriction;
- (d) Total exhaust backpressure;
- (e) Cooled exhaust gas temperature;
- (f) Coolant temperature;
- (g) Engine oil pressure;
- (h) Engine oil temperature;

§196-1-6. Ventilation.

6.1. Minimum quantities of air where diesel-powered equipment is operated shall be maintained pursuant to this section.

6.2. Each specific model of diesel-powered equipment shall be approved by the commission before it is taken underground. The commission shall require an approval plate that must be attached to each piece of the diesel-powered equipment. The approval plate shall specify the minimum ventilating air quantity for the specific piece of diesel-powered

equipment. The minimum ventilating air quantity shall be determined by the WV Diesel Commission based on the amount of air necessary at all times to maintain the exhaust emissions at levels not exceeding the exposure limits established in §196-1-7.

6.3. The minimum quantities of air in any split where any individual unit of diesel-powered equipment is being operated shall be at least that specified on the approval plate for that equipment. Air quantity measurements to determine compliance with this requirement shall be made at the individual unit of diesel-powered equipment.

6.4. Where multiple units are operated, the minimum quantity shall be at least one hundred percent of MSHA's Part 7 approval plate quantities for each unit operating in that split. Air quantity measurements to determine compliance with this requirement shall be made at the most downwind unit of diesel-powered equipment that is being operated in that air split. Should MSHA promulgate new regulations that change the MSHA Part 7 approval plate ventilation rate, the minimum quantity where multiple units are operated shall be revised on a direct ratio basis upon recommendation of the WV Diesel Commission.

6.5. The minimum quantities of air on any split where any diesel-powered equipment is operated shall be in accordance with the minimum air quantities required in subsections (6.1) and (6.2) and shall be specified in the mine diesel ventilation plan.

§196-1-7. Exhaust Gas Monitoring and Control.

7.1. In monitoring and controlling exhaust gases, the ambient concentration of exhaust gases in the mine atmosphere shall not exceed 35 ppm ceiling for carbon monoxide (CO), 25 ppm ceiling for nitric oxide (NO) and 3 ppm ceiling for nitrogen dioxide (NO₂). The concentration of these exhaust gases shall be measured at the equipment operator's or equipment attendant's position and in by the last piece of diesel-powered equipment operating in the same split of air. Measurements shall be made weekly or more often if necessary by a qualified person and shall be conducted pursuant to the requirements of this section.

7.2. Measurement of exhaust gases shall be made with a sampling instrument no less precise than detector tubes.

7.3. If the concentration of any of the gases listed in subsection 7.1 is seventy-five percent or more of its exposure limit, changes to the use of the diesel equipment, the mine ventilation or other modifications to the mining process shall be made.

7.4. If the concentration of any of the gases listed in subsection 7.1 exceeds the exposure limit, the diesel equipment operating in that split shall be removed from service immediately and corrective action taken. After corrective action has been taken by the mine operator, the diesel equipment may be returned to service in its regular operating mode for emissions testing purposes only, and emissions testing shall be conducted immediately to assure that the concentration does not exceed seventy-five per cent of the exposure limit. Corrective action must be taken until the concentration does not exceed seventy-five percent of the exposure limit before the diesel equipment can be returned to full operation.

7.5. In addition to the other maintenance requirements set forth in this article, the mine operator shall comply with the following requirements:

- (a) Repair or adjustment of the fuel injection system shall only be performed by qualified mechanics authorized by the engine manufacturer.
- (b) Complete testing of the emissions system in accordance with 196-1-20 shall be conducted prior to any piece of diesel-powered equipment being put into service, after any repair or adjustment to the fuel delivery system, engine timing or exhaust emissions control and conditioning system.
- (c) Service and maintenance of the intake air filter exhaust particulate filter and the exhaust system shall be performed at specific time intervals based on the component manufacturer's recommendation, compliance with the engine or emissions control operation specifications and, as needed, based on the on-board diagnostics and/or emissions test results. Accurate records shall be maintained of all such service and maintenance.

§196-1-8. Fuel Storage Facilities.

8.1. An underground diesel fuel storage facility shall be any facility designed and constructed to provide for the storage of any mobile diesel fuel transportation unit(s) or the dispensing of diesel fuel.

8.2. Diesel-powered equipment shall be used underground only with fuel that meets the standards of the most recently approved EPA guidelines for over-the-road-fuel. Additionally, the fuel shall also meet the ASTM D975 fuel standards with a flash point of one hundred degrees Fahrenheit or greater at standard temperature and pressure. The operator shall maintain a copy of the most recent delivery receipt from the supplier that will prove that the fuel used underground meets the standard listed above.

8.3. Underground diesel fuel storage facilities shall meet the following general requirements:

- (a) Fixed underground diesel fuel storage tanks are prohibited.
- (b) No more than five hundred gallons of diesel fuel shall be stored in each underground diesel fuel storage facility.

8.4. Underground diesel fuel storage facilities shall be located as follows:

- (a) at least one hundred feet from shafts, slopes, shops and explosives magazines;
- (b) at least twenty-five feet from trolley wires, haulage ways, power cables and electric equipment not necessary for the operation of the storage facilities; and
- (c) in an area that is as dry as practicable.

8.5. Underground diesel fuel storage facilities shall meet the construction requirements and safety precautions enumerated in this subsection.

Underground diesel fuel storage facilities shall meet all of the following:

- (a) (i) Be constructed of noncombustible materials and provided with either self-closing or automatic closing doors.
 - (ii) Be ventilated directly into the return air course using noncombustible materials.
 - (iii) Be equipped with an automatic fire suppression system complying with §196-1-12. The WV Diesel Commission may approve an alternate method of complying with this section on a mine by mine basis.
 - (iv) Be equipped with at least two portable twenty-pound multipurpose dry-chemical type fire extinguishers.
 - (v) Be marked with conspicuous signs designating combustible liquid storage.
 - (vi) Be included in the pre-shift examination.
- (b) Welding or cutting other than that performed in accordance with 8.5(b)(i)(ii)(iii) shall not be done within fifty feet of a diesel fuel storage facility.
- (i) When it is necessary to weld, cut or solder pipelines, cylinders, tanks or containers that may have contained diesel fuel, the following requirements shall apply:
 - (ii) Cutting or welding shall not be performed on or within containers or tanks that have contained combustible or flammable materials until such containers or tanks have been thoroughly purged and cleaned or inerted and a vent or opening is provided to allow for sufficient release of any buildup pressure before heat is applied.
 - (iii) Diesel fuel shall not be allowed to enter pipelines or containers that have been welded, soldered, brazed or cut until the metal has cooled to ambient temperature.

§196-1-9. Transfer of Diesel Fuel.

- 9.1. Diesel fuel shall be transferred as provided in this section.
- 9.2. When diesel fuel is transferred by means of a pump and a hose equipped with a nozzle containing a self-closing valve, a powered pump may be used only if:
 - (a) the hose is equipped with a nozzle containing a self-closing valve without a latch-open device; and
 - (b) the pump is equipped with an accessible emergency shutoff switch.
- 9.3. Diesel fuel shall not be transferred using compressed gas.
- 9.4. Diesel fuel shall not be transferred to the fuel tank of diesel-powered equipment while the equipment's engine is running.
- 9.5. Diesel fuel piping systems shall be designed and operated as dry systems.
- 9.6. All piping, valves and fittings shall meet the following:
 - (a) Be capable of withstanding working pressures and stresses.
 - (b) Be capable of withstanding four times the static pressures.
 - (c) Be compatible with diesel fuel.
 - (d) Be maintained in a manner that prevents leakage.
- 9.7. Vertical pipelines shall have manual shutoff valves installed at the surface filling point and at the underground discharge point.
- 9.8. Unburied diesel fuel pipelines shall not exceed three hundred feet in length and shall have shutoff valves located at each end of the unburied pipeline.
- 9.9. Horizontal pipelines shall not be used to distribute fuel throughout the mine.
- 9.10. Diesel fuel piping systems shall be used only to transport fuel from the surface directly to a single underground diesel fuel transfer point.
- 9.11. When boreholes are used, the diesel fuel piping system shall not be located in a borehole with electric power cables.
- 9.12. Diesel fuel pipelines located in any shaft shall be included as part of the required examination of the shaft.
- 9.13. Diesel fuel piping systems located in entries shall not be located on the same side of the entry as electric cables or power lines.
- 9.14. Diesel fuel pipelines shall not be located in any trolley-haulage entry, except that they may cross the entry perpendicular if buried or otherwise protected in steel conduit or an equivalent from damage and sealed.
- 9.15. Diesel fuel piping systems shall be protected to prevent physical damage.

§196-1-10. Containers.

- 10.1. Containers for the transport of diesel fuel shall meet the requirements of this section.
- 10.2. Diesel fuel shall be transported only in containers specifically designed for the transport of diesel fuel.
- 10.3. No more than one safety can, conspicuously marked, shall be transported on a vehicle at any time.
- 10.4. Containers other than safety cans used to transport diesel fuel shall be provided with the following:
 - (a) Devices for venting.
 - (b) Self-closing caps.
 - (c) Vent pipes at least as large as the fill or withdrawal connection, whichever is larger, but not less than one and one-fourth inch nominal inside diameter.
 - (d) Liquid-tight connections for all container openings that are identified by conspicuous markings and closed when not in use.
 - (e) Shutoff valves located within one inch of the tank shell on each connection through which liquid can normally flow.

10.5. When tanks are provided with openings for manual gauging, liquid-tight caps or covers shall be provided and shall be kept closed when not open for gauging.

10.6. Containers used for the transport of diesel fuel shall not exceed a capacity of five hundred gallons.

10.7. Containers, other than safety cans, used for the transport of diesel fuel shall be permanently fixed to the transportation unit; provided, however, that the WV Diesel Commission may develop criteria on a mine by mine basis that allows for approved diesel fuel transportation units to be transported on (or by) a secondary transportation unit to their respective work areas.

10.8. Diesel fuel transportation units shall be transported individually and not with any other cars, except that two diesel fuel transportation units up to a maximum of five hundred gallons each may be transported together.

10.9. Diesel fuel shall not be transported on conveyor belts.

10.10. When transporting diesel fuel in containers other than safety cans, a fire extinguisher shall be provided on each end of the transportation unit. The fire extinguishers shall be multipurpose type dry-chemical fire extinguishers containing a nominal weight of twenty pounds.

10.11. Diesel fuel transportation units shall have a fire suppression system that meets the requirements of §196-1-11.

10.12. In mines where trolley wire is used, diesel fuel transportation units shall be provided with insulating material to protect the units from energized trolley wire, and the distance between the diesel fuel transportation unit and the trolley wire shall not be less than twelve inches, or the trolley wire shall be de-energized when diesel fuel transportation units are transported through the area.

10.13. Unattended diesel fuel transportation units shall be parked only in underground diesel fuel storage facilities.

10.14. Safety cans shall be used for emergency fueling only.

10.15. Safety cans shall be clearly marked, have a maximum capacity of five gallons and be constructed of metal and equipped with a nozzle and self-closing valves.

§196-1-11. Fire suppression for Equipment and Transportation.

11.1. Fire suppression systems for diesel-powered equipment and fuel transportation units shall meet the requirements of this section.

11.2. The system must be an automatic multipurpose dry-powder type fire suppression system suitable for the intended application and listed or approved by a nationally recognized independent testing laboratory. Installation requirements are as follows:

(a) The system shall be installed in accordance with the manufacturer's specifications and the limitations of the listing or approval.

(b) The system shall be installed in a protected location or guarded to minimize physical damage from routine operations.

(c) Suppressant agent distribution tubing or piping of the system shall be secured and protected against damage, including pinching, crimping, stretching, abrasion and corrosion.

(d) Discharge nozzles of the system shall be positioned and aimed for maximum fire suppression effectiveness in the protected areas. Nozzles shall also be protected against the entrance of foreign materials such as mud, coal dust or rock dust that could prevent proper discharge of suppressant agent.

11.3. The fire suppression system shall provide automatic fire detection and suppression for all of the following:

(a) The engine, transmission, hydraulic pumps and tanks, fuel tanks, exposed brake units, air compressors and battery areas, as applicable, on all diesel-powered equipment.

(b) Fuel containers and electric panels or controls used during fuel transfer operations on fuel transportation units.

11.4. The fire suppression system shall include a system fault and fire alarm annunciator that can be seen and heard by the equipment operator.

11.5. The fire suppression system shall provide for automatic engine shutdown. Engine shutdown and discharge of suppressant agent may be delayed for a maximum of fifteen seconds after the fire alarm annunciator alerts the operator.

11.6. At least two manual actuators shall be provided with at least one manual actuator at each end of the equipment. If the equipment is provided with an operator's compartment, one of the mechanical actuators shall be located in the compartment within easy reach of the operator. For stationary equipment, the two manual actuators shall be located with at least one actuator on the stationary equipment and at least one actuator a safe distance away from the equipment and in intake air.

§196-1-12. Fire suppression for Storage Areas.

12.1. Fire suppression systems for diesel fuel storage areas shall meet the requirements of this section.

12.2. The system shall be an automatic multipurpose dry-powder type fire suppression system or other system of equal capability, suitable for the intended application and listed or approved by a nationally recognized independent testing laboratory. The system shall meet the following installation requirements:

(a) The system shall be installed in accordance with the manufacturer's specifications and the limitations of the listing or approval.

(b) The system shall be installed in a protected location or guarded to minimize physical damage from routine operation.

(c) Suppressant agent distribution tubing or piping of the system shall be secured and protected against damage, including pinching, crimping, stretching, abrasion and corrosion.

(d) Discharge nozzles of the system shall be positioned and aimed for maximum fire suppression effectiveness in the protected areas. Nozzles must also be protected against the entrance of foreign materials such as mud, coal dust and rock dust that could prevent proper discharge of suppressant agent.

12.3. The fire suppressant system shall provide automatic fire detection and suppression for the fuel storage tanks, containers, safety cans, pumps, electrical panels and control equipment in fuel storage areas.

12.4. Audible and visual alarms to warn of fire or system faults shall be provided at the protected area and at a surface location that is always staffed when persons are underground. A means shall also be provided for warning all endangered persons in the event of fire.

12.5. Fire suppression systems shall include two manual actuators with at least one located within the fuel storage facility and at least one located a safe distance away from the storage facility and in intake air.

12.6. The fire suppression system shall remain operative in the event of electrical system failure.

12.7. If electrically operated, the detection and actuation circuits shall be monitored and provided with status indicators showing power and circuit continuity. If not electrically operated, a means shall be provided to indicate the functional readiness status of the system.

12.8. Fire suppression devices shall be visually inspected at least once each week by a person qualified to make such inspections..

12.9. Each fire suppression device shall be tested and maintained.

12.10. A record shall be maintained of the inspection required by this paragraph. The record of the weekly inspections shall be maintained at an appropriate location for each fire suppression device.

12.11. All miners normally assigned to the active workings of a mine shall be instructed about any hazards inherent to the operation of all fire suppression devices installed and, where appropriate, the safeguards available for each device.

§196-1-13. Use of Certain Starting Aids Prohibited.

13.1. The use of volatile or chemical starting aids is prohibited.

§196-1-14. Fueling.

14.1. Fueling of diesel-powered equipment shall not be conducted in the intake escapeway unless the mine design and entry configuration make it necessary. In those cases where fueling in the intake escapeway is necessary, the mine operator shall submit a plan for approval to the Commission outlining the special safety precautions that will be taken to insure the protection of miners. Such plan shall specify a location, (such as end of the tail track or adjacent to the load out point), where fueling will be conducted in the intake escapeway and all other safety precautions that will be taken, which shall include an examination of the area for spillage or fire by a qualified person.

14.2. Diesel fuel and other combustible materials shall be cleaned up and not be permitted to accumulate anywhere in an underground mine or on diesel-powered or electric equipment located therein.

14.3. At least one person specially trained in the cleanup and disposal of diesel fuel spills shall be on duty at the mine when diesel-powered equipment or mobile fuel transportation equipment is being used or when any fueling of diesel-powered equipment is being conducted.

§196-1-15. Fire and Safety Training.

