

WEST VIRGINIA LEGISLATURE

2021 REGULAR SESSION

Committee Substitute

for

Senate Bill 677

BY SENATORS PHILLIPS, CAPUTO, SMITH, ROMANO,
HAMILTON, KARNES, LINDSAY, UNGER, AND WOODRUM

[Originating in the Committee on the Judiciary;
reported on March 27, 2021]

1 A BILL to amend and reenact §22A-1-2 and §22A-1-12 of the Code of West Virginia, 1931, as
2 amended; to amend and reenact §22A-2-33, §22A-2-40, §22A-2-46, and §22A-2-70 of
3 said code; and to amend and reenact §22A-9-1 of said code, all relating to miners' safety,
4 health, and training standards; updating language regarding capacitors used for power
5 correction, electrical work performed on low, medium, or high voltage circuits or
6 equipment, and the use of gas-detecting devices; making technical corrections;
7 authorizing the director to terminate tenured mine inspectors; providing for a hearing
8 process related to a mine inspector's termination; and clarifying the hearing process
9 related to a mine inspector's suspension.

Be it enacted by the Legislature of West Virginia:

ARTICLE 1. OFFICE OF MINERS' HEALTH, SAFETY, AND TRAINING.

§22A-1-2. Definitions.

1 Unless the context in which used clearly requires a different meaning, the following
2 definitions apply to this chapter:

3 (a) *General.* —

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

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

8 (3) Approved: The term "approved" means in strict compliance with mining law or, in the
9 absence of law, accepted by a recognized standardizing body or organization whose approval is
10 generally recognized as authoritative on the subject.

11 (4) Face equipment: The term "face equipment" means mobile or portable mining
12 machinery having electric motors or accessory equipment normally installed or operated in by the
13 last open crosscut in an entry or room.

14 (5) Imminent danger: The term “imminent danger” means the existence of any condition
15 or practice in a coal mine which could reasonably be expected to cause death or serious physical
16 harm before such condition or practice can be abated.

17 (6) Mine: The term “mine” includes the shafts, slopes, drifts, or inclines connected with, or
18 intended in the future to be connected with, excavations penetrating coal seams or strata, which
19 excavations are ventilated by one general air current or divisions thereof, and connected by one
20 general system of mine haulage over which coal may be delivered to one or more points outside
21 the mine, and the surface structures or equipment connected or associated therewith which
22 contribute directly or indirectly to the mining, preparation or handling of coal, or construction
23 thereof.

24 (7) Miner: The term “miner” means any individual working in a coal mine.

25 (8) Operator: The term “operator” means any firm, corporation, partnership, or individual
26 operating any coal mine, or part thereof, or engaged in the construction of any facility associated
27 with a coal mine.

28 (9) Permissible: The term “permissible” means any equipment, device, or explosive that
29 has been approved as permissible by the ~~Federal~~ federal Mine Safety and Health ~~administration~~
30 Administration and/or the United States Bureau of Mines and meets all requirements, restrictions,
31 exceptions, limitations, and conditions attached to such classification by that agency or the
32 bureau.

33 (10) Person: The term “person” means any individual, partnership, association,
34 corporation, firm, subsidiary of a corporation, or other organization.

35 (11) Work of preparing the coal: The term “work of preparing the coal” means the breaking,
36 crushing, sizing, cleaning, washing, drying, mixing, storing, and loading of bituminous coal or
37 lignite and such other work of preparing such coal as is usually done by the operator of the coal
38 mine.

39 (b) *Office of Miners’ Health, Safety and Training.* —

40 (1) Board of appeals: The term “board of appeals” means as provided for in §22A-5-1 *et*
41 *seq.* of this code.

42 (2) Director: The term “director” means the Director of the Office of Miners’ Health, Safety,
43 and Training provided for in §22A-1-3 of this code.

44 (3) Mine inspector: The term “mine inspector” means a state mine inspector provided for
45 in ~~section eight of this article~~ §22A-1-8 of this code.

46 (4) Office: The term “office” means, when referring to a specific office, the Office of Miners’
47 Health, Safety, and Training provided for in this article. The term “office”, when used generically,
48 includes any office, board, agency, unit, organizational entity, or component thereof.

49 (c) *Mine areas.* —

50 (1) Abandoned workings: The term “abandoned workings” means excavation, either caved
51 or sealed, that is deserted and in which further mining is not intended, or open workings which
52 are ventilated and not inspected regularly.

53 (2) Active workings: The term “active workings” means all places in a mine that are
54 ventilated and inspected regularly.

55 (3) Drift: The term “drift” means a horizontal or approximately horizontal opening through
56 the strata or in a coal seam and used for the same purposes as a shaft.

57 (4) Excavations and workings: The term “excavations and workings” means any or all parts
58 of a mine excavated or being excavated, including shafts, slopes, drifts, tunnels, entries, rooms,
59 and working places, whether abandoned or in use.

60 (5) Inactive workings: The term “inactive workings” includes all portions of a mine in which
61 operations have been suspended for an indefinite period, but have not been abandoned.

62 (6) Mechanical working section: The term “mechanical working section” means an area of
63 a mine: (A) In which coal is loaded mechanically; (B) which is comprised of a number of working
64 places that are generally contiguous; and (C) which is of such size to permit necessary

65 supervision during shift operation, including pre-shift and on-shift examinations and tests required
66 by law.

67 (7) Panel: The term “panel” means workings that are or have been developed off of
68 submain entries which do not exceed 3,000 feet in length.

69 (8) Return air: The term “return air” means a volume of air that has passed through and
70 ventilated all the working places in a mine section.

71 (9) Shaft: The term “shaft” means a vertical opening through the strata that is or may be
72 used for the purpose of ventilation, drainage, and the hoisting and transportation of individuals
73 and material, in connection with the mining of coal.

74 (10) Slope: The term “slope” means a plane or incline roadway, usually driven to a coal
75 seam from the surface and used for the same purposes as a shaft.

76 (11) Working face: The term “working face” means any place in a coal mine in which work
77 of extracting coal from its natural deposit in the earth is performed during the mining cycle.

78 (12) Working place: The term “working place” means the area of a coal mine in by the last
79 open crosscut.

80 (13) Working section: The term “working section” means all areas of the coal mine from
81 the loading point of the section to and including the working faces.

