WEST VIRGINIA ADMINISTRATIVE REGULATIONS

DEPARTMENT OF MINES

CHAPTER 22-4

SERIES 3

(1980)

SUBJECT: RULES AND REGULATIONS GOVERNING SURFACE MINING WITHIN THE STATE OF WEST VIRGINIA

FILE IN THE OFFICE OF SECRETARY OF STATE OF WEST VIRGINIA

THIS DATE 10/9/80

PROPOSED REGULATIONS

INDEX

SAFETY RULES AND REGULATIONS GOVERNING SURFACE MINING

References are to Sections in WV Adm. Reg. 22-4, Sec. III.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
DEPARTMENT OF MINES

Chapter (22-4)
Series (III)
(1980)

Subject: Safety Rules and Regulations Governing Surface Mining.

Section 1. General

1.01 Authority - These rules and regulations are issued under authority of West Virginia Code, Chapter 20, Article 6, Section 20, in accordance with the provisions of Chapter 29-A, Article 3, of the West Virginia Code.

1.02 Effective Date - These rules and regulations were promulgated on the _____ day of _____, 19 ___, and became effective on the _____ day of _____, 19___.

1.03 Filing Date - These rules and regulations were filed in the office of the Secretary of State on the _____ day of _____, 19___.

Section 2. Definitions

2.01 The term "surface mine" as used in these regu lations shall extend to all surface mining operations.

2.02 The term "inspector" shall mean surface mine inspector employed by the Department of Mines.

2.03 Detonator - the term "detonator" shall mean blasting caps, electrical blasting caps, and non-electric delay blasting caps.

2.04 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 miniturized detonating cord.

2.05 Primer - the term "primer" shall mean a cartridge or container of explosives into which a detonator or detonating cord is inserted or at-

tached, and whose purpose is to initiate the main explosive charge.

2.06 Safety Fuse - the term "safety fuse" shall mean a flexible cord containing an internal buring medium by which fire or flame is conveyed at a continuous and uniform rate from the point of ignition, usually a blasting cap, to the point of use.

2.07 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.

2.08 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 noncapsensitive explosives.

2.09 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.

2.10 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) contains no ingredient classified as an explosive by the Department of Transportation; and
(d) cannot be detonated by a No. 8 blasting cap.

2.11 Blasting area - shall mean the area near blasting operations in which concussion or flying material can reasonably be expected to cause injury.

2.12 Explosives - the term "explosives" shall mean any or all of the following: water gel slurries, dynamites; permissibles; pellet powder;

blasting caps; electric blasting caps; non-electrical delay blasting caps; cast primers and boosters; detonating cord; and detonating cord delay connections.

2.13 Electric Blasting Caps - the term "electric blasting caps" shall mean instantaneous electric blasting caps and all types of delay electric blasting caps.

Section 3. Excavating

3.01 The highwall shall be sloped to prevent or minimize the danger of slides, and overhanging ledges and all loose material scaled from the wall.

3.02 When the highwall is cracked or shows evidence of movement, or appears to be weakened in any way, the area shall be made safe or abandoned and dangered off.

3.03 The spoil banks shall be placed an adequate distance from the pit to prevent any material from rolling back into the pit and endangering the workmen.

3.04 All trees endangering workmen shall be removed.

3.05 Suitable warning shall be given before equipment shoves over or uproots trees, and all workmen shall be removed from the vicinity.

3.06 When surface mining is done at night, the pit in the vicinity of the work shall be well illuminated.

Section 4. Drilling

4.01 Where horizontal auger drills are used, the operator shall not leave the controls while the drill stems are in operation.

4.02 Employees shall be required to keep in the clear of auger and drill stem while drill is in motion and shall not be permitted to pass under

or step over a moving drill stem or auger.

4.03 When churn drills or vertical rotary drills are used, the driller 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 platform.

4.04 Drillers shall block vertical drill-holes before moving to new location. Vertical drill-holes that remain open after blasting shall be protected to prevent persons falling into them.