15.1. All underground employees at the mine shall receive special instruction related to fighting fires involving diesel fuel. This training may be included in annual refresher training under MSHA regulations at 30 CFR Part 48 (relating to training and retraining of miners) or included in the fire drills required under MSHA regulations at 30 CFR 75.1101-23 (relating to program of instruction; location and use of fire fighting equipment; location of escapeways, exits and routes of travel; evacuation procedures; fire drills.)

15.2. All miners shall be trained in precautions for safe and healthful handling and disposal of diesel-powered equipment filters. All used intake air filters, exhaust diesel particulate matter filters and engine oil filters shall be placed in their original containers or other suitable enclosed containers and removed from the underground mine to the surface. Arrangements will be made for safe handling and disposal of these filters within a timely manner after they have reached the surface.

§196-1-16. Maintenance.

16.1. Diesel-powered equipment shall be maintained in an approved and safe condition as described in this article or shall be removed from service.

16.2. An operator choosing to use diesel equipment in an underground coal mine must develop a maintenance plan and submit his plan to the WV Diesel Commission for approval. Failure of the mine operator to comply with the maintenance requirements of this subsection may result in the revocation of the commission's approval of the complete diesel-powered equipment package, provided appropriate notification has been given to the mine operator and the procedures of this section have been taken. Upon receiving such notice, the mine operator shall have thirty days to submit a plan to achieve and maintain compliance. Such plan shall be evaluated by the commission, and, upon approval, the mine operator shall implement the plan. The commission shall monitor the mine operators' compliance. At any time the commission determines that the mine operator is unable or unwilling to comply, the commission shall revoke the mine operator's approval, which would in turn prohibit use of all diesel equipment at that mine.

16.3. To acquire and maintain approval of a complete diesel-powered equipment package, the mine operator shall comply with the following requirements:

(a) All service, maintenance and repairs of approved complete diesel-powered equipment packages shall be performed by mechanics that are trained and qualified in accordance with §196-1-24.

(b) Service and maintenance of approved complete diesel-powered equipment packages shall be performed according to:

- (i) the specified routine maintenance schedule;
- (ii) on-board performance and maintenance diagnostics readings;
- (iii) emissions test results; and
- (iv) component manufacturer's recommendations.

§196-1-17. Records.

17.1. A record shall be made of all emissions tests, preoperational examinations and maintenance and repairs of complete diesel-powered equipment packages. The records made pursuant to this section shall meet the requirements of the section.

17.2. The person performing the emissions test, examination, maintenance or repair shall certify by date, time, engine hour reading and signature that the emissions test, examination, maintenance or repair was made.

17.3. Records of emissions tests and examinations shall include the specific results of such tests and examination.

17.4. Records of maintenance and repairs shall include the work that was performed, any fluids or oil added, parts replaced or adjustments made and the results of any subsequently required emissions testing.

17.5. Records of preoperational examinations shall be retained for the previous one hundred-hour maintenance cycle.

17.6. Records of emissions tests, one hundred-hour maintenance tests and repairs shall be countersigned once each week by the certified mine electrician or mine foreman.

17.7. All records required by this section shall be retained for at least one year at a surface location at the mine and made available for inspection by the commission, district mine inspector and by miners and their representatives.

§196-1-18. Duties of Operator.

18.1. Prior to using a piece of diesel-powered equipment during a shift, an equipment operator shall conduct an examination as follows:

(a) Check the exhaust emissions control and conditioning system components to determine that the components are in place and not damaged or leaking.

(b) Assure that the equipment is clean and free of accumulations of combustibles.

(c) Assure that the machine is loaded safely.

(d) Check for external physical damage.

(e) Check for loose or missing connections.

(f) Check engine oil level.

(g) Check transmission oil level.

(h) Check other fluid levels, if applicable.

(i) Check for hydraulic, coolant and oil leaks.

(j) Check fan, water pump and other belts.

(k) Check the fan for damage.

(l) Check guards.

(m) Check the fuel level.

(n) Check for fuel leaks.

(o) Comply with record keeping requirements pursuant to §196-1-17.

18.2. After the engine is started and warmed up, the equipment operator shall conduct an examination as follows:

(a) Check all on-board engine performance and maintenance diagnostics system gauges for proper operation and in-range readings. The equipment operator shall immediately shut down the engine and notify the operator if the on-board readings indicate any of the following:

(i) Intake restriction at full engine speed is greater than the manufacturer's recommendation.

(ii) Exhaust restriction at full engine speed is greater than the manufacturer's recommendation.

(iii) Coolant temperature is at or near two hundred twelve degrees Fahrenheit.

(iv) Low engine oil pressure.

(v) High engine oil temperature.

(b) Check safety features, including, but not limited to, the throttle, brakes, steering, lights and horn.

(c) Comply with record keeping requirements pursuant to section §196-1-17.

§196-1-19. Scheduled Maintenance.

19.1. At intervals not exceeding one hundred hours of engine operation, a qualified mechanic shall perform the following maintenance and make all necessary adjustments or repairs or remove the equipment from service:

(a) Wash or steam-clean the equipment.

(b) Check for and remove any accumulations of coal, coal dust or other combustible materials.

(c) Check the equipment for damaged or missing components or other visible defects.

(d) Conduct electrical and safety component inspections.

(e) Replace engine oil and filter. The WV Diesel Commission may approve a replacement interval greater than 100 hours.

(f) Check the transmission oil level and add oil, if necessary.

(g) Check hydraulic oil level and add oil, if necessary.

(h) Check the engine coolant level and add coolant, if necessary.

(i) Check all other fluid levels and add fluid, if necessary.

(j) Check for oil, coolant and other fluid leaks.

(k) Inspect the cooling fan, radiator and shroud. Remove any obstructions and make necessary repairs.

(l) Check all belts. Tighten or replace, if necessary.

(m) Check the battery and service as necessary.

(n) Check the automatic fire suppression system.

(o) Check the portable fire extinguisher.

(p) Check the lights.

(q) Check the warning devices.

(r) With the engine operating, check and replace or repair the following:

(i) Oil pressure.

(ii) Intake air restriction at full engine speed.

(iii) Exhaust gas restriction at full engine speed.

(iv) Exhaust flame arrestor.

(v) All gauges and controls.

(s) Conduct repeatable loaded engine-operating test in accordance with section §196-1-20.

(t) Evaluate and interpret the results of all of the above tests and examinations and make all necessary repairs or remove equipment from service.

(u) Comply with recordkeeping requirements pursuant to section §196-1-17.

§196-1-20. Emissions Monitoring and Control.

20.1. Emissions for diesel-powered equipment shall be monitored and controlled as provided in this section.

20.2. When any diesel-powered machine first enters service at a mine, baseline emission values shall be determined by a qualified mechanic. Unless the WV Diesel Commission approves an alternate procedure, the qualified mechanic shall:

(a) Verify that the seal on the engine fuel injector pump is in place and that the proper fuel pump is on the equipment.

(b) Install a new clean intake air cleaner, measure and record the intake restriction pressure.

(c) Check the level of engine oil.

(d) Change the engine lubrication oil if not fresh.

(e) Check the level of the transmission fluid.

(f) Flush the exhaust system, if needed. Measure and record the exhaust back pressure. If exhaust gas backpressure is above that recommended by the Manufacturer, then steps must be taken to bring the exhaust gas back pressure within the Manufacturer's recommended limit prior to beginning the test described in this section.

(g) Test the brakes.

(h) Place the equipment into an intake entry.

(i) Set the brakes and chock the wheels.

(j) Install the portable carbon monoxide (CO) sampling device into the untreated exhaust gas coupling provided in the operator's cab.

(k) Start the engine and allow it to warm up to operating temperature.

(l) For mobile equipment, shift into the highest gear and put the engine at full throttle, or for stationary equipment, induce a load and put the engine at full throttle.

(m) Start the CO sampler and measure and record CO levels every minute for five minutes.

(n) Comply with recordkeeping requirements pursuant to section §196-1-17.

(o) An alternative to the testing provided in the aforementioned subsections may be developed by the WV Diesel Commission.

Note: CO baseline emissions must be representative of MSHA's approval data

§196-1-21. Diagnostic testing.

21.1. At intervals not exceeding once every one hundred hours of engine operation, a qualified mechanic shall perform equipment maintenance diagnostic testing of each piece of diesel-powered equipment in the mine. The qualified mechanic shall:

(a) verify the identification numbers on the equipment;

(b) check the level of the engine lubricating oil;

(c) check the level of the transmission fluid;

(d) set the brakes and chock the wheels;

(e) install the portable CO sampling device into the untreated exhaust port coupling provided in the operator's cab;

(f) start the engine and allow it to warm up to operating temperature;

- (g) check the intake restriction and the exhaust back pressure at high idle speed;
- (h) if the intake restriction is more than the manufacturer's maximum recommended intake restriction, replace the intake filter with a clean one;
- (i) if exhaust gas backpressure is above that recommended by the Manufacturer, then steps must be taken to bring the exhaust gas back pressure within the Manufacturer's recommended limit prior to beginning the test described in this section;
- (j) for mobile equipment, shift into the highest gear and put the engine at full throttle, or for stationary equipment, induce a load and put the engine at full throttle.
- (k) start the CO sampler and record CO levels every minute for five minutes;
- (l) install the portable CO sampling device into the treated exhaust port coupling provided in the operator's cab and repeat steps (i) and (k);
- (m) if the average CO reading for untreated exhaust gas is greater than twice the baseline established under 196-1-20 or if the average CO reading for treated exhaust gas is greater than 100 ppm, the equipment has failed and must be serviced and retested before it is returned to regular service; and
- (n) comply with recordkeeping requirements pursuant to §196-1-17.
- (o) an alternative to the testing provided in subsections 21.1.a. thru 21.1.n. may be developed and/or approved by the WV Diesel Commission.

§196-1-22 Training and General Requirements.

22.1. To use diesel equipment in an underground mine the mine operator shall submit a training plan to the WV Diesel Commission for approval.

22.2. All training course instructors and all training plans required by this section and §196-1-23 and §196-1-24 shall be approved by the commission. Operator training and qualification shall meet the requirements of this section.

22.3. Training shall be conducted in the basics of the operation of a diesel engine, Federal and State regulations governing their use, company rules for safe operations, specific features of each piece of equipment and the ability to recognize problems and shall be provided to each equipment operator and the mine health and safety committee if one exists. This training shall be designed to bring every operator to a level of good understanding of diesel equipment operation. Each operator will be qualified by attending a minimum eight-hour course, including classroom training on diesel fundamentals and equipment-specific hands-on training on the job.

22.4. Upon successful completion of both training sessions, the operator shall be issued a Certificate of Qualification (MSHA 5000-23) that qualifies him or her to operate a specific type of diesel-powered equipment. An operator may be qualified to operate more than one type of equipment by completing additional equipment-specific training covering differences specific to each additional type of equipment.

22.5. Eight (8) hours of annual diesel equipment operator refresher training, separate from that required by MSHA regulations at 30 CFR Part 48 (relating to the training and retraining of miners), shall be required annually. The mine operator shall furnish all required training and refresher training. The employees will suffer no loss of pay for attending training and refresher training.

22.6. The minimum eight-hour training required by subsection 22.5. shall include instruction in the following classroom subjects:

- (a) Engine fundamentals, which shall include an introduction to the function of a diesel engine and recognition of all major components and their functions.
- (b) Diesel regulations, which shall include an introduction to Federal and State regulations governing the use of diesel equipment.
- (c) Diesel emissions, which shall include an introduction to diesel emissions and their adverse health effects.
- (d) Factors that affect diesel emissions, which shall include a detailed presentation of engine faults and diesel fuel quality and their effect on emissions and the preventive actions that can be taken to minimize emissions levels.
- (e) Emissions control devices, which shall include a detailed presentation of the different emissions control devices employed to reduce emissions and details about actions the operator must take to keep the devices in working order.
- (f) Diagnostic techniques, which shall include a presentation of techniques that can be employed by the operator to assure the equipment is in safe operating condition and instruction about how to recognize and diagnose certain engine faults that may cause increases in emissions.
- (g) The preoperational inspection, which shall include a presentation of the purpose, benefits and requirements of the preoperational inspection.
- (h) Ventilation, which shall include an introduction to special ventilation requirements for areas where diesel-powered equipment will operate.
- (i) Fire suppression system, which shall include an introduction to the fire suppression system and its function and when and how to activate the fire suppression manually.
- (j) Operating rules, which shall include a detailed presentation of the driving rules, safe driving speeds, traffic control devices and equipment limitations.
- (k) Emergency procedures, which shall include discussion of emergency situations, such as fire, diesel fuel spills, component failure, loss of ventilation air and emergency escape procedures and discussion of the potential use of the diesel-powered vehicle as an emergency escape vehicle in case of a mine emergency situation.

(l) Record keeping and reporting procedures, which shall include a presentation on required record keeping and reporting procedures for problems or unsafe conditions, high emissions level and preoperational inspections made by the equipment operator.

22.7. A new Certificate of Qualification (MSHA 5000-23) shall be issued annually after the equipment operator has received the annual refresher training. A copy of the new certificate will be sent to the WV Diesel Commission.

§196-1-23. Equipment-Specific Training.

23.1. Equipment-specific hands-on orientation training shall be given in an area of the mine where the equipment will be operated. This orientation shall be specific to the type and make of the diesel machine and shall be presented in small groups. The following subjects shall be included in the training:

(a) Equipment layout, which shall include familiarization with the layout of the equipment, the operator's compartments and the controls.

(b) Pre-operation inspection, which shall include familiarization with the pre-operation inspection procedure and review of specific details of the inspection and location of the components to be inspected.

(c) Equipment limitations, which shall include instruction relating to equipment performance, speeds, capacities and blind areas.

(d) Operating areas, which shall include instruction relating to areas in which the equipment may be operated.

(e) Operation, which shall include familiarization with the controls, gauges and warning devices and safe operating limits of all indicating gauges.

(f) Refueling procedure, which shall include familiarization with fuel handling, permissible refueling areas, spill prevention, cleanup and potential hazards from diesel fuel.

(g) Emergency devices, which shall include instruction relating to the location and use of the fire extinguisher and fire suppression devices.

(h) Driving practice, which shall include supervised operation of the equipment.

§196-1-24. Diesel Mechanic Training.

24.1. Diesel mechanic training and qualification shall meet the requirements of this section.

24.2. Diesel mechanics shall be trained and qualified to perform maintenance, repairs and testing of the features of diesel equipment certified by MSHA and the commission.

24.3. To be qualified, a diesel mechanic must successfully complete a minimum of sixteen hours of a training program approved by the commission regarding the general function, operation, maintenance and testing of emissions control and conditioning components. The diesel mechanic must be qualified to perform these tasks on the specific machines used at the mine or mines where they are employed. Additional engine-specific training shall be provided to diesel mechanics in accordance with a plan approved by the commission.

24.4. Annual retraining programs of eight (8) hours for diesel mechanics shall be required and approved by the commission. The annual retraining shall include refresher training as well as new procedure and new technology training as necessary. Such training shall be separate from refresher training pursuant to MSHA regulations at 30 CFR Part 48 (relating to training and retraining of miners) and electrical training required by MSHA. The mine operator shall furnish all required training and refresher training. The employees will suffer no loss of pay for attending training and refresher training.

24.5. The minimum sixteen-hour diesel mechanic training programs shall be submitted for approval to the commission and shall include training in the following minimum subject requirements:

(a) Federal and State requirements regulating the use of diesel equipment.

(b) Company policies and rules related to the use of diesel equipment.

(c) Emissions control system design and component technical training.

(d) On-board engine performance and maintenance diagnostics system design and component technical training.

(e) Service and maintenance procedures and requirements for the emissions control systems.

(f) Emissions testing procedures and evaluation and interpretation of test results.

(g) Troubleshooting procedures for the emissions control systems.

(h) Fire protection systems test and maintenance.

(i) Fire and ignition sources and their control and elimination.

(j) Fuel system maintenance and safe fueling procedures.

(k) Intake air system design and components technical training and maintenance procedures.

(l) Engine shutdown device tests and maintenance.

(m) Special instructions regarding components, such as the fuel injection system, that shall only be repaired and adjusted by a qualified mechanic who has received special training and is authorized to make such repairs or adjustments by the component manufacturer.