82 (14) Working unit: The term “working unit” means an area of a mine in which coal is mined
83 with a set of production equipment; a conventional mining unit by a single loading machine; a
84 continuous mining unit by a single continuous mining machine, which is comprised of a number
85 of working places.

86 (d) *Mine personnel.* —

87 (1) Assistant mine foreman: The term “assistant mine foreman” means a certified person
88 designated to assist the mine foreman in the supervision of a portion or the whole of a mine or of
89 the persons employed therein.

90 (2) Certified electrician: The term “certified electrician” means any person who is qualified
91 as a mine electrician and who has passed an examination given by the office, or has at least three
92 years of experience in performing electrical work underground in a coal mine, in the surface work
93 areas of an underground coal mine, in a surface coal mine, in a non-coal mine, in the mine
94 equipment manufacturing industry, or in any other industry using or manufacturing similar
95 equipment, and has satisfactorily completed a coal mine electrical training program approved by
96 the office or any person who is qualified as a mine electrician in any state that recognizes certified
97 electricians licensed in West Virginia.

98 (3) Certified person: The term “certified person”, when used to designate the kind of person
99 to whom the performance of a duty in connection with the operation of a mine shall be assigned,
100 means a person who is qualified under the provisions of this law to perform such duty.

101 (4) Interested persons: The term “interested persons” includes the operator, members of
102 any mine safety committee at the mine affected and other duly authorized representatives of the
103 mine workers and the office.

104 (5) Mine foreman: The term “mine foreman” means the certified person whom the operator
105 or superintendent shall place in charge of the inside workings of the mine and of the persons
106 employed therein.

107 (6) Qualified person: The term “qualified person” means a person who has completed an
108 examination and is considered qualified on record by the office.

109 (7) Shot firer: The term “shot firer” means any person having had at least two years of
110 practical experience in coal mines, who has a knowledge of ventilation, mine roof and timbering,
111 and who has demonstrated his or her knowledge of mine gases, ~~and the use of a flame safety~~
112 ~~lamp, and other~~ approved gas detecting devices by examination and certification given him or her
113 by the office.

114 (8) Superintendent: The term “superintendent” means the person who has, on behalf of
115 the operator, immediate supervision of one or more mines.

116 (9) Supervisor: The term “supervisor” means a superintendent, mine foreman, assistant
117 mine foreman, or any person specifically designated by the superintendent or mine foreman to
118 supervise work or employees and who is acting pursuant to such specific designation and
119 instructions.

120 (e) *Electrical.* —

121 (1) Armored cable: The term “armored cable” means a cable provided with a wrapping of
122 metal, usually steel wires or tapes, primarily for the purpose of mechanical protection.

123 (2) Borehole cable: The term “borehole cable” means a cable designed for vertical
124 suspension in a borehole or shaft and used for power circuits in the mine.

125 (3) Branch circuit: The term “branch circuit” means any circuit, alternating current or direct
126 current, connected to and leading from the main power lines.

127 (4) Cable: The term “cable” means a standard conductor (single conductor cable) or a
128 combination of conductors insulated from one another (multiple conductor cable).

129 (5) Circuit breaker: The term “circuit breaker” means a device for interrupting a circuit
130 between separable contacts under normal or abnormal conditions.

131 (6) Delta connected: The term “delta connected” means a power system in which the
132 windings or transformers or a.c. generators are connected to form a triangular phase relationship,
133 and with phase conductors connected to each point of the triangle.

134 (7) Effectively grounded: The term “effectively grounded” is an expression which means
135 grounded through a grounding connection of sufficiently low impedance (inherent or intentionally
136 added or both) so that fault grounds which may occur cannot build up voltages in excess of limits
137 established for apparatus, circuits, or systems so grounded.

138 (8) Flame-resistant cable, portable: The term “flame-resistant cable, portable” means a
139 portable flame-resistant cable that has passed the flame tests of the federal Mine Safety and
140 Health Administration.

141 (9) Ground or grounding conductor (mining): The term “ground or grounding conductor
142 (mining)”, also referred to as a safety ground conductor, safety ground and frame ground, means
143 a metallic conductor used to connect the metal frame or enclosure of any equipment, device or
144 wiring system with a mine track or other effective grounding medium.

145 (10) Grounded (earthed): The term “grounded (earthed)” means that the system, circuit,
146 or apparatus referred to is provided with a ground.

147 (11) High voltage: The term “high voltage” means voltages of more than 1,000 volts.

148 (12) Lightning arrester: The term “lightning arrester” means a protective device for limiting
149 surge voltage on equipment by discharging or bypassing surge current; it prevents continued flow
150 of follow current to ground and is capable of repeating these functions as specified.

151 (13) Low voltage: The term “low voltage” means up to and including 660 volts.

152 (14) Medium voltage: The term “medium voltage” means voltages from 661 to 1,000 volts.

153 (15) Mine power center or distribution center: The term “mine power center or distribution
154 center” means a combined transformer or distribution unit, complete within a metal enclosure from
155 which one or more low-voltage power circuits are taken.

156 (16) Neutral (derived): The term “neutral (derived)” means a neutral point or connection
157 established by the addition of a “zig-zag” or grounding transformer to a normally underground
158 power system.

159 (17) Neutral point: The term “neutral point” means the connection point of transformer or
160 generator windings from which the voltage to ground is nominally zero, and is the point generally
161 used for system groundings in wye-connected a.c. power system.

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

166 (19) Wye-connected: The term “wye-connected” means a power system connection in
167 which one end of each phase windings or transformers or a.c. generators are connected together
168 to form a neutral point, and a neutral conductor may or may not be connected to the neutral point,
169 and the neutral point may or may not be grounded.

170 (20) Zig-zag transformer (grounding transformer): The term “zig-zag transformer
171 (grounding transformer)” means a transformer intended primarily to provide a neutral point for
172 grounding purposes.