4.05 Drilling equipment shall be inspected daily and any defects shall be corrected promptly.

~~Section 5.~~ Explosives and Blasting

~~5.01 Semitrailer or full trailer vans used for highway or on site transportation of the blasting agents are satisfactory for temporarily storing these materials, provided they are located according to the American Table of Distances 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 the time of placement and removal of stocks and of blasting agents.~~

~~5.02 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 no later than the end of the shift: Provided, however, that if, for any reason the holes cannot be fired immediately, all work shall cease within a radius of 500 feet of blast area, and work shall not commence again until the holes have finally been fired. Where Primacord only is used in the loading of the boreholes, this rule does not apply.~~

~~5.03--Explosives that have been frozen shall not be used.~~

~~5.04--The shot-firer shall wait 30 minutes before returning to a misfired shot, except when using an electric blasting cap.~~

~~5.05--When a shot has misfired, extra precaution shall be taken in the recovery of the explosive and blasting cap.~~

~~5.06--Shot firing cables shall be disconnected immediately from the blasting unit after each blast and shunted.~~

~~5.07--No person shall return to the blasted area until dust has settled and area is cleared.~~

~~5.08--Public highways and all entrances to the operation shall be barricaded and guarded by the operator in all cases where such highways or entrances to the operation are located within 1000 feet of any point where a blast is about to be fired. Notify homes in this area.~~

~~5.09--No blasting shall be done so close to banks of a stream that the banks would be ruptured or broken permitting the water to enter the surface mining pit.~~

~~5.10--When a surface mine operation is close to an active deep mine, the surface mine operator shall give the superintendent and mine foreman of the deep mine at least 12 hours notice in advance of any contempleted blasting that may endanger the safety of persons employed in the deep mine. When a surface mine cuts into an active mine, the surface mine inspector of the District and the superintendent of the deep mine shall be notified before any blasting is done, and the mine inspector shall designate at what hours blasting shall be done.~~

~~5.11--Handling and use of explosives shall be discontinued during an electrical storm.~~

~~5.12--Two-(2)-Way-Radio-equipment-shall-be-turned-off-prior-to-the handling--and-use-of-electric-detonators-for-a-proposed-shot. This-rule does-not-apply-to-radios-operating-beyond-the-distances-shown-on-the-following-table:~~

~~TRANSMITTER-POWER (Watts)~~	~~MINIMUM-DISTANCE (Feet)~~
~~5---25~~	~~100~~
~~25---50~~	~~150~~
~~50---100~~	~~220~~
~~100---150~~	~~350~~
~~250---500~~	~~450~~
~~500---1000~~	~~650~~

~~(This-table-developed-by-the-Institute-of-Makers-of-Explosives-and-listed in-the-Blasters'-Handbook).~~

Section 5. Explosives and Blasting

5.01 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 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 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) 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) Vehicles used to transport explosives, other than blasting agents, shall be substantially constructed with no sparking metal exposed in the cargo space. The vehicle shall be equipped with suitable side and tail gates. The explosives shall not be piled higher than the side or end.

5.02 Transportation of Explosives - Precautions

(a) Explosives and detonators shall not be transported in the same vehicle unless separated by a substantially fastened four-inch 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.

5.03 General Requirements - Explosives

(a) All handling and transporting of explosives shall be under the direct supervision of a designated blaster or certified foreman.

(b) Previously frozen explosives of nitro-glycerin base shall not be used.

(c) Open fires and flames are prohibited within 100 feet of the area where explosives are being stored, handled or used.

(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 of a dragline or like equipment.

5.04 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 a proposed shot. This rule does not apply to radios operating beyond the distances shown on the following table:

Transmitter Power (Watts) (except FM mobile)	Minimum Distance (Feet)
5 - 25	100
25 - 50	150
50 - 100	220
100 - 250	350
250 - 500	450
500 - 1000	650
1000 - 2500	1000
2500 - 5000	1500
5000 - 10000	2200
10000 - 25000	3500
25000 - 50000	5000
50000 - 100000	7000

Transmitter Power (Watts) (FM movile)	Minimum Distance (Feet)
1 - 10	5
10 - 30	10
30 - 60	15
60 - 250	30

Adequate warning signs shall be located on all travelroads, a distance of not less than 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 100 feet of loaded holes or holes being loaded; where such equipment is being used and electrical detonators are being used, stray current tests shall be made on the bench prior to

commencing the loading of holes, if current is detected, such power cables be moved to a safe distance or the power cables shall be de-energized.