(n) Instruction on record keeping requirements for maintenance procedures and emissions testing.

(o) Other subjects determined by the commission to be necessary to address specific health and safety needs.

24.6. Individuals successfully completing the approved 16-hour diesel mechanic training will be considered to be a trained operator providing he has received the necessary task training on the specific piece of diesel equipment.

§196-1-25. Operation of Diesel-Powered Equipment.

25.1. In addition to other requirements of this article, diesel-powered equipment shall be operated pursuant to the standards set forth in this section.

25.2. All diesel-powered equipment shall be attended while in operation with the engine running in underground mines.

25.3. Unnecessary idling of diesel-powered equipment shall be prohibited.

25.4. All roadways where diesel-powered equipment is operated shall be maintained as free as practicable from bottom irregularities, debris and wet or muddy conditions that will affect control of the equipment.

25.5. Operating speeds shall be consistent with conditions of roadways, grades, clearances, visibility and traffic and type of equipment used.

25.6. Equipment operators shall have full control of the mobile equipment while it is in motion.

25.7. Traffic rules, including speed, signals and warning signs, shall be standardized at each mine and posted.

25.8. All diesel-powered equipment shall be maintained in a safe and healthful operating condition. Equipment in an unsafe or unhealthful condition or not maintained in accordance with the engine or emissions control operating specifications shall be removed from service immediately and shall not be returned to service until all necessary corrective actions have been taken.

§196-1-26. Diesel Inspectors; Employment; Training.

26.1. Prior to the implementation of this Rule, the West Virginia Office of Miners' Health Safety and Training shall employ a diesel inspector in each of the State's four Regional offices.

26.2. The diesel inspector may be assigned other duties as prescribed by the Director.

26.3. The West Virginia Office of Miners' Health Safety and Training shall provide the diesel inspectors with specific training in the Rules for Operating Diesel Equipment in Underground Mines; also they shall train and equip the diesel inspectors with the proper equipment so that the inspectors may effectively test for diesel emissions and properly enforce the Rules for Operating Diesel Equipment in Underground Mines as prescribed by the WV Diesel Commission.

26.4. The diesel inspectors shall be trained in accordance with criteria as established and approved by the WV Diesel Commission.

26.5. After the implementation of the Rules for Operating Diesel Equipment in Underground Mines, the West Virginia Office of Miners' Health Safety and Training shall employ additional diesel inspectors as needed.

§196-1-27. Diesel Inspector Training Course.

27.1. Training for diesel inspectors shall include, but is not limited to, the following:

- (a) Engine Fundamentals Components and Operation of a Diesel Engine
- (b) Fuel Standards Fuel Requirements and Effect of Various Fuels on DPM Emissions
- (c) Diesel Regulations State and Federal
- (d) DPM Health Effects
- (e) Factors that increase/decrease DPM emissions
- (f) Emission Control Techniques Operation, Maintenance and Testing
- (g) Diagnostics Instruments, Testing and Evaluation
- (h) Inspection Techniques Enforcement
- (i) Ventilation
- (j) Fire Suppression Systems Operation, Testing and Maintenance
- (k) Emergency Procedures Firefighting, Spills/Containment
- (l) Fuel Handling/Storage
- (m) Manufacturer Training
- (n) Training Requirement Plans, Record keeping

ADDENDUM 1

Current Inspector Salaries

Per WV Code §22A-1-9, §22A-1-11, §22A-1-12, §22A-1-13 and §22A-1-24, the Director of the Office of Miners' Health, Safety and Training has the authority and responsibility to set the minimum salaries to be paid to Mine Safety Instructors, Surface Mine Inspectors, Underground Mine Inspectors, Electrical Inspectors, Mine Foreman Examiner, Assistant Inspector-at-Large and Inspector-at-Large. The new minimum salary schedule below is effective July 1, 2007 for each of these classes.

Additionally, Legislative rule 36 CSR 44 requires an additional \$250/month for each mine rescue team member.

Title	Minimum Salary	Mine Rescue Team Minimum Salary
Safety Instructor	\$43,728	\$46,728
Surface Mine Inspector	\$44,880	\$47,880
Underground Mine Inspector	\$45,768	\$48,768
Electrical Inspector	\$47,592	\$50,592
Chief Electrical Inspector	\$51,276	\$54,276
Chief Diesel Inspector	\$51,276	\$54,276
Mine Rescue Coordinator	\$51,276	\$54,276
Mine Personnel Examiner	\$53,124	\$56,124
Assistant Inspector-at-Large	\$53,124	\$56,124
Inspector-at-Large	\$57,480	\$60,480

ADDENDUM 2

Charts for 36 CSR 23

Surface Construction Operations Within the Coal Mining Industry

CSR §36-23. Surface Construction Operations Within the Coal Mining Industry

PLEASE NOTE:

Those provisions deemed unnecessary by OSHA as being outdated and redundant have been deleted.

Please see 29 CFR 1926, as amended August 30, 1996.

Charts / Tables affected (now obsolete):

Table 27	Table 45
Table 28	Table 46
Table 43	Table 48
Table 44	

Table F-1 FIRE EXTINGUISHERS DATA
















	WATER TYPE				FOAM	CARBON DIOXIDE	DRY CHEMICAL			
							SODIUM OR POTASSIUM BICARBONATE	MULTI-PURPOSE ABC		
										
CLASS A FIRES WOOD, PAPER, TRASH HAVING GLOWING EMBERS 	YES	YES	YES	YES	YES	NO <small>(CERT. LABEL REQUIRED)</small>	NO <small>(CERT. LABEL REQUIRED)</small>	NO <small>(CERT. LABEL REQUIRED)</small>	YES	YES
CLASS B FIRES FLAMMABLE LIQUIDS GASOLINE, OIL, PAINTS, GREASE, ETC. 	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
CLASS C FIRES ELECTRICAL EQUIPMENT 	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
CLASS D FIRES COMBUSTIBLE METALS 	SPECIAL EXTINGUISHING AGENTS APPROVED BY RECOGNIZED TESTING									
METHOD OF OPERATION	PULL PIN, SQUEEZE HANDLE	TURN UPSIDE DOWN AND BUMP	PUMP HANDLE	TURN UPSIDE DOWN	TURN UPSIDE DOWN	PULL PIN, SQUEEZE LEVER	RUPTURE CARTRIDGE, SQUEEZE LEVER	PULL PIN, SQUEEZE HANDLE	PULL PIN, SQUEEZE HANDLE	RUPTURE CARTRIDGE, SQUEEZE LEVER
RANGE	30' - 40'	30' - 40'	30' - 40'	30' - 40'	30' - 40'	3' - 5'	5' - 30'	5' - 20'	5' - 30'	5' - 30'
MAINTENANCE	CHECK AIR PRESSURE GAUGE MONTHLY	WEIGH GAS CARTRIDGE AND ADD WATER IF REQUIRED ANNUALLY	DISCHARGE AND FILL WITH WATER ANNUALLY	DISCHARGE ANNUALLY RECHARGE	DISCHARGE ANNUALLY RECHARGE	WEIGH SEMI-ANNUALLY	WEIGH GAS CARTRIDGE, CHECK CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	WEIGH GAS CARTRIDGE, CHECK CONDITION OF DRY CHEMICAL ANNUALLY

Table 1

Table 2

STORAGE IN INSIDE ROOMS			
Fire Protection Provided ¹	Fire Resistance	Maximum Floor Area (ft ²)	Total Allowable Quantities (gal/ft ² floor area)
Yes	2 hr.	500	10
No	2 hr.	500	4*
Yes	1 hr.	150	5*
No	1 hr.	150	2

Table 3
TABLE F-4

Heating appliances	Minimum clearance, (inches)		
	Sides	Rear	Chimney Connector
Room heater, circulating type.....	12	12	18
Room heater, radiant type.....	36	36	18

Tables 4 and 5

Figure G-1

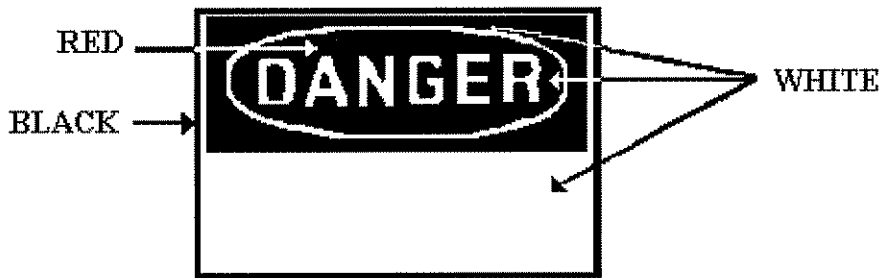


Figure G-2

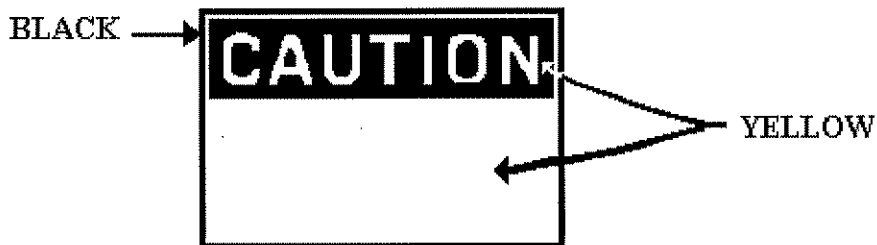
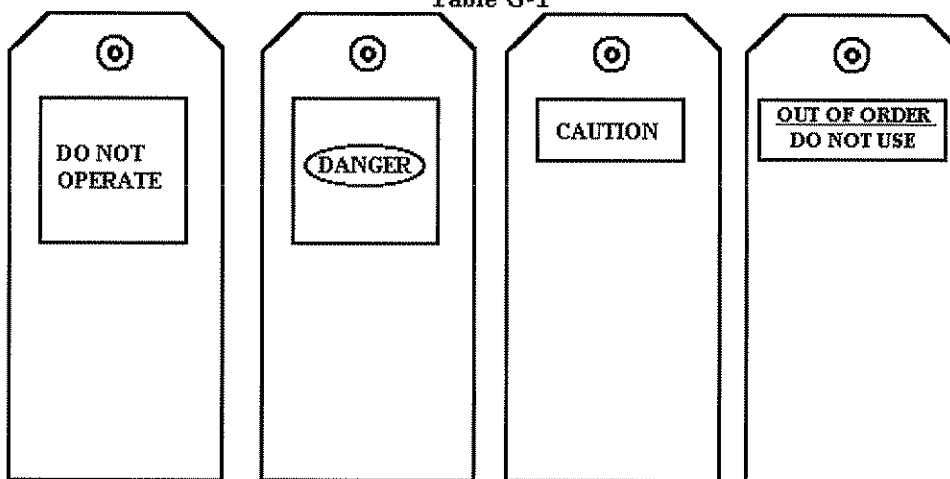


Table G-1



White tag - White letters on a red square

White tag - White letters on red oval with a black square

Yellow tag - Yellow letters on a black background

White tag - White letters on a black background

Basic Stock (Background)	Safety Colors (Ink)	Copy Specification (Letters)
White	Red	Do Not Operate
White	Black and Red	Danger
Yellow	Black	Caution
White	Black	Out of Order Do Not Use

Table 6

Table 7
TABLE H - 1. -- RATED CAPACITY (WORKING LOAD LIMIT),
FOR ALLOY STEEL CHAIN SLINGS (1)

Chain size, inches	Rated Capacity (Working Load Limit), Pounds [Horizontal angles shown in parentheses](2)											
	Single branch sling--			Double sling vertical angle (1)						Triple and quadruple sling vertical angle (1)		
	90 deg. Loading	30 deg. (60 deg.)	45 deg. (45 deg.)	30 deg. (60 deg.)	45 deg. (45 deg.)	60 deg. (30 deg.)	30 deg. (60 deg.)	45 deg. (45 deg.)	60 deg. (30 deg.)	30 deg. (60 deg.)	45 deg. (45 deg.)	60 deg. (30 deg.)
1/4.....	3,250	5,560	4,550	3,250	5,560	4,550	3,250	5,560	4,550	3,250	5,560	4,550
3/8.....	6,600	11,400	9,300	6,600	11,400	9,300	6,600	11,400	9,300	6,600	11,400	9,300
1/2.....	11,250	19,500	15,900	11,250	19,500	15,900	11,250	19,500	15,900	11,250	19,500	15,900
5/8.....	16,500	28,500	23,300	16,500	28,500	23,300	16,500	28,500	23,300	16,500	28,500	23,300
3/4.....	23,000	39,800	32,500	23,000	39,800	32,500	23,000	39,800	32,500	23,000	39,800	32,500
7/8.....	28,750	49,800	40,600	28,750	49,800	40,600	28,750	49,800	40,600	28,750	49,800	40,600
1.....	38,750	67,100	54,800	38,750	67,100	54,800	38,750	67,100	54,800	38,750	67,100	54,800
1 1/8....	44,500	77,000	63,000	44,500	77,000	63,000	44,500	77,000	63,000	44,500	77,000	63,000
1 1/4....	57,500	99,500	81,000	57,500	99,500	81,000	57,500	99,500	81,000	57,500	99,500	81,000
1 3/8....	67,000	116,000	94,000	67,000	116,000	94,000	67,000	116,000	94,000	67,000	116,000	94,000
1 1/2....	80,000	138,000	112,900	80,000	138,000	112,900	80,000	138,000	112,900	80,000	138,000	112,900
1 3/4....	100,000	172,000	140,000	100,000	172,000	140,000	100,000	172,000	140,000	100,000	172,000	140,000

Footnote(1) Other grades of proof tested steel chain include Proof Coil, BBB Coil and Hi-Test Chain. These grades are not recommended for overhead lifting and therefore are not covered by this code

Footnote(1) Rating of multileg slings adjusted for angle of loading measured as the included angle between the inclined leg and the vertical.

Footnote(2) Rating of multileg slings adjusted for angle of loading between the inclined leg and the horizontal plane of the load.

Table 8

TABLE H - 2. -- MAXIMUM ALLOWABLE WEAR
AT ANY POINT OF LINK

Chain size, (inches)	Maximum allowable wear (inch)
1/4	3/64
3/8	5/64
1/2	7/64
5/8	9/64
3/4	5/32
7/8	11/64
1	3/16
1 1/8	7/32
1 1/4	1/4
1 3/8	9/32
1 1/2	5/16
1 3/4	11/32

Table 9

TABLE H - 3. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope
With Fiber Core (FC)

Dia (inches)	Rope	Rated capacities, tons (2,000 lb)						Rated capacities, tons (2,000 lb)					
		Vertical			Choker			Vertical			Vertical Basket(1)		
		HT	MS	S	HT	MS	S	HT	MS	S	HT	MS	S
1/4	6x19	0.49	0.51	0.55	0.37	0.38	0.41	0.99	1.0	1.1	1.0	1.0	1.1
5/16	6x19	0.76	0.79	0.85	0.57	0.59	0.64	1.5	1.6	1.7	1.5	1.6	1.7
3/8	6x19	1.1	1.1	1.2	0.80	0.85	0.91	2.1	2.2	2.4	2.1	2.2	2.4
7/16	6x19	1.4	1.5	1.6	1.1	1.1	1.2	2.9	3.0	3.3	2.9	3.0	3.3
1/2	6x19	1.8	2.0	2.1	1.4	1.5	1.6	3.7	3.9	4.3	3.7	3.9	4.3
9/16	6x19	2.3	2.5	2.7	1.7	1.9	2.0	4.6	5.0	5.4	4.6	5.0	5.4
5/8	6x19	2.8	3.1	3.3	2.1	2.3	2.5	5.6	6.2	6.7	5.6	6.2	6.7
3/4	6x19	3.9	4.4	4.8	2.9	3.3	3.6	7.8	8.8	9.5	7.8	8.8	9.5
7/8	6x19	5.1	5.9	6.4	3.9	4.5	4.8	10.0	12.0	13.0	10.0	12.0	13.0
1	6x19	6.7	7.7	8.4	5.0	5.8	6.3	13.0	15.0	17.0	13.0	15.0	17.0
1 1/8	6x19	8.4	9.5	10.0	6.3	7.1	7.9	17.0	19.0	21.0	17.0	19.0	21.0
1 1/4	6x37	9.8	11.0	12.0	7.4	8.3	9.2	20.0	22.0	25.0	20.0	22.0	25.0
1 3/8	6x37	12.0	13.0	15.0	8.9	10.0	11.0	24.0	27.0	30.0	24.0	27.0	30.0
1 1/2	6x37	14.0	16.0	17.0	10.0	12.0	13.0	28.0	32.0	35.0	28.0	32.0	35.0
1 5/8	6x37	16.0	18.0	21.0	12.0	14.0	15.0	33.0	37.0	41.0	33.0	37.0	41.0
1 3/4	6x37	19.0	21.0	24.0	14.0	16.0	18.0	38.0	43.0	48.0	38.0	43.0	48.0
2	6x37	25.0	28.0	31.0	18.0	21.0	23.0	49.0	55.0	62.0	49.0	55.0	62.0

Footnote(1) These values only apply when the D/d ratio for HT slings is 10 or greater, and for MS and S Slings is 20 or greater where:
D=Diameter of curvature around which the body of the sling is bent;
d=Diameter of rope.