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

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

4 (b) To be eligible for employment as a mine inspector the applicant shall be: (1) A citizen
5 of West Virginia, in good health, not less than 24 years of age, of good character and reputation,
6 and of temperate habits; (2) a person who has had at least five years of practical experience in
7 coal mines, at least two years of which have been in mines of this state: *Provided*, That graduation
8 from any accredited college of mining engineering may be considered the equivalent of two years
9 of practical experience; (3) a person who has had practical experience with dangerous gases
10 found in coal mines; and (4) a person who has a good theoretical and practical knowledge of
11 mines, mining methods, mine ventilation, sound safety practices, and applicable mining laws and
12 rules. For the purpose of this section, practical experience means the performance of normal
13 mining duties requiring a person to hold a certificate of competency and qualification as an
14 experienced underground miner prior to actually performing such duties.

15 (c) In order to qualify for appointment as an underground mine inspector, an eligible
16 applicant shall submit to written, oral, and practical examinations administered by the Mine
17 Inspectors' Examining Board and furnish evidence of good health, character, and other facts

18 establishing eligibility as the board may require. The examinations shall relate to the duties to be
19 performed by an underground mine inspector and, subject to the approval of the Mine Inspectors'
20 Examining Board, may be prepared by the director. If the board finds after investigation and
21 examination that an applicant: (1) Is eligible for appointment; and (2) has passed each required
22 examination, with a grade of at least 75 percent or an overall combined average score of 80
23 percent, the board shall add the applicant's name and grades to the register of qualified eligible
24 candidates and promptly certify its action in writing to the director. The director shall then appoint
25 one of the candidates from the three having the highest grades.

26 (d) Underground mine inspectors shall be paid an annual salary of not less than \$38,160;
27 assistant inspectors-at-large, not less than \$44,448; inspectors-at-large, not less than \$46,104,
28 each of which shall be fixed by the director, who shall take into consideration ability, performance
29 of duty, and experience. In accordance with established rules of the state's Travel Management
30 Office, underground mine inspectors shall also be allowed and paid expenses necessarily incident
31 to the performance of their official duties: *Provided*, That no reimbursement for expenses may be
32 made other than upon the timely submittal of a properly itemized expense account settlement
33 completed by the underground mine inspector, approved and countersigned by the director, or
34 his or her designated representative, verifying that the expenses were actually incurred in the
35 performance of official duties. Underground mine inspectors shall devote all of their time to the
36 duties of the office and shall be afforded compensatory time or compensation of at least the
37 regular rate for all time in excess of 40 hours per week.

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

41 (2) ~~Proceedings for the removal of an underground mine inspector may be initiated by the~~
42 ~~director whenever there is reasonable cause to believe that adequate cause exists, warranting~~
43 ~~removal. The proceeding may be initiated by a verified petition, filed with the mine inspectors'~~

44 ~~examining board by the director, setting forth with particularity the facts alleged~~ The director may
45 remove an underground mine inspector at any time for the reasons set forth in §22A-1-12(e)(1)
46 of this code. Upon such removal, the inspector shall be provided a written notice of removal,
47 describing the cause(s) for removal and setting forth with particularity the facts on which the
48 removal was based. Not less than 20 reputable citizens, who are operators or employees in
49 mines in this state, may petition the director for the removal of an underground mine inspector. If
50 the petition is verified by at least one of the petitioners, based on actual knowledge of the affiant
51 of the alleged facts, which, if true, warrant the removal of the inspector, the director shall cause
52 an investigation of the alleged facts to be made. If, after the investigation, the director finds that
53 there is substantial evidence, ~~which, if true that~~ warrants removal of the inspector, the director
54 shall ~~file a petition with the board requesting removal of the inspector~~ remove the inspector and
55 provide him or her a written notice of removal, describing the cause(s) for removal and setting
56 forth with particularity the evidence found in the investigation: *Provided*, That in all cases of
57 removal, the inspector may request, in writing, a hearing before the Board of Coal Mine Health
58 and Safety within 15 days of receipt of the notice of removal. The director shall provide the
59 inspector written notice of the right to a hearing in the notice of removal.

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

65 (4) ~~(3) At the time and place designated in the notice~~ If the inspector requests a hearing
66 in writing, the board shall promptly schedule a hearing and provide notice to the inspector of the
67 time and place for such hearing, at which time and place the board shall hear all evidence offered
68 in support of the ~~petition~~ removal and on behalf of the inspector. Each witness shall be sworn,
69 and a transcript shall be made of all evidence taken and proceedings had at the hearing. No

70 continuance may be granted except for good cause shown. ~~The chair of the board and the director~~
71 ~~have power to administer oaths and subpoena witnesses~~ The administrator of the board, or in
72 their absence a member of the board designated by the board, has the power to administer oaths
73 and subpoena witnesses.

74 ~~(5) (4) If any mine inspector against whom a petition has been filed~~ If any removed mine
75 inspector requests a hearing and thereafter willfully refuses or fails to appear before the board, or
76 having appeared, refuses to answer under oath any relevant question on the basis that the
77 testimony or answer might incriminate him or her or refuses to waive immunity from prosecution
78 because of any relevant matter about which the inspector may be asked to testify, then the
79 inspector shall forfeit his or her position.

80 ~~(6) (5) If, after hearing, the board finds that the inspector should be removed, it shall enter~~
81 ~~an order to that effect~~ If the inspector fails to request a hearing in writing, or after requesting a
82 hearing in writing and such hearing having been held, the board finds that the inspector should
83 be removed based on a preponderance of the evidence, the board shall enter an order to that
84 effect. Should the board find that the inspector should not have been removed, the inspector
85 shall be reinstated. The decision of the board is final and is not subject to judicial review.

ARTICLE 2. UNDERGROUND MINES.

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

1 (a) Only a certified "shot firer" designated by mine management shall be permitted to
2 handle explosives and do blasting. Only electric detonators of proper strength fired with
3 permissible shot firing units shall be used except under special permits as hereinafter provided,
4 and drillholes shall be stemmed with at least 24 inches of incombustible material, or at least one
5 half of the length of the hole shall be stemmed if the hole is less than four feet in depth, unless
6 other permissible stemming devices or methods are used. Drillholes shall not be drilled beyond
7 the limits of the cut, and as far as practicable, cuttings and dust shall be cleaned from the holes
8 before the charge is inserted. Charges of explosives exceeding one and one-half pounds, but not

9 exceeding three pounds, shall be used only if drillholes are six feet or more in depth. Ample
10 warning shall be given before shots are fired, and care shall be taken to determine that all persons
11 are in the clear before firing. Miners shall be removed from adjoining places and other places
12 when there is danger of shots blowing through. No shots shall be fired in any place known to
13 liberate explosive gas, until such place has been properly examined by a competent person who
14 is designated by mine management for that purpose, and no shots shall be fired in any place
15 where gas is detected with a ~~permissible flame safety lamp~~ an approved gas detecting device
16 until such gas has been removed by means of ventilation. After firing any shot, or shots, the
17 person firing the same shall not return to the working face until the smoke has been cleared away
18 and then he or she shall make a careful examination of the working face before leaving the place
19 or before performing any other work in the place.