(d) Holes shall not be drilled if there is a 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 40-second-per-foot safety fuse less than 36 in. long or any 30-second-per-foot fuse less than 48 in. 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 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-foot air gap shall be provided between the blasting circuit and the power circuit when the hole or series of holes are being connected.

5.05 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 500 feet in length when new and never less than 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 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.

5.06 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 connects the leg wires of the detonating caps to the shooting cable.

(d) All holes or series of holes containing electric 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 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.

5.07 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.

5.08 Misfires

(a) When electric blasting caps have been used the blaster shall not return to misfired holes for at least 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 misfire.

(c) The blaster shall wait 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 ends 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.

5.09 Storage of Explosives

(a) After loading boreholes all unused explosives shall be returned to the proper explosive storage magazine.

(b) The storage of explosives and the construction, location, illumination and maintenance of magazines shall be in accordance with Federal regulations as promulgated by the Internal Revenue Service, Bureau of Alcohol, Tobacco and Firearms.

(c) Explosives magazines shall be located at least 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 25 feet around magazines shall be kept clear of dry leaves, grass, undergrowth, trash and debris.

(f) Detonator and explosive storage magazines shall be separated by at least 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.

Section 6. Underground Workings

6.01 The superintendent and mine foreman of any deep mine shall be notified immediately when a surface mine operation may in any way interfere with the safe operation of the active deep mine.

6.02 Special precautions shall be taken to protect the employees where excavating is being done in the vicinity of an abandoned deep mine or portion thereof, which may contain a dangerous accumulation of water or gas.

6.03 All cut-throughs into abandoned deep mine workings shall be immediately closed.

Section 7. Equipment

7.01 Operators of shovels, draglines or tractors shall not operate their equipment when any persons are within such proximity as to be endangered. The equipment shall be provided with efficient warning devices.

7.02 Operators of surface mining equipment shall not swing dipper of bucket over passing haulage units.

7.03 The dipper of the loading shovel shall be swung over the body of the truck and not the cab.

7.04 No person shall be allowed in cab or on the truck while a truck is being loaded with power shovel unless cab is shielded.

7.05 Riding in a dipper or bucket shall be prohibited.

7.06 Workmen shall keep out from under suspended dipper at all times.

7.07 Surface mining and loading equipment shall be inspected daily.

7.08 All ropes shall be securely attached to the drum and the dipper by at least four (4) suitable wire ripe clips or properly wedged.

7.09 Walkways and platforms on shovels and draglines shall be maintained in safe condition and shall be equipped with safe handrails.

7.10 Men shall not get on and off draglines, or shovels without first notifying the operator.

7.11 Men shall not be permitted in the immediate vicinity of shovels or draglines unless in the line of duty.

7.12 The bulldozer operator shall, at all times, keep a reasonably safe distance from the edge of all vertical or abrupt excavations or fills.

7.13 Equipment that revolves in an arc on a turntable shall have a minimum clearance of four (4) feet from the highwall or other obstructions.

7.14 While greasing or doing repair work on a boom of a shovel or dragline, 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 that are equipped with dandrail or ladder.

7.15 Dippers shall be lowered for repairs.

7.16 Operators of shovels or draglines shall sound a signal, such as a whistle, bell, or horn, before moving forward or backward; and all men not in the clear shall respond immediately.

7.17 All gears and other moving parts shall be guarded.

7.18 Operators shall not leave the cab of the crane without throwing the controls into the "off" position, likewise if the power should fail, controls shall be placed in the "off" position until orders are given to resume operation.

7.19 Good housekeeping shall be practiced on shovels and draglines.

7.20 Dump bodies of trucks shall be properly blocked when raised for any purpose except dumping of load.

7.21 Equipment shall be maintained in a safe operating condition.

Section 8. Compressed Gases

8.01 Tanks or cylinders of "Compressed Gases" and their contents must be used solely for their intended purposes.

8.02 Oxygen and acerylene tanks or cylinders of 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.

8.03 The clothing of any person using "Compressed Gas" in or about surface mines shall be reasonably free of petroleum products.