HT = Hand Tucked Splice and Hidden Tuck Splice.

For hidden tuck splice (IWRC) use values in HT columns.

MS = Mechanical Splice.

S = Swaged or Zinc Poured Socket.

Table 10

TABLE H - 4. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

6x19 and 6x37 Classification Improved Plow Steel Grade Rope
With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)						Rated capacities, tons (2,000 lb)					
Dia (inches)	Constr	Vertical			Choker			Vertical Basket(1)			Vertical Basket(1)		
		HT	MS	S	HT	MS	S	HT	MS	S	HT	MS	S
1/4	6x19	0.53	0.56	0.59	0.40	0.42	0.44	1.0	1.1	1.2			
5/16	6x19	0.81	0.87	0.92	0.61	0.65	0.69	1.6	1.7	1.8			
3/8	6x19	1.1	1.2	1.3	0.86	0.93	0.98	2.3	2.5	2.6			
7/16	6x19	1.5	1.7	1.8	1.2	1.3	1.3	3.1	3.4	3.5			
1/2	6x19	2.0	2.2	2.3	1.5	1.6	1.7	3.9	4.4	4.6			
9/16	6x19	2.5	2.7	2.9	1.8	2.1	2.2	4.9	5.5	5.8			
5/8	6x19	3.0	3.4	3.6	2.2	2.5	2.7	6.0	6.8	7.2			
3/4	6x19	4.2	4.9	5.1	3.1	3.6	3.8	8.4	9.7	10.0			
7/8	6x19	5.5	6.6	6.9	4.1	4.9	5.2	11.0	13.0	14.0			
1	6x19	7.2	8.5	9.0	5.4	6.4	6.7	14.0	17.0	18.0			
1 1/8	6x19	9.0	10.0	11.0	6.8	7.8	8.5	18.0	21.0	23.0			
1 1/4	6x37	10.0	12.0	13.0	7.9	9.2	9.9	21.0	24.0	26.0			
1 3/8	6x37	13.0	15.0	16.0	9.6	11.0	12.0	25.0	29.0	32.0			
1 1/2	6x37	15.0	17.0	19.0	11.0	13.0	14.0	30.0	35.0	38.0			
1 5/8	6x37	18.0	20.0	22.0	13.0	15.0	17.0	35.0	41.0	44.0			
1 3/4	6x37	20.0	24.0	26.0	15.0	18.0	19.0	41.0	47.0	51.0			
2	6x37	26.0	30.0	33.0	20.0	23.0	25.0	53.0	61.0	66.0			

Footnote(1) These values only apply when the D/d ratio for HT slings is 10 or greater, and for MS and S slings is 20 or greater where:
D=Diameter of curvature around which the body of the sling is bent;
d=Diameter of rope.

HT = Hand Tucked Splice. For hidden tuck splice (IWRC) use Table

H-3 values in HT column.

MS = Mechanical Splice.

S = Swaged or Zinc Poured Socket.

Table 11

TABLE H - 5. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

Cable Laid Rope -- Mechanical Splice Only

7x7x7 & 7X7X19 Constructions Galvanized Aircraft Grade Rope
 7x6x19 IWRC Construction Improved Plow Steel Grade Rope

Rope		Rated capacities, tons (2,000 lb.)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x7x7.....	0.50	0.38	1.0
3/8	7x7x7.....	1.1	0.81	2.2
1/2	7x7x7.....	1.8	1.4	3.7
5/8	7x7x7.....	2.8	2.1	5.5
3/4	7x7x7.....	3.8	2.9	7.6
5/8	7x7x19.....	2.9	2.2	5.8
3/4	7x7x19.....	4.1	3.0	8.1
7/8	7x7x19.....	5.4	4.0	11.0
1	7x7x19.....	6.9	5.1	14.0
1 1/8	7x7x19.....	8.2	6.2	16.0
1 1/4	7x7x19.....	9.9	7.4	20.0
3/4	(2)7x6x19	3.8	2.8	7.6
7/8	(2)7x6x19	5.0	3.8	10.0
1	(2)7x6x19	6.4	4.8	13.0
1 1/8	(2)7x6x19	7.7	5.8	15.0
1 1/4	(2)7x6x19	9.2	6.9	18.0
1 5/16	(2)7x6x19	10.0	7.5	20.0
1 3/8	(2)7x6x19	11.0	8.2	22.0
1 1/2	(2)7x6x19	13.0	9.6	26.0

Footnote(1) These values only apply when the D/d ratio is 10 or greater where:

D=Diameter of curvature around which the body of the sling is bent;
 d=Diameter of rope.

Footnote(2) IWRC.

Table 12

TABLE H - 6. -- RATED CAPACITIES FOR SINGLE LEG SLINGS

8-Part and 6-Part Braided Rope
 6x7 and 6x19 Construction Improved Plow Steel Grade Rope
 7x7 Construction Galvanized Aircraft Grade Rope

Component ropes		Rated capacities, tons (2,000 lb)					
Diameter (inches)	Constr	Vertical		Choker		Basket vertical to 30 deg. (1)	
		8-Part	6-Part	8-Part	6-Part	8-Part	6-Part
3/32.....	6x7	0.42	0.32	0.32	0.24	0.74	0.55
1/8.....	6x7	0.76	0.57	0.57	0.42	1.3	0.98
3/16.....	6x7	1.7	1.3	1.3	0.94	2.9	2.2
3/32.....	7x7	0.51	0.39	0.38	0.29	0.89	0.67
1/8.....	7x7	0.95	0.71	0.71	0.53	1.6	1.2
3/16.....	7x7	2.1	1.5	1.5	1.2	3.6	2.7
3/16.....	6x19	1.7	1.3	1.3	0.98	3.0	2.2
1/4.....	6x19	3.1	2.3	2.3	1.7	5.3	4.0
5/16.....	6x19	4.8	3.6	3.6	2.7	8.3	6.2
3/8.....	6x19	6.8	5.1	5.1	3.8	12.0	8.9
7/16.....	6x19	9.3	6.9	6.9	5.2	16.0	12.0
1/2.....	6x19	12.0	9.0	9.0	6.7	21.0	15.0
9/16.....	6x19	15.0	11.0	11.0	8.5	26.0	20.0
5/8.....	6x19	19.0	14.0	14.0	10.0	32.0	24.0
3/4.....	6x19	27.0	20.0	20.0	15.0	46.0	35.0
7/8.....	6x19	36.0	27.0	27.0	20.0	62.0	47.0
1.....	6x19	47.0	35.0	35.0	26.0	81.0	61.0

Footnote(1) These values only apply when the D/d ratio is 20 or greater where: D=Diameter of curvature around which the body of the sling is bent; d=Diameter of component rope.

Table 13
TABLE H - 7. -- RATED CAPACITIES FOR 2-LEG
AND 3-LEG BRIDLE SLINGS

6x19 and 6x37 Classification Improved Plow Steel
Grade Rope With Fiber Core (FC)

Rope		Rated capacities, tons (2,000 lb)						Rated capacities, tons (2,000 lb)					
Dia [inches]	Constr	2-Leg bridle slings						3-Leg bridle slings					
		30 deg(1) (60 deg) (2)		45 deg. angle		60 deg(1) (30 deg) (2)		30 deg(1) (60 deg) (2)		45 deg. angle		60 deg(1) (30 deg) (2)	
		HT	MS	HT	MS	HT	MS	HT	MS	HT	MS	HT	MS
1/4	6x19	0.85	0.88	0.70	0.72	0.49	0.51	1.3	1.3	1.0	1.1	0.74	0.76
5/16	6x19	1.3	1.4	1.1	1.1	0.76	0.79	2.0	2.0	1.6	1.7	1.1	1.2
3/8	6x19	1.8	1.9	1.5	1.6	1.1	1.1	2.8	2.9	2.3	2.4	1.6	1.7
7/16	6x19	2.5	2.6	2.0	2.2	1.4	1.5	3.7	4.0	3.0	3.2	2.1	2.3
1/2	6x19	3.2	3.4	2.6	2.8	1.8	2.0	4.8	5.1	3.9	4.2	2.8	3.0
9/16	6x19	4.0	4.3	3.2	3.5	2.3	2.5	6.0	6.5	4.9	5.3	3.4	3.7
5/8	6x19	4.8	5.3	4.0	4.4	2.8	3.1	7.3	8.0	5.9	6.5	4.2	4.6
3/4	6x19	6.8	7.6	5.5	6.2	3.9	4.4	10.0	11.0	8.3	9.3	5.8	6.6
7/8	6x19	8.9	10.0	7.3	8.4	5.1	5.9	13.0	15.0	11.0	13.0	7.7	8.9
1	6x19	11.0	13.0	9.4	11.0	6.7	7.7	17.0	20.0	14.0	16.0	10.0	11.0
1 1/8	6x19	14.0	16.0	12.0	13.0	8.4	9.5	22.0	24.0	18.0	20.0	13.0	14.0
1 1/4	6x37	17.0	19.0	14.0	16.0	9.8	11.0	25.0	29.0	21.0	23.0	15.0	17.0
1 3/8	6x37	20.0	23.0	17.0	19.0	12.0	13.0	31.0	35.0	25.0	28.0	18.0	20.0
1 1/2	6x37	24.0	27.0	20.0	22.0	14.0	16.0	36.0	41.0	30.0	33.0	21.0	24.0
1 5/8	6x37	28.0	32.0	23.0	26.0	16.0	18.0	43.0	48.0	35.0	39.0	25.0	28.0
1 3/4	6x37	33.0	37.0	27.0	30.0	19.0	21.0	49.0	56.0	40.0	45.0	28.0	32.0
2	6x37	43.0	48.0	35.0	39.0	25.0	28.0	64.0	72.0	52.0	59.0	37.0	41.0

HT = Hand Tucked Splice.
MS = Mechanical Splice.
Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

Table 14
 TABLE H - 8. -- RATED CAPACITIES FOR 2-LEG
 AND 3-LEG BRIDLE SLINGS

6x19 and 6x37 Classification Improved Plow Steel
 Grade Rope With Independent Wire Rope Core (IWRC)

Rope		Rated capacities, tons (2,000 lb)						Rated capacities, tons (2,000 lb)					
Dia (inches)	Constr	2-Leg bridle slings						3-Leg bridle slings					
		30 deg.(1) (60 deg.)(2)		45 deg. angle		60 deg.(1) (30 deg.)(2)		30 deg.(1) (60 deg.)(2)		45 deg. angle		60 deg.(1) (30 deg.)(2)	
		HT	MS	HT	MS	HT	MS	HT	MS	HT	MS	HT	MS
1/4	6x19	0.92	0.97	0.75	0.79	0.53	0.56	1.4	1.4	1.1	1.2	0.79	0.84
5/16	6x19	1.4	1.5	1.1	1.2	0.81	0.87	2.1	2.3	1.7	1.8	1.2	1.3
3/8	6x19	2.0	2.1	1.6	1.8	1.1	1.2	3.0	3.2	2.4	2.6	1.7	1.9
7/16	6x19	2.7	2.9	2.2	2.4	1.5	1.7	4.0	4.4	3.3	3.6	2.3	2.5
1/2	6x19	3.4	3.8	2.8	3.1	2.0	2.2	5.1	5.7	4.2	4.6	3.0	3.3
9/16	6x19	4.3	4.8	3.5	3.9	2.5	2.7	6.4	7.1	5.2	5.8	3.7	4.1
5/8	6x19	5.2	5.9	4.2	4.8	3.0	3.4	7.8	8.8	6.4	7.2	4.5	5.1
3/4	6x19	7.3	8.4	5.9	6.9	4.2	4.9	11.0	13.0	8.9	10.0	6.3	7.3
7/8	6x19	9.6	11.0	7.8	9.3	5.5	6.6	14.0	17.0	12.0	14.0	8.3	9.9
1	6x19	12.0	15.0	10.0	12.0	7.2	8.5	19.0	22.0	15.0	18.0	11.0	13.0
1 1/8	6x19	16.0	18.0	13.0	15.0	9.0	10.0	23.0	27.0	19.0	22.0	13.0	16.0
1 1/4	6x37	18.0	21.0	15.0	17.0	10.0	12.0	27.0	32.0	22.0	26.0	16.0	18.0
1 3/8	6x37	22.0	25.0	18.0	21.0	13.0	15.0	33.0	38.0	27.0	31.0	19.0	22.0
1 1/2	6x37	26.0	30.0	21.0	25.0	15.0	17.0	39.0	45.0	32.0	37.0	23.0	26.0
1 5/8	6x37	31.0	35.0	25.0	29.0	18.0	20.0	46.0	53.0	38.0	43.0	27.0	31.0
1 3/4	6x37	35.0	41.0	29.0	33.0	20.0	24.0	53.0	61.0	43.0	50.0	31.0	35.0
2	6x37	46.0	53.0	37.0	43.0	26.0	30.0	68.0	79.0	56.0	65.0	40.0	46.0

HT = Hand Tucked Splice.
 MS = Mechanical Splice.
 Footnote(1) Vertical angles.
 Footnote(2) Horizontal angles.

Table 15

TABLE H - 9. -- RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

Cable Laid Rope - Mechanical Splice Only
 7x7x7 and 7x7x19 Construction Galvanized Aircraft Grade Rope
 7x6x19 IWRC Construction Improved Plow Steel Grade Rope

Rope		Rated capacities, tons (2,000 lb)			Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	2-Leg bridle slings			3-Leg bridle slings		
		30 deg.(1) (60 deg.) (2)	45 deg. angle	60 deg.(1) (30 deg.) (2)	30 deg.(1) (60 deg.) (2)	45 deg. angle	60 deg.(1) (30 deg.) (2)
1/4.....	7x7x7.....	0.87	0.71	0.50	1.3	1.1	0.75
3/8.....	7x7x7.....	1.9	1.5	1.1	2.8	2.3	1.6
1/2.....	7x7x7.....	3.2	2.6	1.8	4.8	3.9	2.8
5/8.....	7x7x7.....	4.8	3.9	2.8	7.2	5.9	4.2
3/4.....	7x7x7.....	6.6	5.4	3.8	9.9	8.1	5.7
5/8.....	7x7x19.....	5.0	4.1	2.9	7.5	6.1	4.3
3/4.....	7x7x19.....	7.0	5.7	4.1	10.0	8.6	6.1
7/8.....	7x7x19.....	9.3	7.6	5.4	14.0	11.0	8.1
1.....	7x7x19.....	12.0	9.7	6.9	18.0	14.0	10.0
1 1/8.....	7x7x19.....	14.0	12.0	8.2	21.0	17.0	12.0
1 1/4.....	7x7x19.....	17.0	14.0	9.9	26.0	21.0	15.0
3/4.....	7x6x19 IWRC.	6.6	5.4	3.8	9.9	8.0	5.7
7/8.....	7x6x19 IWRC.	8.7	7.1	5.0	13.0	11.0	7.5
1.....	7x6x19 IWRC.	11.0	9.0	6.4	17.0	13.0	9.6
1 1/8.....	7x6x19 IWRC.	13.0	11.0	7.7	20.0	16.0	11.0
1 1/4.....	7x6x19 IWRC.	16.0	13.0	9.2	24.0	20.0	14.0
1 5/16.....	7x6x19 IWRC.	17.0	14.0	10.0	26.0	21.0	15.0
1 3/8.....	7x6x19 IWRC.	19.0	15.0	11.0	28.0	23.0	16.0
1 1/2.....	7x6x19 IWRC.	22.0	18.0	13.0	33.0	27.0	19.0

Footnote(1) Vertical angles.
 Footnote(2) Horizontal angles.