20 (b) Multiple shooting in coal or rock or both is authorized only under permit issued by the
21 director. Permission to shoot more than 10 shots simultaneously may be granted by the director
22 only after consultation with interested persons, and such shooting will be performed by special
23 methods and under precautions prescribed by the director. All multiple shooting in bottom or roof
24 rock shall be performed in intake air, except by special permit from the director, after consultation
25 with interested persons, as heretofore provided. Multiple blasting of more than 10 shots performed
26 under any permit granted by the director under this section shall be done only on noncoal-
27 producing shifts or idle days, except as may be provided as a condition of the permit granted.

28 (c) Regular or short-interval delay detonators may be used for blasting purposes with
29 written permission from the director. Regular delay detonators shall not be used for blasting coal,
30 but may be used for grading above or below coal seams and during shaft, slope, tunnel work and
31 in faults or wants. Where short-interval delay detonators are permitted by said director to be used,
32 the shot firing circuit must be tested with a blasting galvanometer before firing, and the leg wires
33 connected in series. No instantaneous, regular, or zero-delay detonators are to be fired in
34 conjunction with short-interval delay detonators. The delay interval between dependent rows must

35 not be less than 25 milliseconds or more than 100 milliseconds, and the entire series of any one
36 round shall not provide a delay of more than 500 milliseconds between the first and last shot. The
37 total number of charged holes to be fired during any one round must not exceed the limit permitted
38 by the director. Misfires must be tested with a blasting galvanometer before removing.

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

44 (e) Blasting cables shall be well insulated and shall be as long as may be necessary to
45 permit persons authorized to fire shots to get in a safe place out of the line of fire. The cable,
46 when new, shall be at least 125 feet in length and never less than 100 feet. Shooting cables shall
47 be kept away from power wires and all other sources of electric current, connected to the leg
48 wires by the person who fires the shot, staggered as to length or well separated at the detonator
49 leg wires, and shunted at the battery until ready to connect to the blasting unit.

ARTICLE 2. UNDERGROUND MINES.

§22A-2-40. General provisions.

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

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

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

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

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

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

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

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

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

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

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

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

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

32 (13) All electric face equipment which is taken into or used inby the last open crosscut of
33 any coal mine shall be permissible.

34 (14) In mines operated in coal seams which are located at elevations above the water
35 table, the phrase "coal seams above the water table" means coal seams in a mine which are

36 located at an elevation above a river or the tributary of a river into which a local surface water
37 system naturally drains.

38 (15) The operator of each coal mine shall maintain in permissible condition all electric face
39 equipment, which is taken into or used in by the last open crosscut of any mine.

40 (16) Except where permissible power connection units are used, all power-connection
41 points out by the last open crosscut shall be in intake air.

42 (17) All power circuits and electric equipment shall be deenergized before work is done
43 on such circuits and equipment, except when necessary for trouble shooting or testing.

44 (18) Energized trolley wires may be repaired only by a person trained to perform electrical
45 work and to maintain electrical equipment and the operator of a mine shall require that such
46 persons wear approved and tested insulated shoes and wireman's gloves.

47 (19) No electrical work shall be performed on low-, medium-, or high-voltage distribution
48 circuits or equipment, except by a qualified person or by a person trained to perform electrical
49 work and to maintain electrical equipment under the direct supervision of a qualified person.
50 Disconnecting devices shall be locked out and suitably tagged by ~~the persons who perform~~ each
51 person who performs such work, except that in cases where locking out is not possible, such
52 devices shall be opened and suitably tagged by such persons who installed them, or, if such
53 persons are unavailable, by qualified persons authorized by the operator or his or her agent.

54 (20) All electric equipment shall be examined weekly, tested, and properly maintained by
55 a qualified person to assure safe operating conditions. When a potentially dangerous condition is
56 found on electric equipment, such equipment shall be removed from service until such condition
57 is corrected. A record of such examinations shall be kept and made available to an authorized
58 representative of the director and to the miners in such mine.

59 (21) All electric conductors shall be sufficient in size and have adequate current-carrying
60 capacity and be of such construction that a rise in temperature resulting from normal operation
61 will not damage the insulating material.

62 (22) All electrical connections or splices in conductors shall be mechanically and
63 electrically efficient, and suitable connectors shall be used. All electrical connections or splices in
64 insulated wire shall be reinsulated at least to the same degree of protection as the remainder of
65 the wire.

66 (23) Cables shall enter metal frames of motors, splice boxes, and electric compartment
67 only through proper fittings. When insulated wire, other than cables, pass through metal frames,
68 the holes shall be substantially bushed with insulated bushings.

69 (24) All power wire (except trailing cables on mobile equipment, specially designed cables
70 conducting high-voltage power to underground rectifying equipment or transformers, or bare or
71 insulated ground and return wires) shall be supported on well-installed insulators and shall not
72 contact combustible material, roof, or ribs.

73 (25) Power wires and cables, including, but not limited to, phone communication and
74 control wires, except trolley wires, trolley feeder wires, and bare signal wires, shall be insulated
75 adequately and fully protected. The provisions of this subdivision ~~shall not become~~ became
76 effective ~~until~~ on January 1, 1978.

77 (26) Automatic circuit-breaking devices or fuses of the correct type and capacity shall be
78 installed so as to protect all electric equipment and circuits against short circuit and overloads.
79 Three-phase motors on all electric equipment shall be provided with overload protection that will
80 deenergize all three phases in the event that any phase is overloaded.

81 (27) Incandescent lamps installed along haulageways and at other locations shall not
82 contact combustible material, and if powered from trolley or direct current feeder circuits, need
83 not be provided with separate short circuits or overload protection, if the lamp is not more than
84 eight feet in distance from such circuits.

