

WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
DEPARTMENT OF MINES

FILED IN THE OFFICE  
ROBERT D. BAILEY  
SECRETARY OF STATE  
THIS DATE 8/17/67

Chapter (22-4)  
Series (III)  
(1967)

**Subject: Safety Rules and Regulations Governing Surface Mining.**

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**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 17th day of August, 1967, and became effective on the 16th day of September, 1967.

1.03.     Filing Date-These rules and regulations were filed in the office of the Secretary of State on the 17th day of August, 1967.

**Section 2.     Definitions**

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

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

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 contemplated 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 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 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 rope 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 handrail 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 acetylene 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 Gases shall not be used under direct pressure from tanks or cylinders but must be used under reduced pressures not exceeding that recommended by the 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 arresting screen with selfclosing lid) may be stored on the equipment securely fastened in a specific location 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 mining 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 the roof and ribs of active and underground roadways.**

**13.08. Auger holes should not intersect underground mine workings known to contain or suspected to contain 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.**

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**WEST VIRGINIA ADMINISTRATIVE REGULATIONS**

**Department of Mines**

**Chapter 22-4**

**(1964)**

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