Table 16
TABLE H- 10. -- RATED CAPACITIES FOR 2-LEG AND
3-LEG BRIDLE SLINGS

8-Part and 6-Part Braided Rope
6x7 and 6x19 Construction Improved Flow Steel Grade Rope
7x7 Construction Galvanized Aircraft Grade Rope

Rope		Rated capacities, tons (2,000 lb)						Rated capacities, tons (2,000 lb)					
Dia (in.)	Constr	2-Leg bridle sling						3-Leg bridle sling					
		30 deg(1) (60 deg)(2)		45 deg angle		60 deg (1) (30 deg)(2)		30 deg(1) (60 deg)(2)		45 deg angle		60 deg(1) (30 deg)(2)	
		8-Part	6-Part	8-Part	6-Part	8-Part	6-Part	8-Part	6-Part	8-Part	6-Part	8-Part	6-Part
3/32	6x7	0.74	0.55	0.60	0.45	0.42	0.32	1.1	0.83	0.90	0.68	0.64	0.48
1/8	6x7	1.3	0.98	1.1	0.80	0.76	0.57	2.0	1.5	1.6	1.2	1.1	0.85
3/16	6x7	2.9	2.2	2.4	1.8	1.7	1.3	4.4	3.3	3.6	2.7	2.5	1.9
3/32	7x7	0.89	0.67	0.72	0.55	0.51	0.39	1.3	1.0	1.1	0.82	0.77	0.58
1/8	7x7	1.6	1.2	1.3	1.0	0.95	0.71	2.5	1.8	2.0	1.5	1.4	1.1
3/16	7x7	3.6	2.7	2.9	2.2	2.1	1.5	5.4	4.0	4.4	3.3	3.1	2.3
3/16	6x19	3.0	2.2	2.4	1.8	1.7	1.3	4.5	3.4	3.7	2.8	2.6	1.9
1/4	6x19	5.3	4.0	4.3	3.2	3.1	2.3	8.0	6.0	6.5	4.9	4.6	3.4
5/16	6x19	8.3	6.2	6.7	5.0	4.8	3.6	12.0	9.3	10.0	7.6	7.1	5.4
3/8	6x19	12.0	8.9	9.7	7.2	6.8	5.1	18.0	13.0	14.0	11.0	10.0	7.7
7/16	6x19	16.0	12.0	13.0	9.8	9.3	6.9	24.0	18.0	20.0	15.0	14.0	10.0
1/2	6x19	21.0	15.0	17.0	13.0	12.0	9.0	31.0	23.0	25.0	19.0	18.0	13.0
9/16	6x19	26.0	20.0	21.0	16.0	15.0	11.0	39.0	29.0	32.0	24.0	23.0	17.0
5/8	6x19	32.0	24.0	26.0	20.0	19.0	14.0	48.0	36.0	40.0	30.0	28.0	21.0
3/4	6x19	46.0	35.0	38.0	28.0	27.0	20.0	69.0	52.0	56.0	42.0	40.0	30.0
7/8	6x19	62.0	47.0	51.0	38.0	36.0	27.0	94.0	70.0	76.0	57.0	54.0	40.0
1	6x19	81.0	61.0	66.0	50.0	47.0	35.0	122.0	91.0	99.0	74.0	70.0	53.0

Footnote(1) Vertical angles.
Footnote(2) Horizontal angles.

Table 17

TABLE H - 11. -- RATED CAPACITIES FOR STRAND LAID GROMMET
 -- HAND TUCKED

Improved Plow Steel Grade Rope

Rope body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x19	0.85	0.64	1.7
5/16	7x19	1.3	1.0	2.6
3/8	7x19	1.9	1.4	3.8
7/16	7x19	2.6	1.9	5.2
1/2	7x19	3.3	2.5	6.7
9/16	7x19	4.2	3.1	8.4
5/8	7x19	5.2	3.9	10.0
3/4	7x19	7.4	5.6	15.0
7/8	7x19	10.0	7.5	20.0
1	7x19	13.0	9.7	26.0
1 1/8	7x19	16.0	12.0	32.0
1 1/4	7x37	18.0	14.0	37.0
1 3/8	7x37	22.0	16.0	44.0
1 1/2	7x37	26.0	19.0	52.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which rope is bent. d=Diameter of rope body.

Table 18

TABLE H - 12. -- RATED CAPACITIES FOR CABLE LAID GROMMET
 -- HAND TUCKED

7x6x7 and 7x6x19 Constructions Improved Plow Steel Grade Rope
 7x7x7 Construction Galvanized Aircraft Grade Rope

Cable body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
3/8	7x6x7	1.3	0.95	2.5
9/16	7x6x7	2.8	2.1	5.6
5/8	7x6x7	3.8	2.8	7.6
3/8	7x7x7	1.6	1.2	3.2
9/16	7x7x7	3.5	2.6	6.9
5/8	7x7x7	4.5	3.4	9.0
5/8	7x6x19	3.9	3.0	7.9
3/4	7x6x19	5.1	3.8	10.0
15/16	7x6x19	7.9	5.9	16.0
1 1/8	7x6x19	11.0	8.4	22.0
1 5/16	7x6x19	15.0	11.0	30.0
1 1/2	7x6x19	19.0	14.0	39.0
1 11/16	7x6x19	24.0	18.0	49.0
1 7/8	7x6x19	30.0	22.0	60.0
2 1/4	7x6x19	42.0	31.0	84.0
2 5/8	7x6x19	56.0	42.0	112.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which cable body is bent., d=Diameter of cable body.

Table 19

TABLE H - 13. -- RATED CAPACITIES FOR STRAND LAID
 ENDLESS SLINGS
 -- MECHANICAL JOINT

Improved Plow Steel Grade Rope

Rope body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	(2)6x19	0.92	0.69	1.8
3/8	(2)6x19	2.0	1.5	4.1
1/2	(2)6x19	3.6	2.7	7.2
5/8	(2)6x19	5.6	4.2	11.0
3/4	(2)6x19	8.0	6.0	16.0
7/8	(2)6x19	11.0	8.1	21.0
1	(2)6x19	14.0	10.0	28.0
1 1/8	(2)6x19	18.0	13.0	35.0
1 1/4	(2)6x37	21.0	15.0	41.0
1 3/8	(2)6x37	25.0	19.0	50.0
1 1/2	(2)6x37	29.0	22.0	59.0

Footnote(1) These values only apply when the D/d ratio is 5 or greater where: D=Diameter of curvature around which rope is bent. d=Diameter of rope body.

Footnote(2) IWRC.

Table 20

TABLE H - 14. -- RATED CAPACITIES FOR CABLE LAID
 ENDLESS SLINGS
 -- MECHANICAL JOINT

7x7x7 and 7x7x19 Constructions Galvanized Aircraft Grade Rope
 7x6x19 Construction Improved Plow Steel Grade Rope

Cable body		Rated capacities, tons (2,000 lb)		
Dia (inches)	Constr	Vertical	Choker	Vertical basket(1)
1/4	7x7x7	0.83	0.62	1.6
3/8	7x7x7	1.8	1.3	3.5
1/2	7x7x7	3.0	2.3	6.1
5/8	7x7x7	4.5	3.4	9.1
3/4	7x7x7	6.3	4.7	12.0
5/8	7x7x19	4.7	3.5	9.5
3/4	7x7x19	6.7	5.0	13.0
7/8	7x7x19	8.9	6.6	18.0
1	7x7x19	11.0	8.5	22.0
1 1/8	7x7x19	14.0	10.0	28.0
1 1/4	7x7x19	17.0	12.0	33.0
3/4	(2)7x6x19	6.2	4.7	12.0
7/8	(2)7x6x19	8.3	6.2	16.0
1	(2)7x6x19	10.0	7.9	21.0
1 1/8	(2)7x6x19	13.0	9.7	26.0
1 1/4	(2)7x6x19	16.0	12.0	31.0
1 3/8	(2)7x6x19	18.0	14.0	37.0
1 1/2	(2)7x6x19	22.0	16.0	43.0

Footnote(1) These values only apply when the D/d value is 5 or greater where: D=Diameter of curvature around which cable body is bent. d=Diameter of cable body.

Footnote(2) IWRC.

Table 21

TABLE H -15. -- MANILA ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

		Rated capacity in pounds (safety factor=3)						Rated capacity in pounds (safety factor=5)									
		Eye and eye sling						Endless sling									
Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Minimum breaking strength in pounds	Basket hitch; horizontal			Basket hitch; Angel of rope to horizontal			Vertical hitch	Choker hitch	Basket hitch; horizontal			Basket hitch; Angel of rope to horizontal			
			90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)	90 deg (0 deg)	60 deg (30 deg)			45 deg (45 deg)	30 deg (60 deg)	90 deg (0 deg)	60 deg (30 deg)	45 deg (45 deg)	30 deg (60 deg)	
1/2	7.5	2,650	550	250	1,100	900	750	550	950	500	1,900	1,700	1,400	1,900	1,700	1,400	950
9/16	10.4	3,450	700	350	1,400	1,200	1,000	700	1,200	600	2,500	2,200	1,800	2,500	2,200	1,800	1,200
5/8	13.3	4,400	900	450	1,800	1,500	1,200	900	1,600	800	3,200	2,700	2,200	3,200	2,700	2,200	1,600
3/4	16.7	5,400	1,100	550	2,200	1,900	1,500	1,100	2,000	950	3,900	3,400	2,800	3,900	3,400	2,800	2,000
13/16	19.5	6,500	1,300	650	2,600	2,300	1,800	1,300	2,300	1,200	4,700	4,100	3,300	4,700	4,100	3,300	2,300
7/8	22.5	7,700	1,500	750	3,100	2,700	2,200	1,500	2,800	1,400	5,600	4,800	3,900	5,600	4,800	3,900	2,800
1 1/8	27.0	9,000	1,800	900	3,600	3,100	2,600	1,800	3,200	1,600	6,500	5,600	4,600	6,500	5,600	4,600	3,200
1 1/16	31.3	10,500	2,100	1,100	4,200	3,600	3,000	2,100	3,800	1,900	7,600	6,600	5,400	7,600	6,600	5,400	3,800
1 1/8	36.0	12,000	2,400	1,200	4,800	4,200	3,400	2,400	4,300	2,200	8,600	7,500	6,100	8,600	7,500	6,100	4,300
1 1/4	41.7	13,500	2,700	1,400	5,400	4,700	3,800	2,700	4,900	2,400	9,700	8,400	6,900	9,700	8,400	6,900	4,900
1 5/16	47.9	15,000	3,000	1,500	6,000	5,200	4,300	3,000	5,400	2,700	11,000	9,400	7,700	11,000	9,400	7,700	5,400
1 1/2	59.9	18,500	3,700	1,850	7,400	6,400	5,200	3,700	6,700	3,300	13,500	11,500	9,400	13,500	11,500	9,400	6,700
1 5/8	74.6	22,500	4,500	2,300	9,000	7,800	6,400	4,500	8,100	4,100	16,000	14,000	11,500	16,000	14,000	11,500	8,000
1 3/4	89.3	26,500	5,300	2,700	10,500	9,260	7,500	5,300	9,500	4,800	19,000	16,500	13,500	19,000	16,500	13,500	9,590
2	107.5	31,000	6,200	3,100	12,500	10,500	8,800	6,200	11,000	5,600	22,500	19,500	16,000	22,500	19,500	16,000	11,000
2 1/3	125.0	36,000	7,200	3,600	14,500	12,500	10,000	7,200	13,000	6,500	26,000	22,500	18,500	26,000	22,500	18,500	13,000
2 1/4	146.0	41,000	8,200	4,100	16,500	14,000	11,500	8,200	15,000	7,400	29,500	25,500	21,000	29,500	25,500	21,000	15,000
2 1/2	166.7	46,500	9,300	4,700	18,500	16,000	13,000	9,300	16,500	8,400	33,500	29,000	23,500	33,500	29,000	23,500	16,500
2 5/8	190.8	52,000	10,500	5,200	21,000	18,000	14,500	10,500	18,500	9,500	37,500	32,500	26,500	37,500	32,500	26,500	18,500

Table 22
TABLE H - 16. -- NYLON ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal weight per 100 ft in pounds	Eye and eye sling						Endless sling					
		Rated capacity in pounds (safety factor=9)						Rated capacity in pounds (safety factor=9)					
		Vertical hitch	Choker hitch	Basket hitch; horizontal	Angel of rope to horizontal (45 deg)	60 deg (30 deg)	90 deg (0 deg)	Vertical hitch	Choker hitch	Basket hitch; horizontal	Angel of rope to horizontal (45 deg)	60 deg (30 deg)	90 deg (0 deg)
1/2	6.5	700	350	1,400	1,200	950	700	1,200	600	2,400	2,100	1,700	1,200
9/16	8.3	850	400	1,700	1,500	1,200	850	1,500	750	3,000	2,600	2,200	1,500
5/8	10.5	1,100	550	2,200	1,900	1,600	1,100	2,000	1,100	4,000	3,400	2,800	2,000
3/4	14.5	1,500	750	3,000	2,600	2,100	1,500	2,700	1,400	5,400	4,700	3,800	2,700
13/16	17.0	1,800	900	3,600	3,100	2,600	1,800	3,200	1,600	6,400	5,600	4,600	3,200
7/8	20.0	19,000	1,100	4,200	3,700	3,000	2,100	3,800	1,900	7,600	6,600	5,400	3,800
1	26.0	23,750	1,300	5,300	4,600	3,700	2,600	4,800	2,400	9,500	8,200	6,700	4,800
1 1/16	29.0	27,360	1,500	6,100	5,300	4,300	3,000	5,500	2,700	11,000	9,500	7,700	5,500
1 1/8	34.0	31,350	1,700	7,000	6,000	5,000	3,500	6,300	3,100	12,500	11,000	8,900	6,300
1 1/4	40.0	35,625	2,000	7,900	6,900	5,600	4,000	7,100	3,600	14,500	12,500	10,000	7,100
1 5/16	45.0	40,850	2,300	9,100	7,900	6,400	4,500	8,200	4,100	16,500	14,000	12,000	8,200
1 1/2	55.0	50,350	2,800	11,000	9,700	7,900	5,600	10,000	5,000	20,000	17,500	14,000	10,000
1 5/8	68.0	61,750	3,400	13,500	12,000	9,700	6,900	12,500	6,200	24,500	21,500	17,500	12,500
1 3/4	83.0	74,100	4,100	16,500	14,500	11,500	8,200	15,000	7,400	29,500	27,500	21,000	15,000
2	95.0	87,400	4,900	19,500	17,000	13,500	9,700	17,500	8,700	35,000	30,500	24,500	17,500
2 1/8	109.0	100,700	5,600	22,500	19,500	16,500	11,000	20,000	10,000	40,500	35,000	28,500	20,000
2 1/4	129.0	118,750	6,600	26,500	23,000	18,500	13,000	24,000	12,000	47,500	41,000	33,500	24,000
2 1/2	149.0	133,000	7,400	29,500	25,500	21,000	15,000	26,500	13,500	53,000	46,000	37,500	26,500
2 5/8	168.0	153,900	8,600	34,000	29,500	24,000	17,000	31,000	15,500	61,500	53,500	43,500	31,000

Table 23

TABLE H - 17. --- POLYESTER ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