85 (28) In all main power circuits, disconnecting switches shall be installed underground
86 within 500 feet of the bottoms of shafts and boreholes through which main power circuits enter

87 the underground area of the mine and within 500 feet of all other places where main power circuits
88 enter the underground area of the mine.

89 (29) All electric equipment shall be provided with switches or other controls that are safely
90 designed, constructed, and installed.

91 (30) Each underground, exposed power conductor that leads underground shall be
92 equipped with suitable lightning arrestors of approved type within 100 feet of the point where the
93 circuit enters the mine. Lightning arrestors shall be connected to a low-resistance grounding
94 medium on the surface which shall be separated from neutral ground by a distance of not less
95 than 25 feet.

96 (31) Except for areas of a coal mine inby the last open crosscut, incandescent lamps may
97 be used to illuminate underground areas. When incandescent lamps are used in a track entry or
98 belt entry or near track entries to illuminate special areas other than structures, the lamps shall
99 be installed in weatherproof sockets located in positions such that the lamps will not come in
100 contact with any combustible material. Lamps used in all other places must be of substantial
101 construction and be fitted with a glass enclosure.

102 (32) An authorized representative of the director may require in any mine that electric face
103 equipment be provided with devices that will permit the equipment to be deenergized quickly in
104 the event of an emergency.

105 (33) An authorized representative of the director shall require manually operated
106 emergency stop switches, designed to deenergize the traction motor circuit when the contractors
107 or controller fail to open, to be installed on all battery powered tractors, taken into or used inby
108 the last open crosscut of any entry or room.

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

111 (35) Short circuit protection for trailing cables shall be provided by an automatic circuit
112 breaker or other no less effective device approved by the director of adequate current-interrupting

113 capacity in each ungrounded conductor. Disconnecting devices used to disconnect power from
114 trailing cables shall be plainly marked and identified and such devices shall be equipped or
115 designed in such a manner that it can be determined by visual observation that the power is
116 disconnected.

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

119 (37) One temporary splice may be made in any trailing cable. Such trailing cable may only
120 be used for the next 24-hour period. No temporary splice shall be made in a trailing cable within
121 25 feet of the machine, except cable reel equipment. Temporary splices in trailing cables shall be
122 made in a workmanlike manner and shall be mechanically strong and well insulated. Trailing
123 cables or hand cables which have exposed wires or which have splices that heat or spark under
124 load shall not be used. As used in this section, the term "splice" means a mechanical joining of
125 one or more conductors that have been severed.

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

127 (A) Mechanically strong with adequate electrical conductivity and flexibility;

128 (B) Effectively insulated and sealed so as to exclude moisture; and

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

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

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

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

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

141 (43) Except where waived by the director, metallic frames, casings and other enclosures
142 of electric equipment that can become alive through failure of insulation or by contact with
143 energized parts shall be grounded, and ~~on or before January 1, 1978,~~ shall have a ground
144 monitoring system.

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

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

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

155 (47) Installation of silicon diodes shall be restricted to electric equipment receiving power
156 from a direct-current system with one polarity grounded. Where such diodes are used on circuits
157 having a nominal voltage rating of 250, they must have a forward current rating of 400 amperes
158 or more, and have a peak inverse voltage rating of 400 or more. Where such diodes are used on
159 circuits having nominal voltage rating of 550, they must have a forward current rating of 250
160 amperes or more, and have a peak inverse voltage rating of 800 or more.

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

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

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

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

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

181 (53) Disconnecting or cutout switches on energized high-voltage surface lines shall be
182 operated only with insulated sticks, fuse tongs, or pullers which are adequately insulated and
183 maintained to protect the operator from the voltage to which he or she is exposed. When such
184 switches are operated from the ground, the person operating such devices shall wear protective
185 rubber gloves.

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

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

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

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

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

200 (59) The grounding resistor, where required, shall be of the proper ohmic value to limit the
201 voltage drop in the grounding circuit external to the resistor to not more than 100 volts under fault
202 conditions. The grounding resistor shall be rated for maximum fault current continuously and
203 insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

204 (60) High-voltage circuits extending underground and supplying portable mobile or
205 stationary high-voltage equipment shall contain either a direct or derived neutral which shall be
206 grounded through a suitable resistor at the source transformers, and a grounding circuit,
207 originating at the grounded side of the grounding resistor, shall extend along with the power
208 conductors and serve as a grounding conductor for the frames of all high-voltage equipment
209 supplied power from the circuit, except that the director or his or her authorized representative
210 may permit ungrounded high-voltage circuits to be extended underground to feed stationary
211 electrical equipment if such circuits are either steel armored or installed in grounded, rigid steel
212 conduit throughout their entire length, and upon his or her finding that such exception does not
213 pose a hazard to the miners. Within 100 feet of the point on the surface where high-voltage circuits
214 enter the underground portion of the mine, disconnecting devices shall be installed and so

215 equipped or designed in such a manner that it can be determined by visual observation that the
216 power is disconnected, except that the director or his or her authorized representative may permit
217 such devices to be installed at a greater distance from such area of the mine if he or she
218 determines, based on existing physical conditions, that such installation will be more accessible
219 at a greater distance and will not pose any hazard to the miners.

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

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

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

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

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

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

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

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

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

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

257 (71) Power centers and portable transformers shall be deenergized before they are moved
258 from one location to another, except that, when equipment powered by sources other than such
259 centers or transformers is not available, the director may permit such centers and transformers to
260 be moved while energized, if he or she determines that another equivalent or greater hazard may
261 otherwise be created, and if they are moved under the supervision of a qualified person, and if
262 such centers and transformers are examined prior to such movement by such person and found
263 to be grounded by methods approved by an authorized representative of the director and
264 otherwise protected from hazards to the miner. A record shall be kept of such examinations. High-
265 voltage cables, other than trailing cables, shall not be moved or handled at any time while

266 energized, except that when such centers and transformers are moved while energized as
267 permitted under this section, energized high-voltage cables attached to such centers and
268 transformers may be moved only by a qualified person and the operator of such mine shall require
269 that such person wear approved and tested insulated wireman's gloves.