8.04 Only an approved type of spark-lighter shall be used for lighting torches.

8.05 Compressed Gasses shall not be used under direct pressure from tanks or cylinders but must be used under reduced pressures not exceeding that recommended by the manufacturer.

8.06 Tests for leaks on hose and valves or gauges shall be made only with soft brush and soapy water or soap suds.

8.07 A suitable wrench designed for compressed tanks shall be in the possession of the person authorized to use the equipment.

Section 9. Electricity

9.01 When machinery is being operated or being moved under power lines a safe interval shall be maintained between the farthest reaching point of such equipment and said power lines.

9.02 Employers shall furnish suitable insulating gloves to employees

performing work that requires them to come in contact with electrical equipment involving shock hazards.

9.03 All electrical apparatus and conductors shall be sufficient in size. They shall be so installed, worked and maintained as to reduce danger from accidental shock or fire to the minimum; they shall be of such construction and so worked that a rise in temperature caused by ordinary working will not damage the insulating material.

Section 10. Ramps, Tipples and Cleaning Plants

10.01 All ladders shall be securely fastened. Permanent ladders more than 10 feet in height shall be provided with backguard.

10.02 Both sides of ramp shall be provided with rubbing boards of ample dimensions and they shall be securely anchored.

10.03 An adequate dumping block at least 8 inches high shall be installed at all dumping points, excluding stockpiles.

10.04 Lights shall be provided as needed in or on surface structures.

Section 11. Fire Protection

11.01 Fire extinguishers of correct type and ample capacity shall be kept on each piece of mobile equipment and in all buildings.

11.02 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.

11.03 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.

11.04 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 extra gallon of gasoline in an approved safety can (flash arrest-

ing screen with selfclosing lid) may be stored on the equipment out of the way of moving objects.

11.05 Flammable liquids shall not be used to clean machinery.

Section 12. Haulage

12.01 Traffic directions which differ from standard highway practice shall be posted on signs along the haulage roads at strategic points in letters at least two inches high.

12.02 Safety equipment on trucks shall be maintained to the standards set for highway equipment.

12.03 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.

Section 13. Auger Mining

13.01 Warning signs shall be posted conspicuously at the entrances to abandoned auger operations and at strategic locations along the outcrop line where coal has been auger mined.

13.02 Completed auger holes shall be blocked with highwall spoil to a minimum height of 1 foot above the coal bed and to within 1,000 feet of the active holes.

13.03 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 should wear a life-line that extends to the hands of a person on the surface.

13.04 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 a suitable danger board placed across its entrance.

13.05 Open lights and smoking material are prohibited in auger holes.

13.06 "NO SMOKING" signs shall be posted in close proximity where auger holes are being drilled.

13.07 Auger mingin should not be done in proximity to active underground workings unless the work is coordinated with the underground plan of workings. Auger holes should not be drilled so as to:

(a) Disrupt the ventilation systems of active underground mines.
(b) Create inundation hazards to active underground mines.
(c) Cause damage to roof and ribs of active and underground roadways.

13.08 Auger holes should not intersect underground mine workings known to contain or suspected to conatain dangerous quantities of impounded water, except to dewater such areas under controlled conditions and then only after all necessary precautions have been taken to safeguard life and property.

13.09 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.

13.10 Auger-mining equipment should not be operated in the vicinity of auger holes emitting dangerous quantities of methane or oxygen-deficient air until the atmosphere has been rendered harmless.

13.11 The operator should not leave the controls while the auger is being operated.

13.12 Persons should keep clear of the auger train while it is moving and should not pass under or over an auger train, except where suitable

crossing facilities are provided.

13.13 Persons should keep clear of auger sections being swung into position.

13.14 Where practicable, no persons, including the auger-machine operator should be in a direct line with the boreholes during mining operations in case explosive gas or dust is ignited by the auger.

13.15 Internal-combustion engines in the vicinity of auger holes should be stopped while auger holes are being inspected.

13.16 Combustible materials, dinner pails or other supplies should not be stored in auger holes.

13.17 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 Mines.

13.18 All Auger mining machines shall be equipped with a permissible flame safety lamp.

13.19 In each auger mining crew there shall be a man qualified in the care and use of a permissible flame safety lamp.