		Rated capacity in pounds (safety factor=9)						Rated capacity in pounds (safety factor=9)					
		Eye and eye sling						Endless sling					
Rope dia. nomi- nal inches	Mini- mum break- ing strength in pounds	Verti- cal hitch		Basket hitch; Angel of rope to horizontal		90 deg 30 deg (0 deg) (60 deg)		Verti- cal hitch		Basket hitch; Angel of rope to horizontal		90 deg 30 deg (0 deg) (60 deg)	
		Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch	Choker hitch
1/2	8.0	700	350	1,400	1,200	950	700	1,200	600	2,400	2,100	1,700	1,200
9/16	10.2	850	400	1,700	1,500	1,200	850	1,500	750	3,000	2,600	2,200	1,500
5/8	13.0	1,100	550	2,100	1,800	1,500	1,100	1,900	950	3,800	3,300	2,700	1,900
3/4	17.5	1,300	650	2,600	2,300	1,900	1,300	2,400	1,200	4,800	4,100	3,400	2,400
13/16	21.0	1,600	800	3,300	2,800	2,300	1,600	2,900	1,500	5,900	5,100	4,200	2,900
7/8	25.0	1,900	950	3,800	3,300	2,700	1,900	3,400	1,700	6,800	5,900	4,800	3,400
1	30.5	2,300	1,200	4,600	4,000	3,300	2,300	4,200	2,100	8,400	7,200	5,900	4,200
1 1/16	34.5	2,700	1,300	5,400	4,700	3,800	2,700	4,800	2,400	9,700	8,400	6,900	4,800
1 1/8	40.0	3,100	1,600	6,200	5,400	4,400	3,100	5,600	2,800	11,000	9,700	7,900	5,600
1 1/4	46.3	3,500	1,800	7,000	6,100	5,000	3,500	6,300	3,200	12,500	11,000	8,900	6,300
1 5/16	52.5	4,000	2,000	7,900	6,900	5,600	4,000	7,100	3,600	14,500	12,500	10,000	7,100
1 1/2	66.8	4,900	2,500	9,900	8,600	7,000	4,900	8,900	4,400	18,000	15,500	12,500	8,900
1 5/8	82.0	6,000	3,000	12,000	10,400	8,500	6,000	11,000	5,500	21,500	19,000	15,500	11,000
1 3/4	98.0	7,200	3,600	14,500	12,500	10,000	7,200	13,000	6,400	26,000	22,500	18,000	13,000
2	118.0	8,400	4,200	17,000	14,500	12,000	8,400	15,000	7,600	30,500	26,500	21,500	15,000
2 1/8	135.0	9,700	4,900	19,500	17,000	13,500	9,700	17,500	8,700	35,000	30,500	24,500	17,500
2 1/4	157.0	11,500	5,700	22,500	19,500	16,000	11,500	20,500	10,000	40,500	35,000	29,000	20,500
2 1/2	181.0	13,000	6,400	26,000	22,500	18,000	13,000	23,000	11,500	46,500	40,000	33,000	23,000
2 5/8	205.0	14,500	7,200	29,000	25,000	20,500	14,500	26,000	13,000	52,000	45,000	37,000	26,000

Table 24
TABLE N-184-19. -- POLYPROPYLENE ROPE SLINGS

[Angle of rope to vertical shown in parentheses]

Rope dia. nominal in inches	Nominal wt. per 100 ft in pounds	Eye and eye sling						Endless sling					
		Vertical hitch			Basket hitch; Angel of rope to horizontal			Vertical hitch			Basket hitch; Angel of rope to horizontal		
		Choker hitch	90 deg (0 deg)	45 deg (45 deg)	30 deg (60 deg)	Choker hitch	90 deg (0 deg)	45 deg (45 deg)	30 deg (60 deg)	Choker hitch	90 deg (0 deg)	45 deg (45 deg)	30 deg (60 deg)
1/2	4.7	645	325	1,290	1,120	910	645	1,160	580	2,320	2,010	1,640	1,160
9/16	6.1	780	390	1,560	1,350	1,100	780	1,400	700	2,810	2,430	1,990	1,400
5/8	7.5	950	475	1,900	1,650	1,340	950	1,710	855	3,420	2,960	2,420	1,710
3/4	10.7	1,300	650	2,600	2,250	1,840	1,300	2,340	1,170	4,680	4,050	3,310	2,340
13/16	12.7	1,520	760	3,040	2,630	2,150	1,520	2,740	1,370	5,470	4,740	3,870	2,740
7/8	15.0	1,760	880	3,520	3,050	2,490	1,760	3,170	1,580	6,340	5,490	4,480	3,170
1	18.0	2,140	1,070	4,280	3,700	3,030	2,140	3,850	1,930	7,700	6,670	5,450	3,860
1 1/16	20.4	2,450	1,230	4,900	4,240	3,460	2,450	4,410	2,210	8,820	7,640	6,240	4,410
1 1/8	23.7	2,800	1,400	5,600	4,850	3,960	2,800	5,040	2,520	10,100	8,730	7,130	5,040
1 1/4	27.0	3,210	1,610	6,420	5,560	4,540	3,210	5,780	2,890	11,600	10,000	8,170	5,780
1 5/16	30.5	3,600	1,800	7,200	6,240	5,090	3,600	6,480	3,240	13,000	11,200	9,170	6,480
1 1/2	38.5	4,540	2,270	9,080	7,860	6,420	4,540	8,170	4,090	16,300	14,200	11,600	8,170
1 5/8	47.5	5,510	2,760	11,000	9,540	7,790	5,510	9,920	4,960	19,800	17,200	14,000	9,920
1 3/4	57.0	6,580	3,290	13,200	11,400	9,300	6,580	11,800	5,920	23,700	20,500	16,800	11,800
2	69.0	7,960	3,980	15,900	13,800	11,300	7,960	14,300	7,160	28,700	24,800	20,300	14,300
2 1/8	80.0	9,330	4,670	18,700	16,200	13,200	9,330	16,800	8,400	33,600	29,100	23,800	16,800
2 1/4	92.0	10,600	5,300	21,200	18,400	15,000	10,600	19,100	9,540	38,200	33,100	27,000	19,100
2 1/2	107.0	12,200	6,100	24,400	21,100	17,300	12,200	22,000	11,000	43,900	38,000	31,100	22,000
2 5/8	120.0	13,800	6,900	27,600	23,900	19,600	13,800	24,800	12,400	49,700	43,000	35,100	24,800

See Figs. N-184-4 and N-184-5 for sling configuration descriptions.

Table 25

TABLE H - 19. -- SAFE WORKING LOADS FOR SHACKLES

(In tons of 2,000 pounds)

Material size (inches)	Pin diameter (inches)	Safe working load
1/2	5/8	1.4
5/8	3/4	2.2
3/4	7/8	3.2
7/8	1	4.3
1	1 1/8	5.6
1 1/8	1 1/4	6.7
1 1/4	1 3/8	8.2
1 3/8	1 1/2	10.0
1 1/2	1 5/8	11.9
1 3/4	2	16.2
2	2 1/4	21.2

Table 26TABLE H - 20. -- NUMBER AND SPACING OF
U-BOLT WIRE ROPE CLIPS

Improved plow steel, rope diameter (inches)	Number of clips		Minimum spacing (inches)
	Drop forged	Other material	
1/2	3	4	3
5/8	3	4	3 3/4
3/4	4	5	4 1/2
7/8	4	5	5 1/4
1	5	6	6
1 1/8	6	6	6 3/4
1 1/4	6	7	7 1/2
1 3/8	7	7	8 1/4
1 1/2	7	8	9

Table 29
Material Working Load

All planking shall be Scaffold Grade as recognized by grading rules for the species of wood used. The maximum permissible spans for 2- X 9-inch or wider planks are shown in the following table:

	Material				
	Full thickness undressed lumber			Nominal thickness lumber	
Working load (p.s.f.).....	25	50	75	25	50
Permissible span (ft.).....	10	8	6	8	9

Table 30

TABLE D-7 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS OF SINGLE POLE SCAFFOLDS - LIGHT DUTY

	Maximum height of scaffold	
	20 feet	60 feet
Uniformly distributed load.....	Not to exceed 25 pounds per square foot.	
Poles or uprights.....	2 by 4 in.....	4 by 4 in.
Pole spacing (longitudinal).....	6 ft. 0 in.....	10 ft. 0 in.
Maximum width of scaffold.....	5 ft. 0 in.....	5 ft. 0 in.
Bearers or putlogs to 3 ft. 0 in. width.....	2 by 4 in.....	2 by 4 in.
Bearers or putlogs to 5 ft. 0 in. width.....	2 by 6 in. or 3 by 4 in.	2 by 6 in. or 3 by 4 in. (rough).
Ledgers.....	1 by 4 in.....	1 1/4 by 9 in.
Planking.....	1 1/4 by 9 in. (rough).....	2 by 9 in.
Vertical spacing of horizontal members.....	7 ft. 0 in.....	7 ft. 0 in.
Bracing, horizontal and diagonal.	1 by 4 in.....	1 by 4 in.
Tie-ins.....	1 by 4 in.....	1 by 4 in.
Toeboards.....	4 in. high (minimum).....	4 in. high (minimum)
Guardrail.....	2 by 4 in.....	2 by 4 in.

All members except planking are used on edge.

Table 31TABLE D-8 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS
OF SINGLE POLE SCAFFOLDS - MEDIUM DUTY

Uniformly distributed load.....	Not to exceed 50 pounds per square foot.
Maximum height of scaffold.....	60 ft.
Poles or uprights.....	4 by 4 in.
Pole spacing (longitudinal).....	8 ft. 0 in.
Maximum width of scaffold.....	5 ft. 0 in.
Bearers or putlogs.....	2 by 9 in. or 3 by 4 in.
Spacing of bearers or putlogs.....	8 ft. 0 in.
Ledgers.....	2 by 9 in.
Vertical spacing of horizontal members.	9 ft. 0 in.
Bracing, horizontal.....	1 by 6 in. or 1 1/4 by 4 in.
Bracing, diagonal.....	1 by 4 in.
Tie-ins.....	1 by 4 in.
Planking.....	2 by 9 in.
Toeboards.....	4 in. high (minimum).
Guardrail.....	2 by 4 in.

All members except planking are used on edge.

Table 32TABLE D-9 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF
MEMBERS OF SINGLE POLE SCAFFOLDS - HEAVY DUTY

Uniformly distributed load.....	Not to exceed 75 pounds per square foot.
Maximum height of scaffold.....	60 ft.
Poles or uprights.....	4 by 4 in.
Pole spacing (longitudinal).....	6 ft. 0 in.
Maximum width of scaffold.....	5 ft. 0 in.
Bearers or putlogs.....	2 by 9 in. or 3 by 5 in. (rough)
Spacing of bearers or putlogs.....	6 ft. 0 in.
Ledgers.....	2 by 9 in.
Vertical spacing of horizontal members.	6 ft. 6 in.
Bracing, horizontal and diagonal.....	2 by 4 in.
Tie-ins.....	1 by 4 in.
Planking.....	2 by 9 in.
Toeboards.....	4 in. high (minimum).
Guardrail.....	2 by 4 in.

All members except planking are used on edge.

Table 33

TABLE D-10 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS OF INDEPENDENT POLE SCAFFOLDS - LIGHT DUTY

	Maximum height of scaffold	
	20 feet	60 feet
Uniformly distributed load.....	Not to exceed 25 pounds per square foot.	
Poles or uprights.....	2 by 4 in.....	4 by 4 in.
Pole spacing (longitudinal).....	6 ft. 0 in.....	10 ft. 0 in.
Pole spacing (transverse).....	6 ft. 0 in.....	10 ft. 0 in.
Ledgers.....	1 1/4 by 4 in....	1 1/4 by 9 in.
Bearers to 3 ft. 0 in. span.....	2 by 4 in.....	2 by 4 in.
Bearers to 10 ft. 0 in. span.....	2 by 6 in. or 3 by 4 in....	2 by 9 in. (rough) or 3 by 8 in.
Planking.....	1 1/4 by 9 in....	2 by 9 in.
Vertical spacing of horizontal members.....	7 ft. 0 in.....	7 ft. 0 in.
Bracing, horizontal and diagonal.	1 by 4 in.....	1 by 4 in.
Tie-ins.....	1 by 4 in.....	1 by 4 in.
Toeboards.....	4 in. high.....	4 in. high (minimum)
Guardrail.....	2 by 4 in.....	2 by 4 in.

All members except planking are used on edge.

Table 34TABLE D-11 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS
OF INDEPENDENT POLE SCAFFOLDS - MEDIUM DUTY

Uniformly distributed load.....	Not to exceed 50 pounds per square foot.
Maximum height of scaffold.....	60 ft.
Poles or uprights.....	4 by 4 in.
Pole spacing (longitudinal).....	8 ft. 0 in.
Pole spacing (transverse).....	8 ft. 0 in.
Ledgers.....	2 by 9 in.
Vertical spacing of horizontal members....	6 ft. 0 in.
Spacing of bearers.....	8 ft. 0 in.
Bearers.....	2 by 9 in. (rough) or 2 by 10 in.
Bracing, horizontal.....	1 by 6 in. or 1 1/4 by 4 in.
Bracing, diagonal.....	1 by 4 in.
Tie-ins.....	1 by 4 in.
Planking.....	2 by 9 in.
Toeboards.....	4 in. high (minimum).
Guardrail.....	2 by 4 in.

All members except planking are used on edge.

Table 35TABLE D-12 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS
OF INDEPENDENT POLE SCAFFOLDS - HEAVY DUTY

Uniformly distributed load.....	Not to exceed 75 pounds per square foot.
Maximum height of scaffold.....	60 ft.
Poles or uprights.....	4 by 4 in.
Pole spacing (longitudinal).....	6 ft. 0 in.
Pole spacing (transverse).....	8 ft. 0 in.
Ledgers.....	2 by 9 in.
Vertical spacing of horizontal members.	4 ft. 6 in.
Bearers.....	2 by 9 in. (rough)
Bracing, horizontal and diagonal.....	2 by 4 in.
Tie-ins.....	1 by 4 in.
Planking.....	2 by 9 in.
Toeboards.....	4 in. high (minimum).
Guardrail.....	2 by 4 in.

All members except planking are used on edge.

Table 36

TABLE D-13 - TUBE AND COUPLER SCAFFOLDS - LIGHT DUTY

Uniformly distributed load.....	Not to exceed 25 p.s.f.
Post spacing (longitudinal).....	10 ft. 0 in.
Post spacing (transverse).....	6 ft. 0 in.

Working levels	Additional planked levels	Maximum height
1	8	125 ft.
2	4	125 ft.
3	0	91 ft. 0 in.

Table 37

TABLE D-14 - TUBE AND COUPLER SCAFFOLDS - MEDIUM DUTY

Uniformly distributed load.....	Not to exceed 50 p.s.f.
Post spacing (longitudinal).....	8 ft. 0 in.
Post spacing (transverse).....	6 ft. 0 in.

Working levels	Additional planked levels	Maximum height
1	6	125 ft.
2	0	78 ft. 0 in.

Table 38

TABLE D-15 - TUBE AND COUPLER SCAFFOLDS - HEAVY DUTY

Uniformly distributed load.....	Not to exceed 75 p.s.f.
Post spacing (longitudinal).....	6 ft. 6 in.
Post spacing (transverse).....	6 ft. 0 in.

Working levels	Additional planked levels	Maximum height
1	6	125 ft.

Table 39

TABLE D-16 - MINIMUM NOMINAL SIZE AND MAXIMUM SPACING OF MEMBERS OF OUTRIGGER SCAFFOLDS

	Light duty	Medium duty
Maximum scaffold load.....	25 p.s.f.....	50 p.s.f.
Outrigger size.....	2 x 10 in.....	3 x 10 in.
Maximum outrigger spacing...	10 ft. 0 in....	6 ft. 0 in.
Planking.....	2 x 9 in.....	2 x 9 in.
Guardrail.....	2 x 4 in.....	2 x 4 in.
Guardrail uprights.....	2 x 4 in.....	2 x 4 in.
Toeboards (minimum).....	4 in.....	4 in.