270 (72) Low- and medium-voltage three-phase alternating-current circuits used underground
271 shall contain either a direct or derived neutral which shall be grounded through a suitable resistor
272 at the power center, and a grounding circuit, originating at the grounded side of the grounding
273 resistor, shall extend along with the power conductors and serve as a grounding conductor for
274 the frames of all the electrical equipment supplied power from the circuit, except that the director
275 or his or her authorized representative may permit underground low- and medium-voltage circuits
276 to be used underground to feed such stationary electrical equipment if such circuits are either
277 steel armored or installed in grounded rigid steel conduit throughout their entire length. The
278 grounding resistor, where required, shall be of the proper ohmic value to limit the ground fault
279 current to 25 amperes. The grounding resistor shall be rated for maximum fault current
280 continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the
281 system.

282 (73) Low- and medium-voltage resistance grounded systems serving portable or mobile
283 equipment shall include a fail-safe ground check circuit to monitor continuously the grounding
284 circuit to assure continuity which ground check circuit shall cause the circuit breaker to open when
285 either the ground or pilot check wire is broken, or other not less effective device approved by the
286 director or his or her authorized representative to assure such continuity, except that an extension
287 of time, not in excess of 12 months, may be permitted by the director on a mine-to-mine basis if
288 he or she determines that such equipment is not available. Cable couplers shall be constructed
289 so that the ground check continuity conductor shall be broken first and the ground conductors
290 shall be broken last when the coupler is being uncoupled.

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

293 (75) Circuit breakers shall be marked for identification.

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

295 (77) Trailing cables for medium-voltage circuits shall include grounding conductors, a
296 ground check conductor, and grounded metallic shields around each power conductor or a ground
297 metallic shield over the assembly, except that on equipment employing cable reels, cables without
298 shields may be used if the insulation is rated 2,000 volts or more.

299 (78) Trolley wires and trolley feeder wires shall be provided with cutout switches at
300 intervals of not more than 2,000 feet and near the beginning of all branch lines.

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

302 (80) Trolley wires and trolley feeder wires, high-voltage cables, and transformers shall not
303 be located within 15 feet of the last open crosscut and shall be kept at least 150 feet from pillar
304 workings.

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

307 Trolley wires and trolley feeder wires shall be guarded adequately:

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

309 (B) On both sides of all doors and stoppings.

310 (C) At man-trip stations.

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

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

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

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

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

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

§22A-2-46. Welding and cutting.

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

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

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

15 (d) Transportation of oxygen and gas tanks or cylinders shall be permitted on self-
16 propelled machinery or belt conveyors specially equipped for safe holding of the containers in
17 transportation. In no instance shall such transportation be permitted in conjunction with any
18 mantrip, unless such mantrip is especially equipped with a compartment, lined with at least four

19 inches of foam rubber or the equivalent, and capable of tightly securing the tank inside the
20 manufactured frame of the vehicle.

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

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

27 (g) In all mines a certified person, pursuant to ~~section 12 of this article~~ §22A-2-12 of this
28 code, shall examine for gas with ~~permissible flame safety lamps or other~~ an approved gas
29 ~~detectors~~ detector before and during welding or cutting. The safety of the equipment and methods
30 used in such cases shall be subject to approval of the director. If equipment is mobile, it shall be
31 removed outby the last open breakthrough before cutting and welding may be performed on such
32 equipment.

§22A-2-70. Shafts and slopes.

1 (a) *When mine examiner to be employed; qualifications.* — During the sinking of a shaft
2 or the driving of a slope to a coal bed or while engaged in underground construction work, or
3 relating thereto, the operator shall assign a mine examiner to such project areas. Such mine
4 examiner shall have a certificate of competency valid only for the type of work stipulated thereon
5 and issued to him or her by the Office of Miners’ Health, Safety, and Training after he or she has
6 passed an examination given by the Office of Miners’ Health, Safety, and Training. He or she or
7 she shall, at the time he or she takes the examination, have a minimum of five years’ experience
8 in shaft sinking, slope driving and underground construction; moreover, he or she shall be able to
9 detect methane with ~~a flame safety lamp~~ an approved gas detector and have a thorough
10 knowledge of the ventilation of shafts, slopes, and mines, and the machinery connected therewith,
11 and finally, he or she shall be a person of good moral character with temperate habits.

12 (b) *Mine examiner or certified person acting as such; duties generally; records open for*
13 *inspection.* — In all shafts and slopes within three hours immediately preceding the beginning of
14 a work shift and before any workmen in such shift, other than those who may be designated to
15 make the examinations, enter the underground areas of such shafts or slopes, a certified foreman
16 or mine examiner, designated by the operator of such shaft or slope to do so, shall make an
17 examination of such areas. Each person designated to make such examinations shall make tests
18 with a ~~permissible flame safety lamp~~ an approved gas detector for accumulations of methane and
19 oxygen deficiency, and examine sides of shafts and ribs and roof of all slopes. Should he or she
20 find a condition which he or she considers dangerous to persons, he or she shall place a
21 conspicuous danger sign at all entrances to such places. He or she shall record the results of his
22 or her examination with ink or indelible pencil in a book prescribed by the director, kept at a place
23 on the surface designated by mine management. All records as prescribed herein shall be open
24 for inspection by interested persons.

25 (c) *Approvals and permits.* — An approval shall be obtained from the office before work is
26 started. A permit shall be obtained from the office: (1) To stop fan when miners are in shafts or
27 slopes; (2) to use electrical machinery in shafts or slopes; (3) to use electric lights in shafts or
28 slopes; (4) to use welders, torches, and like equipment in shafts or slopes; (5) to hoist more than
29 four miners at one time in buckets or cars; (6) to shoot more than 15 shots in one series.

30 (d) *Records.* — The foreman in charge on each shift shall keep a daily report of conditions
31 and practices. The foreman in charge on each shift shall read and countersign the reports of the
32 previous shift. Unsatisfactory conditions and practices reported shall be repeated on daily reports
33 until corrected. Hoists, buckets, cars, ropes, and appliances thereto shall be examined by a
34 qualified person before the start of each shift and a written record kept. Deaths from accidents or
35 previous injuries shall be reported immediately by wire to the office of the director and to the
36 district mine inspector or the inspector-at-large. A written report of all injuries and deaths shall be
37 mailed to the Office of Miners' Health, Safety, and Training and district mine inspector promptly.