Table 40

TABLE D-17 - SCHEDULE FOR LADDER-TYPE PLATFORMS

	Length of platform (feet)		
	12	14 & 16	18 & 20
Side stringers, minimum cross section (finished sizes):			
At ends (in.).....	1 3/4 x 2 3/4	1 3/4 x 2 3/4	1 3/4 x 3
At middle (in.)....	1 3/4 x 3 3/4	1 3/4 x 3 3/4	1 1/4 x 4
Reinforcing strip (minimum) (1).....			
Rungs (2).....			
Tie rods:			
Number (minimum)...	3	4	4
Diameter (minimum).	1/4 in	1/4 in	1/4 in
Flooring, minimum finished size (in.)..	1/2 x 2 3/4	1/2 x 2 3/4	1/2 x 2 3/4

TABLE D-17 - SCHEDULE FOR LADDER-TYPE PLATFORMS
[CONTINUED]

	Length of platform (feet)	
	22 & 24	28 & 30
Side stringers, minimum cross section (finished sizes):		
At ends (in.).....	1 3/4 x 3	1 3/4 x 3 1/2
At middle (in.)....	1 3/4 x 4 1/4	1 3/4 x 5
Reinforcing strip (minimum) (1).....		
Rungs (2).....		
Tie rods:		
Number (minimum)...	5	6
Diameter (minimum).	1/4 in	1/4 in
Flooring, minimum finished size (in.)..	1/2 x 3/4	1/2 x 2 3/4

Footnote(1) A 1/8 x 7/8-in, steel reinforcing strip or its equivalent shall be attached to the side or underside full length.

Footnote(2) Rungs shall be 1 1/8-in. minimum, diameter with at least 7/8-in. diameter tenons, and the maximum spacing shall be 12 in. center to center.

Table 41

TABLE D-18 - MINIMUM DIMENSIONS FOR BRICKLAYERS' SQUARE SCAFFOLD MEMBERS

Members	Dimensions (Inches)
Bearers or horizontal members.....	2 by 6
Legs.....	2 by 6
Braces at corners.....	1 by 6
Braces diagonally from center frame..	1 by 8

Table 42

TABLE D-19 - MINIMUM DIMENSIONS FOR HORSE SCAFFOLD MEMBERS

Members	Dimensions (Inches)
Horizontal members or bearers	3 by 4
Legs	1 1/4 by 4 1/2
Longitudinal brace between legs	1 by 6
Gusset brace at top of legs	1 by 8
Half diagonal braces	1 1/4 by 4 1/2

Table 47

**TABLE B-1
MAXIMUM ALLOWABLE SLOPES**

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V)(1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(3)
STABLE ROCK	VERTICAL (90°)
TYPE A (2)	3/4:1 (53°)
TYPE B	1:1 (45°)
TYPE C	1 1/2:1 (34°)

Footnote(1) Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

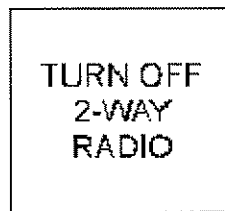


Figure 1. Excavations Made in Type C Soil
All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1 1/2:1.

Table 49



About 48" x 48"



About 42" x 36"

ADDENDUM 3

Appendix A and B

48 CSR 8

48CSR8

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

ELECTRICAL WORK PERFORMED 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	Apprentice's Initials
Total Low/Med Voltage Hours This Page:				Signature of Apprentice Electrician:		Page Number:	
Total High Voltage Hours This Page:				Total Accumulated Hours			

INDEX

INDEX

Accidents (also see Homeland Security)	
Accident; notice, investigation by Office of Miners' Health, Safety and Training	57
Difference between medical treatment and first aid	134
Investigation of accidents	134
Notification of accidents and occupational injuries	134
Preservation of evidence following accident	134
Preservation of evidence following accident or disaster	58
Preservation of evidence following an accident or disaster	320
Written report of accident	58
Assessments	
Assessment procedure for individuals	342
Assessment procedure for knowing violations	342
Assessment procedure for operators	340
Board of Appeals	
Board of Appeals	70
Board of Appeals	297
Hearings	219
Procedures and practice before the board of appeals	216
Procedures for temporary suspension of certificates issued to persons pursuant to Chapter 22A of the code of West Virginia pending full hearing before the Board of Appeals	223
Rules applicable to proceedings initiated alleging discrimination or for compensation owed to miners as a result of a withdrawal order	221
Rules applicable to proceedings initiated to withdraw certification	220
Board of Coal Mine Health and Safety	
Agenda for board meetings	210
Board membership	71
Board powers and duties	72
Coal mine safety and technical review committee; membership; method of nomination and appointment; meetings; quorum; powers and duties of the committee; powers and duties of the board of coal mine health and safety	74
Compensation and expenses of board members	75
Construction of shafts, slopes, surface facilities and the safety hazards attendant therewith; duties of board of coal mine health and safety to promulgate rules; time limits thereof	60
General rulemaking procedures	207
Health and safety administrator; qualifications; duties; employees; compensation	73
Preliminary procedures for promulgation of rules	73
Procedures for promulgating regulations in response to fatalities	208
Procedures for promulgating regulations in response to major causes of injuries	208
Procedures for promulgating regulations in response to suggestions by board members or administrator	209
Reports	75
Board of Miner Training, Education and Certification	
Board continued; membership; method of appointment; terms	76
Board powers and duties	77
Continuing education requirements for underground mine foreman-fire boss	77
Duties of director and office	77
Certifications	
Application for certification and testing procedures (belt examiner)	223
Certificate of competency and qualification – underground or surface miner	79
Certificate of competency and qualification – underground or surface miner	321
Certificate of competency and qualification or permit of apprenticeship required of all surface and underground mines	321
Certification and statutory duties of shaft and/or slope superintendent-examiner-foreman and Examiner-foreman	89
Certification of surface mine foreman	298
Certification of underground and surface coal miners	78
Construction supervisor certification	139
Criteria for belt examiners certification	224

Examiner-foreman certification	90
Limitations of article	79
Limitations of article	321
Permit of apprenticeship – surface miner	78
Permit of apprenticeship – surface miner	321
Permit of apprenticeship – underground miner	78
Refusal to issue certificate; appeal	79
Refusal to issue certificate; appeal	321
Superintendent – Shaft and/or slope certification	89
Supervision of apprentices	79
Violations; penalties	79
When underground mine foreman-fire boss required; assistants; certification	32
When underground mine foreman-fire boss required; assistants; certification	122
Certified Electrician	
Annual training	262
Certification procedures	261
Certified electrician training plan	264
Classifications of electrical certification	260
Classroom and lab training plan	264
Criteria for apprentice electrical training program	261
Exceptions	261
Exceptions	269
Examinations	261
Initial training	263
Qualifications	260
Qualified person-electrician	269
Requirement for board approval	263
Clearing Crews	
Chain saws	282
Chipping (in-woods locations)	285
Emergency provisions	280
Environmental conditions	281
Explosives and blasting agents	281
Flammable and combustible liquids	281
Hand- and portable-powered tools – general requirements	281
Limbing and bucking	285
Machines, vehicles, and mobile equipment	282
Manual tree felling	285
Overhead electric lines	284
Personal protective equipment	280
Pre-shift and on-shift examination	285
Safety meetings	285
Seat belts	280
Signaling and signal equipment	281
Training	285
Tree felling	284
Work areas	281
Coal Mine Safety and Technical Review Committee	
Coal mine safety and technical review committee; membership; method of nomination and appointment; meetings; quorum; powers and duties of the committee; powers and duties of the board of coal mine health and safety	74
Communications, Emergency Communications	
Emergency communications requirements for shaft and/or slope operations and arrangements for emergency medical assistance and transporting for injured persons; reporting requirements; posting requirements at shaft and/or slope operations	88
Local emergency telephone system	83
Telephone service or communication facilities	46
Telephone service or communication facilities	104
Wireless emergency communications and tracking/locating systems	328
Comprehensive Mine Safety Program	
Annual review of the comprehensive mine safety program	336
Comprehensive safety program for coal mining operations in the State of West Virginia	334

Mandatory safety programs; penalties	25
Mine evaluation for development of the initial comprehensive mine safety program; submittals to commissioner	335
Miscellaneous	337
Modifications	336
Primary safety program components	335
Responsibility for comprehensive mine safety program	335
Review procedure	337
Right of mine employees to review and comment on the comprehensive mine safety program; posting requirements	337
Submission of initial comprehensive mine safety program	335
Crimes and their Punishment	
Entry of building other than dwelling; entry of railroad, traction or motorcar, steamboat or other vessel; penalties; counts in indictment	83
Damage or destruction of railroad or public utility company property, or real or personal property used for producing, generating, transmitting, distributing, treating or collecting electricity, natural gas, coal, water, wastewater, storm water, telecommunications or cable service; penalties; restitution	83
Diesel-Powered Equipment	
Containers	349
Diagnostic testing	353
Diesel inspector training course	356
Diesel inspectors; employment; training	356
Diesel mechanic training	355
Diesel-powered equipment package	346
Duties of operator	352
Emissions monitoring and control	353
Equipment – specific training	355
Exhaust emissions control	347
Exhaust emission requirements for diesel power packages	65
Exhaust gas monitoring and control	348
Fire and safety training	351
Fire suppression	67
Fire suppression for equipment and transportation	350
Fire suppression for storage areas	350
Fuel	66
Fueling	351
Fuel storage facilities	348
General Provisions	62
Maintenance	67
Maintenance	349
Operation of diesel-powered equipment	355
Records	352
Scheduled maintenance	352
Training	68
Training and general requirements	354
Transfer of diesel fuel	349
Underground use	346
Use of certain starting aids prohibited	351
Ventilation	66
Ventilation	347
WV Diesel Equipment Commission	63
Emergency Medical Personnel	
Emergency medical personnel	320
Emergency medical personnel in coal mines	80
Emergency communications requirements for shaft and/or slope operations and arrangements for emergency medical assistance and transporting for injured persons; reporting requirements; posting requirements at shaft and/or slope operations	85
First-aid training of coal mine employees	81
Equipment	
De-energization of self-propelled electric coal feeders; performance requirements	123
Electric equipment in mines	129

Performing work from a raised position; safeguards	131
Pre-operational equipment check	132
Responsibility for care and maintenance of equipment	132
Right of a miner to refuse to operate unsafe equipment; procedure; discrimination	60
Explosives and Blasting	
Blasting and the use of explosives	193
Explosives and blasting	300
Explosives and blasting	330
Explosives and blasting	332
Explosives and blasting agents	281
Explosives handling and use	86
Misfires of explosives	38
Misfires of explosives	87
Other blasting devices	38
Preparation of shots; blasting practices	37
Preparation of shots; blasting practices and requirements for sheathed explosive units	212
Requirements for the use of sheathed explosives in underground mining	212
Surface magazines for explosives	37
Transportation of explosives	37
Transportation of explosives	85
Underground storage of explosives	37
Use of authorized explosives; storage or use of unauthorized explosives	37
Use of magazines for explosives	85
Vehicles used to transport explosives	86
Fire Protection	
Fire protection	52
Fire protection	142
Fire protection	331
First-Aid	
Accessible outlets; safe roadways for emergencies; accessibility of first-aid equipment; use of special capsule for removal of personnel	54
Difference between medical treatment and first aid	134
First-aid equipment	54
First-aid equipment	319
First-aid training of coal mine employees	81
First-aid training of coal mine employees	321
First-aid training of shaft and/or slope employees	339
First-aid requirements	140
Handling Materials	
Prevention of injuries due to handling materials	205
Homeland Security and Emergency Management	
Immunity and exemption	2
Notification of emergency incidents by covered facilities	345
Requests for information – general provisions	345
Trade secrets and confidential information	345
Housekeeping	
Housekeeping practices	206
Independent Contractors	
Address of record and telephone number	135
Enforcement of citations and orders	135
Independent contractor register	135
Reporting requirements	339
Service of documents	135
Intoxicants	
No act permitted endangering security of mine; search for intoxicants, matches, etc.	52
No act permitted endangering security of mine; search for intoxicants, matches, etc.	137
Longwall Mining	
Accessible travel route – longwall mining section	107
Chock and/or shield recovery plan from longwall face; approval by office of miners' health, safety and training	105
Communications; longwall working face; longwall working section	106
Cutting and welding; longwall mining section	107

Electrical de-energizing devices; longwall section face conveyor	106
Longwall and shortwall mining	60
Longwall mining – first aid equipment	107
Longwall mining – general requirements	107
Methane examinations; monitor, face area	106
Plans for longwall mining; approval by office of miners' health, safety and training	105
Safety provisions – longwall section face conveyor	107
Training – longwall mining section	107
Mine and Industrial Accident Rapid Response System	
Emergency mine response	2
Emergency operations center	2
Legislative purpose; creation	2
Rule-making authority	3
Study of other industrial emergencies	3
Mine Foreman	
Ascertainment, record and removal of all dangers	34
Authority of fire boss to perform other duties	35
Authority, accountability, and responsibility of underground mine foremen; responsibility of operator in relation to mine foremen; and regulatory review procedures	128
Continuing education requirements for underground mine foreman-fire boss	77
Daily inspection of working places; records	34
Dangerous places	34
Death of resignation of mine foreman; successor	35
Death of resignation of mine foreman; successor	299
Duties; ventilation; loose coal, slate or rocks; props; drainage of water; man doors; instruction of apprentice miners	33
Duty of mine foreman to notify operator when unable to comply with law; duty of operator	35
Duty of mine foreman to notify operator when unable to comply with law; duty of operator	299
Examinations of reports of fire bosses	34
Fire bosses to have no superior officers	35
Instruction of employees and supervision of apprentices; annual examination of persons using flame safety lamps; records of examination; maintenance of methane detectors, etc.	33
Instruction of employees and supervision of apprentices; annual examination of persons using flame safety lamps; records of examination; maintenance of methane detectors, etc.	136
Instruction of employees and supervision of apprentices; annual examination of persons using flame safety lamps; records of examination; maintenance of methane detectors, etc.	298
Mine foreman and assistant mine foreman; daily inspection of working places, records	299
Preparation of danger signal by fire boss or certified person acting as such prior to examination; report; records open for inspection	35
Safety inspections; removal of gases	34
Unlawful to enter mine until fire boss reports it safe; exceptions	35
When underground mine foreman-fire boss required; assistants; certification	32
When underground mine foreman-fire boss required; assistants; certification	122
Mine Foreman Examiner	
Certificates of qualification heretofore granted	22
Certification of mine foreman or assistant mine foreman whose license to engage in similar activities suspended in another State	23
Certification of mine foreman or assistant mine foreman whose license to engage in similar activities suspended in another State	297
Criteria for duties of mine foreman examiner	258
Criteria for mine foreman examiner for surface mine foremen in West Virginia	258
Criteria for mine foreman examiner to certify successful applicants to the commissioner	258
Criteria for preparation of examinations; notice of intention to take examination; investigation and applicants	258
Criteria for record of examinations	258
Duties of mine foreman examiner	22
Mine foreman examiner for mine foreman and assistant mine foreman; salary	296
Mine foreman examiner for mine foremen-fire bosses and assistant mine foreman-fire bosses; salary	22
Mine foreman examiner to certify successful applicants to director	22
Place and time for examinations	22
Preparation of examinations; notice of intention to take examination; investigation of	

applicants	22
Reciprocity of mine foreman certification and experienced miner certification	26
Record of examination	22
Withdrawal of certification	22
Mine Inspectors' Examining Board	
Board continued	79
Mine inspectors' examining board	291
Mine Mapping (underground)	
Supervision by professional engineer or licensed land surveyor; seal and certification; contents; extensions; repository; availability; traversing; copies; archive; final survey and map; penalties	26
Mine Rescue	
Agency mine rescue team members compensation; worker's compensation	215
Alternate approved training program	257
Certification	257
Course outline of the initial training program for mine rescue team members	257
Criteria for the initial mine rescue team member training program for prospective mine rescue team members in West Virginia	256
Experience requirements	256
Mine rescue crews	23
Mine rescue instructor requirements	256
Mine rescue requirements for the office of miners' health, safety and training	214
Mine rescue stations; equipment	23
Mine rescue teams	23
Physical requirements	215
Training requirements	256
Mine Safety Instructor	
Mine safety instructors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to mine safety instructors	14
Mine Safety Technology	
Approval of devices	82
Legislative findings, purposes and intent	81
Mine Safety Technology Task Force	323
Mine Safety Technology Task Force continued; membership; method of nomination and appointment	81
Task force powers and duties	82
Monthly Reporting	
Monthly report by operator	69
Monthly report by operator	320
Monthly report by operator of mine; exception as to certain inactive mines	62
Reporting requirements – Independent contractors	339
Movement of Mining Equipment	
Construction work and requirements	102
Mining equipment and disassembled mining machine parts that may be transported with certain requirements	98
Movement of disassembled parts of mining equipment and equipment in off-track entries with battery powered equipment	100
Rehabilitation work and requirements	102
Specific types of equipment and related types of equipment that cannot be moved with persons inby on the same ventilation air current	94
Track equipment, such as track cleaners, and requirements	96
Track mounted equipment that may continue to operate normally	94
Tramming of AC electrical equipment	98
Tramming of DC electrical equipment	99
Transporting mining equipment in track haulage entries with battery powered locomotives	95
Transporting mining supplies	98
Oil and Gas Wells	
Coal operators procedure before operating near oil and gas wells	61
Drilling units and pooling of interests	6
Method of plugging	9
Notice of plugging and reclamation of well; right to take well; objection; plugging order; plugging for mine-through	9