38 Immediate notice shall be given the office of the director, the district mine inspector and the
39 inspector-at-large in the event of an ignition of gas, or serious accident to miners or equipment.
40 All permits and approvals must be available for inspection by all interested persons.

41 (e) *General.* — The foreman on shift shall have at least five years' experience in shafts or
42 slopes. New employees shall be instructed in the dangers and rules incident to their work.
43 Conspicuous bulletin boards and warning signs shall be maintained. Unauthorized persons shall
44 not be permitted around shafts or slopes. First-aid material shall be maintained at the operation
45 as required by ~~section fifty-nine of this article~~ §22A-2-59 of this code. The scene of a fatal accident
46 shall be left unchanged until an investigation is made by all interested persons. All employees
47 and others around the operation shall wear hard-toe shoes and hard-top hats. Goggles or other
48 eye protection shall be worn when cutting, welding, or striking where particles may fly. Gears,
49 belts, and revolving parts of machinery shall be properly guarded. Hand tools shall be in good
50 condition. Sides of shafts, ribs, and roof of all slopes shall be closely observed for loose and
51 dangerous conditions. Loose brows, ribs, and top in slopes shall be taken down or supported;
52 loose ribs in shafts shall be scaled. Miners shall be hoisted and lowered under power in shafts
53 and slopes. All hoists must have two positive breaking devices. At least three wraps of rope shall
54 remain on the hoist drum at all times. Wire ropes shall not be less than three-fourths inches in
55 diameter, and of a design to prevent excessive spinning or turning when hoisting.

56 When heavy materials are hoisted, a large rope shall be used if necessary. A hoisting
57 engineer shall be in constant attendance while men are in shaft. Head frames shall be constructed
58 substantially. Noise from machinery shall not interfere with signals. The standard signal code,
59 whistle or bell shall be used for hoisting:

- 60 One signal Hoist
61 One signal Stop
62 Two signals Lower
63 Three signals Man cage

64 One signal from hoisting engineer Miners board cage

65 Hoist signals shall be posted in front of the hoisting engineer. The shaft opening shall be
66 enclosed by a fence five feet high. Buckets shall not be loaded within six inches of the top rim.
67 Buckets shall have a positive lock on the handle or bale to prevent bucket from crumpling while
68 being hoisted. Positive coupling devices shall be used on buckets or cars (hooks with safety
69 catches or threaded clevis). Emergency devices for escape shall be provided while shafts are
70 under construction. Miners shall not ride on or work from rims of buckets. Buckets or cars shall
71 not be lowered without a signal from working area. Only sober and competent engineers shall be
72 permitted to operate hoists. No intoxicating liquors or intoxicated persons shall be permitted in or
73 around any shaft, slope, or machinery. Lattice type platforms shall be used.

74 (f) *Explosives.* — Explosives and blasting caps being taken into or removed from the
75 operation shall be transported and kept in approved nonconducting receptacles (unopened
76 cartons or cases are permissible). Explosives shall not be primed until ready to be inserted into
77 holes. Handling of explosives and loading of holes shall be under the strict supervision of a
78 qualified person or shotfirer. No more explosives or caps than are required to shoot one round
79 shall be taken into shafts. Adobe, mudcapped, or unconfined shots shall not be fired. Holes shall
80 be stemmed tightly and full into the mouth. Blasting caps shall be inserted in line with the
81 explosive. Leg wires of blasting caps and buss wires shall be kept shunted until connected.
82 Shooting cables shall be shunted at firing devices and before connecting to leg wires. Only
83 approved shooting devices shall be used. Shots shall be fired promptly after the round of holes
84 are charged. Warnings shall be given before shots are fired by shouting “Fire” three times slowly
85 after those notified have withdrawn. The blasting circuit shall be wired in series or parallel series.
86 All shooting circuits shall be tested with a galvanometer by a qualified person before shooting. A
87 careful examination for misfires shall be made after each shot. Persons shall not return to the face
88 until smoke and dust have cleared away. The shooting cable shall be adequately insulated and
89 have a substantial covering; be connected by the person firing the shot; and be kept away from

90 power circuits. Misfires shall be removed by firing separate holes or by washing; shall not be
91 drilled out; and shall be removed under supervision of a foreman or qualified person. Separate
92 magazines for the storage of explosives and detonators shall be located not less than 300 feet
93 from openings or other structures. Magazines for the storage of explosives and detonators shall
94 be separated at least 50 feet. Magazines shall be located behind barricades. The outside of
95 magazines shall be constructed of incombustible material. Rubbish and combustible material shall
96 not be permitted to accumulate around or in magazine. Warning signs, to be seen in all directions,
97 shall be posted near magazines.

98 (g) *Electrical*. — Power cables installed in slopes shall be placed in conduit away from the
99 belt as far as possible. Surface transformers shall be elevated at least eight feet from the ground
100 or enclosed by a fence six feet high, grounded if metal; shall be properly grounded; shall be
101 installed so that they will not present a fire hazard; and shall be guarded by sufficient danger
102 signs.

103 Electric equipment shall be in good condition, clean and orderly; shall be equipped with
104 guards around moving parts; and shall be grounded with effective frame grounds on motors and
105 control boxes.

106 All electric wires shall be installed and supported on insulators. All electric equipment shall
107 be protected by dual element fuse or circuit breakers.

108 (h) *Ventilation*. — Ventilating fans shall be offset from portal at least 15 feet; shall be
109 installed so that the ventilating current is not contaminated by dust, smoke or gases; shall be
110 effectively frame grounded; and shall be provided with fire extinguishers.

111 All shafts and slopes shall be ventilated adequately and continuously with fresh air. Air
112 tubing shall deliver not less than 9,000 feet per minute at the working area or as much more as
113 the inspector may require.

114 (i) *Gases.* — A foreman shall be in attendance at all times in shafts and slopes who has
115 passed an examination given by the office as to his or her competency in the use of ~~flame safety~~
116 ~~lamps~~ of an approved gas detector.

117 An examination shall be made before and after shooting by the foreman on shift. The
118 foreman shall have no superior in the performance of his or her duties. ~~A lighted flame safety~~
119 ~~lamp or other~~ An approved gas detector shall be carried at all times by the foreman when in the
120 working area and weekly gas analysis made. In all shafts and slopes within three hours
121 immediately preceding the beginning of a work shift and before any workmen in such shift, other
122 than those who may be designated to make the examinations, enter the underground areas of
123 such shafts or slopes, a certified mine foreman or mine examiner designated by the operator of
124 such shaft or slope to do so, shall make an examination of such area. Evidence of official
125 examination shall be left at the face by marking date and initials.

126 Gases should be removed under the supervision of the foreman in charge. Smoking shall
127 not be permitted inside of shafts or slopes.

128 (j) *Drilling.* — Dust allaying or dust collecting devices shall be used while drilling.

129 (k) *Lights to be used in shafts.* — Only approved electric cap lights shall be used in shafts.
130 Other lights shall be of explosive-proof type. Lights shall be suspended in shafts by cable or chain
131 other than the power conductor. In slopes, lights must be substantially installed. Power cables
132 shall be of an approved type. Power cables shall not be taut from shaft collar to light. Power cables
133 shall be in good condition and free of improper splices. Lights shall be suspended not less than
134 20 feet above where miners are working. Lights shall be removed from shaft and power cut off
135 when shooting. In slopes, lights must be removed a safe distance when shots are fired. Lights
136 shall not be replaced in shafts or slopes until examination has been made for gas by the mine
137 examiner and found clear. Front of light shall be protected by a substantial metal type guard.
138 Lights shall be protected from falling objects from above by a metal hood. The lighting circuit shall

139 be properly fused. Electric lights shall not be used in gaseous atmospheres. ~~A lighted flame safety~~
140 ~~lamp or~~ An approved gas detector shall be kept for use at the face while miners are at work.

ARTICLE 9. MINE INSPECTORS' EXAMINING BOARD.

**§22A-9-1. Mine Inspectors' Examining Board abolished and duties imposed upon the
Board of Coal Mine Health and Safety.**

1 The Mine Inspectors' Examining Board is hereby abolished. All duties and responsibilities
2 imposed upon the Mine Inspectors' Examining Board are transferred and hereby imposed upon
3 the Board of Coal Mine Health and Safety. On the effective date of the reenactment of this article
4 and section of the code, all equipment and records necessary to effectuate the purposes of this
5 article shall be transferred to the Board of Coal Mine Health and Safety.

6 In addition to other duties expressly set forth elsewhere in this article, the Board of Coal
7 Mine Health and Safety shall:

8 (1) Establish and, from time to time, revise forms of application for employment as mine
9 inspectors, which shall include the applicant's Social Security number and forms for written
10 examinations to test the qualifications of candidates for that position;

11 (2) Adopt and promulgate reasonable rules relating to the examination, qualification, and
12 certification of candidates for appointment as mine inspectors, and hearing for removal of
13 inspectors, ~~required to be held by section 12, article one of this chapter~~ under §22A-1-12 of this
14 code. All of such rules shall be printed and a copy thereof furnished by the ~~secretary of the board~~
15 to any person upon request. The board shall determine whether applicants have the necessary
16 experience to take the mine inspector examination, and the examination of candidates for
17 appointment as a mine inspector shall be conducted by the board and it shall rank all applicants;

18 (3) Prepare and certify to the Director of the Office of Miners' Health, Safety, and Training
19 a register of qualified eligible candidates for appointment as mine inspectors. The register shall
20 list all qualified eligible candidates in the order of their grades, the candidate with the highest
21 grade appearing at the top of the list. After each meeting of the board held to examine such

22 candidates, and at least annually, the board shall prepare and submit to the Director of the Office
23 of Miners' Health, Safety, and Training a revised and corrected register of qualified eligible
24 candidates for appointment as mine inspector, deleting from such revised register all persons: (a)
25 Who are no longer residents of West Virginia; (b) who have allowed a calendar year to expire
26 without, in writing, indicating their continued availability for such appointment; (c) who have been
27 passed over for appointment for three years; (d) who have become ineligible for appointment
28 since the board originally certified that such person was qualified and eligible for appointment as
29 mine inspector; or (e) who, in the judgment of the board, should be removed from the register for
30 good cause by the board;

31 (4) The board shall keep and preserve the written examination papers, manuscripts,
32 grading sheets, and other papers of all applicants for appointment as mine inspector for a period
33 of two years. Specimens of the examinations given, together with the correct solution of each
34 question, shall be preserved;

35 (5) The board shall issue a letter or written notice of qualification to each successful eligible
36 candidate;

37 (6) The Board of Coal Mine Health and Safety shall hear and determine proceedings for
38 hearings for the removal of mine inspectors in accordance with the provisions of ~~this article~~ §22A-
39 1-12 of this code when requested in writing by the mine inspector;

40 (7) The board shall hear and determine appeals of mine inspectors from suspension
41 orders made by the director pursuant to the provisions of §22A-1-4 of this code: *Provided*, That
42 an aggrieved inspector, in order to appeal from any order of suspension, shall file such appeal in
43 writing with the Board of Coal Mine Health and Safety not later than 10 days after receipt of notice
44 of suspension. On such appeal the board shall promptly affirm the act of the director unless it ~~be~~
45 is satisfied from a clear preponderance of the evidence that the director has acted arbitrarily. Each
46 witness shall be sworn, and a transcript shall be made of all evidence taken and the proceedings
47 had at the hearing. No continuance may be granted except for good cause shown. The

48 administrator of the board, or in their absence a member of the board designated by the board,
49 shall have the power to administer oaths and subpoena witnesses; and

50 (8) The board and office shall make an annual report to the Governor and the director
51 concerning the administration of mine inspection personnel in the state service, making such
52 recommendations as the board considers to be in the public interest.

NOTE: The purpose of this bill is to update provisions of the code related to miners' safety, health and training standards. The bill makes changes to code sections related to capacitors used for power correction, electrical work performed on low, medium, or high voltage circuits or equipment, and the use of gas detecting devices. The bill also makes technical corrections. It authorizes the director to terminate tenured inspectors and provides a hearing process related to an inspector's termination.

Strike-throughs indicate language that would be stricken from a heading or the present law, and underscoring indicates new language that would be added.