Notice to owners	3
Operators filing of plans – oil and gas wells	322
Protective devices when coalbed methane well penetrates workable coal bed; when a coalbed methane well is drilled through horizon of coal bed from which coal has been removed; notice of stimulation; results of stimulation	6
Review board hearing; findings; order	4
Review of application; hearing; pooling order; spacing; operator; elections; working interests, royalty interests, carried interests, escrow account for conflicting claims, division order	7
Spacing	9
Office of Miners' Health, Safety and Training	
Applicability and enforcement of laws safeguarding life and property; rules; authority of director regarding enforcing safety laws	26
Applicability and enforcement of laws safeguarding life and property; rules; authority of director regarding enforcing safety laws	289
Diesel inspector training course	356
Diesel inspectors; employment; training	356
Director and inspectors authorized to enter mines; duties of inspectors to examine mines; no advance notice; reports after fatal accidents	16
Director and inspectors authorized to enter mines; duties of inspectors to examine mines; no advance notice; reports after fatal accidents	292
Director's authority to promulgate rules	13
Director; powers and duties	12
Discrimination	21
Discrimination	295
Employment of electrical inspectors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to electrical inspectors	15
Employment of surface mine inspectors; eligibility; qualifications; examinations; salary; provisions relating to underground mine inspectors applicable to surface mine inspectors	16
Employment of underground mine inspectors; eligibility; qualifications; examinations; salary and expenses; reinstatement; removal	15
Examinations to determine compliance with permits	62
Findings, orders and notices	17
Freedom of Information	335
Hearings	275
Injunctions	20
Injunctions	294
Inspectors	69
Judicial review	19
Judicial review	294
Mine inspectors may be appointed to fill vacancy in division	14
Mine inspectors; regions and districts; employment; tenure; oath	13
Offices continued	13
Penalties	20
Penalties	294
Posting of notices, orders and decisions; delivery to agent of operator; names and addresses to be filed by operators	19
Posting of notices, orders and decisions; delivery to agent of operator; names and addresses to be filed by operators	293
Powers and duties of electrical inspectors as to inspections, findings and orders; reports of electrical inspectors	18
Procedures and practice before the department of energy	270
Records and reports	22
Records and reports	296
Review of orders and notices by the director	18
Review of orders and notices by the director	293
Rules applicable to proceedings initiated to assess civil penalties	273
Rules applicable to proceedings initiated upon petition for declaratory ruling	278
Rules applicable to proceedings for modification, extension, termination or review of orders and notices	276
Rules for protection of health and safety of employees	69
Savings provisions	13

Open Pit Mines, Cement Manufacturing Plants and Underground Limestone and Sandstone Mines

Drilling	330
Drilling	332
Excavating	329,331
Explosives and blasting	330
Explosives and blasting	332
Fire protection	331
Haulage	331
Haulage	334
Monthly report by operator	69
Operation of equipment	330
Operation of equipment	333
Penalties	69
Roof support	333
Surface structures	329
Transportation of men	333
Underground workings	333
Ventilation	333
Outbursts	
Notification of outbursts	204
Plan for controlling outbursts	204
Protective Equipment and Clothing	
Emergency shelters/chambers	326
Eye and face protection	141
Personal protective equipment – clearing crews	280
Personal protective and life saving equipment	141
Placement of intrinsically safe battery-powered lights and lifeline cords	326
Protective equipment and clothing	51
Protective equipment and clothing	318
Requirements for approved eye protection	210
Requirements for safety gloves	210
Requirements for safety-toed shoes with metatarsal guards	210
Respiratory protection	141
Safety helmets	52
Self-contained self-rescue device storage cache plan	324
Self-contained self-rescue devices provided for escape from mines	324
Wireless emergency communications and tracking/locating systems	328
Record Keeping	
Availability of records	200
Individual responsibility	200
System for record keeping	199
Reopening old or abandoned mines	
Reopening of abandoned mines	123
Reopening old or abandoned mines	62
Unused and abandoned parts of mine	131
Respirable Dust	
Control of respirable dust	60
Right of a Miner	
Decision by the director or the deputy director as to whether or not the miner acted with good faith and with good cause	111
Dispute procedures; immediate supervisor – miner	110
Equipment examination; immediate supervisor – miner	110
Inspection; Department of Energy	110
No miner shall be required to operate unsafe equipment	110
Operator’s procedure if dispute remains unsettled	110
Procedures for refusing to operate unsafe equipment	206
Right of a miner to refuse to operate unsafe equipment; procedure; discrimination	60
Right of a miner to refuse to work in an unsafe area or unsafe manner	60
Roof Control	
Automated temporary roof support	117
Conventional roof support	116
Evaluation and revision of roof control plan	121

Installation of roof support using mining machines with integral roof bolters	116
Manual installation of temporary support.	118
Mining methods	115
Pillar recovery	117
Protection from falls of roof, face and ribs	114
Rehabilitation of areas with unsupported roof	119
Roof bolting	115
Roof control plan	120
Roof control plan – approved criteria	120
Roof control plan information	120
Roof testing and scaling.	118
Supplemental support materials, equipment and tools	119
Underground auger mines – special requirements	121
Safety Training Program – Surface miner	
Approval procedures for instructors	256
Approval procedures for training programs	255
Criteria for health and safety training program for prospective surface coal miners	242
Course outline for training for prospective surface coal miners	243
Training objectives for surface coal mine health and safety training course	245
Safety Training Program – Underground miner	
Approval procedures for instructors	241
Approval procedures for training programs	241
Course outline for training for prospective underground coal miners	225
Criteria for health and safety training program for prospective underground coal miners	224
Training objectives for underground coal mine health and safety training course	227
Shafts and Slopes	
Approvals and permits, explosives and ventilation for the construction of shaft and/or slope	
Operations	84
Arrangements for emergency medical assistance and transportation for injured persons;	
reporting requirements; posting requirements	88
Authority of examiner to perform other duties	91
Certification and statutory duties of shaft and/or slope superintendent-examiner-foreman and	
Examiner-foreman	89
Construction of shafts, slopes, surface facilities and the safety hazards attendant therewith;	
duties of board of coal mine health and safety to promulgate rules; time limits thereof	60
Devices to detect overlapping on hoists	88
Duty of operator; duty of superintendent to notify operator when unable to comply with rules	
and regulations	90
Duties shaft and/or slope examiner	91
Duties shaft and/or slope foreman	90
Duties of shaft and/or slope superintendent	89
Electrical provisions – shaft and/or slope	113
Emergency communications requirements	88
Emergency communications requirements for shaft and/or slope operations and arrangements	
for emergency medical assistance and transporting for injured persons; reporting requirements;	
posting requirements at shaft and/or slope operations	88
Examination, records, ventilation - shaft and/or slopes	87
Examiner-foreman certification	90
Explosives handling and use	89
First-aid training of shaft and/or slope employees	339
Information to be filed by company performing construction work; notices, orders, and	
decisions received by company agent; principal officer in charge; permits to be obtained	
by company performing construction work	84
Lights to be used in shaft	114
Misfires of explosives	87
No shaft and/or slope to be opened without prior approval of the Director of the Office of	
Miners' Health, Safety and Training	84
Posting of permit approvals	85
Roof and rib control programs and plans	85
Shafts and slopes	58
Shaft and/or slope examiner to have no superior officers	91
Superintendent – Shaft and/or slope certification	89

Surface distributed reclamation bond	84
Transportation of explosives	85
Use of authorized explosives	85
Use of magazines for explosives	85
Vehicles used to transport explosives	86
Ventilation – fan	87
Ventilation – Methods, maintenance, evacuation, quality, quantity	87
Ventilation – working area	87
When examiner-foreman may be designated	90
When superintendent-examiner-foreman and/or examiner-foreman required	89
Sheathed Explosive Units	
Preparation of shots; blasting practices and requirements for sheathed explosive units	212
Requirements for the use of sheathed explosives in underground mining	212
Shortwall Mining	
Accessible travel route – shortwall mining section	109
Chock and/or shield recovery plan from shortwall face; approval by department of energy	108
Cutting and welding – shortwall mining	109
Methane examination; monitor; face area	109
Plans for shortwall mining; approval by department of energy	108
Safety provisions – shortwall section	109
Shortwall mining – first-aid equipment	109
Shortwall mining – general requirements	109
Training – shortwall mining section	110
Surface Areas	
Crushers, feeders, rotary breakers	202
Machines with moveable parts	202
Mirrors on surface operated equipment	203
Operating equipment with suspended material	201
Protection from falls from elevated areas	201
Tires and repairs	202
Safety devices on surface haulage equipment	203
Safety precautions on coal stockpiles	201
Transporting compressed gas cylinders	202
Working around high-voltage powerlines	202
Surface Construction	
Accident prevention and tags	147
Automated temporary roof support (ATRS) on roof bolting machines used for construction	201
Blasting and the use of explosives	193
Concrete, concrete forms, and shoring	188
Construction supervisor certification	139
Cranes, derricks, hoists, elevators, and conveyors	177
Crushers, feeders, and rotary breakers	202
Demolition	191
Disposal of waste material	150
Duties of certified supervisor	140
Electrical	158
Employment of certified supervisor	139
Excavations, trenching, and shoring	185
Eye and face protection	141
Fire prevention	143
Fire protection	142
First-aid requirements	140
Flammable and combustible liquids	144
Gas welding and cutting	154
General accident prevention	139
General requirements for storage	147
Housekeeping	139
Illumination	134
Ladders and scaffolding	161
Machines with movable parts	202
Mirrors on surface operated equipment	203
Motor vehicles, mechanized equipment, and marine operations	182

Personal protective and life saving equipment	141
Portable firefighting equipment	143
Pressure Vessels	139
Respiratory protection	141
Rigging equipment for material handling	148
Rollover protective structures; overhead protection	199
Safety belts, lifelines, and lanyards	141
Safety devices on surface haulage equipment	203
Safety nets	142
Sanitation	141
Seat belts	202
Signaling	147
Steel erection	190
Temporary heating devices	146
Tools – hand and power	151
Transporting compressed gas cylinders	202
Working over or near water	142
Surface Mine Foremen	
Certification of surface mine foremen	25
Criteria for certification of surface mine foremen in West Virginia	257
Criteria for duties of mine foreman examiner	258
Criteria for location and time of mine foreman examinations	258
Criteria for mine foreman examiner to certify successful applicants to the commissioner	258
Criteria for mine foreman examiner for surface mine foremen in West Virginia	258
Criteria for preparation of examinations; notice of intention to take examination; investigation and applicants	258
Criteria for record of examinations	258
Surface mine foreman and assistant mine foreman certification required	258
Surface Mines	
Annual examination of persons using flame safety lamps; record of examination; maintenance of methane detectors, etc.	322
Auger mining	304
Certificate of competency and qualification – underground or surface miner	321
Certificate of competency and qualification or permit of apprenticeship required of all surface and underground mines	321
Coal storage bins; recovery tunnels; coal storage piles	317
Compressed gases and welding	310
Drilling	300
Duties of person subject to article; rules and regulations of operators	318
Electricity	306
Emergency medical personnel	320
Excavating	299
Explosion or accident; notice, investigation	320
Explosives and blasting	300
Fire in and about mine; notification of director and district mine inspector	58
Fire protection	318
First-aid equipment	319
First-aid training of coal mine employees	321
General provisions	305
Hand-held electric drills and rotating tools; trailing cables	310
Haulage	303
Installation of lighting	310
Monthly report by operator	320
Non-titled	311
Operators filing of plans – oil and gas wells	322
Permit of apprenticeship – surface miner	321
Preservation of evidence following an accident or disaster	320
Protective equipment and clothing	318
Ramps, tipples, cleaning plants, and other surface areas	315
Refusal to issue certificate; appeal	321
Supervision of apprentices	321
Thermal coal dryers and plants	319

Underground workings	303
When respiratory equipment to be worn; control of dust	311
Violations; penalties	322
Thermal Dryers	
Thermal coal dryers and plants	55
Underground Clay Mine	
Clay Mine foreman; when to be employed; qualifications; assistants	68
Rules for protection of health and safety of employees	69
Underground Equipment	
Canopies or cabs; electric face equipment	37
Car dropping requirements	211
Correction of unsafe conditions	206
Coupling and uncoupling of mine cars	204
Equipment to conform with height of coal seam	37
Movement of mining equipment	32
Operation of section haulage equipment	205
Procedures for refusing to operate unsafe equipment	206
Track haulage locomotives	200
Transportation of disabled underground rubber-tired mining equipment	215
Trolley pole swing limiters	207
Underground equipment to conform with height of seam	206
Underground Mines	
Accessible outlets; safe roadways for emergencies; accessibility of first-aid equipment; use of special capsule for removal of personnel	54
Belt conveyor; installation; maintenance; examination of belt conveyors and belt entries	41
Bonding track used as power conductor	46
Boreholes	33
Checking systems	52
Coal storage bins; recovery tunnels; coal storage piles	55
Control of coal dust; rock dusting	35
Designated areas of safety	206
Duties of persons subject to article; rules and regulations of operators	51
Electric equipment in mines	47
Electrical provisions for underground mining	123
Fans	28
Fire in and about mine; notification of director and district mine inspector	58
Hand-held electric drills and rotating tools; trailing cables	47
Haulage or surface areas	49
Haulage roads and equipment; shelter holes; prohibited practices; signals; inspection	39
Hoisting machinery; telephones; safety devices; hoisting engineers and drum runners	38
Housekeeping	48
Installation of lighting	47
Mining close to abandoned workings	57
Movement of mining equipment	32
No mine to be opened or reopened without prior approval of the Director of the Office of Miners' Health, Safety and Training; certificate of approval; approval fees; extension of certificate of approval; certificates of approval not transferable; section to be printed on certificates of approval	56
Plan of ventilation; approval by the director of the office of miners' health, safety and training	28
Procurement of dust-tight electrical equipment; fireproof construction; dust control; repairs; welding; handrails and toeboards; protection of personnel on conveyors; backguards on ladders; walkways or safety devices around thickeners	48
Railroad cars; dumping areas; other surface areas	49
Requirements for remote controlled extended or deep-cut mining operations; special consideration of roof control and mine ventilation plans; roof bolting procedures; additional precautions for increased worker safety	213
Responsibility for care and maintenance of face equipment	48
Roof support; specific requirements	36
Sealing permanently closed or abandoned mines	57
Signals on haulways; lights at mouth and bottom of shaft; operation of cages	33
Slopes, incline planes and haulage roads	33
Smoking in and around surface structures	49

Storage of flammable liquids in lamphouse	48
Telephone service or communication facilities	46
Transportation of miners by cars; self-propelled equipment; belts	40
Underground mine car loading points	206
Unused and abandoned parts of mine	31
Use of authorized explosives; storage or use of unauthorized explosives	37
Use of belt air	30
Welding and cutting	47
When respiratory equipment to be worn; control of dust	48
Ventilation of mines in general	29

Ventilation

Fans	130
------------	-----

WV Diesel Equipment Commission

WV Diesel Equipment Commission	63
--------------------------------------	----

Notes:

Lined page for writing or notes.