

**SURFACE
GENERAL
COAL MINER
CERTIFICATION**

FOR

**SURFACE MINES
AND
AUGER MINES**

Requirements For General Coal Miner Certification

The following procedures are to be followed to secure certification:

- A. Applicants employed in Virginia coal mines prior to January 1, 1996 who wish to become certified shall:
 - 1. Submit Form DM-BCME-1, Application for Certification.
 - 2. Submit a notarized Work Experience Form, DM-BCME-2 Verifying mining experience prior to January 1, 1996.
 - 3. Pay a \$10.00 fee for certification.
 - 4. Underground miners must pass the gas detection examination if they are not already gas detection qualified.

- B. Applicants seeking certification **after January 1, 1996** shall:
 - 1. Submit Form DM-BCME-1, Application for Certification.
 - 2. Pay a \$ 10.00 fee for certification.
 - 3. Submit documentation to the Division of Mines verifying completion of new miner training, supervisory retraining, annual refresher training, or submit a valid EMT, EMT-first responder, advanced first aid certificate or card or submit proof of two hours first aid training within the past twelve months signed by an approved instructor or as otherwise indicated in General Coal Miner Certification (next page) section I-3. The training shall include highlights of the Coal Mine Safety Laws of Virginia and the Coal Mine Safety and Health Regulations of the Division of Mines and the Board of Coal Mining Examiners. The training shall include a demonstration of knowledge or passing of a written examination of Virginia's coal mine safety laws and regulations.
 - 4. Submit Form DM-BCME-3, Verification of Training Completed for General Coal Miner Certification prior to commencing work in a coal mine. The form shall be signed by the employee and the instructor and the date they sign will be the effective date of the General Coal Miner Certification.
 - 5. Underground miners must pass the gas detection examination.

For information call Mary S. Gibson, Regulatory Boards Administrator, 276/523-8234.

General Coal Miner Certification Process

I. Materials needed:

- A. Furnished by Applicant
 - 1. Proof of age (must be at least 18 years of age)
 - 2. \$ 10.00 in cash, check or money order (**Money may be received at our Big Stone Gap or Keen Mountain offices, or through the mail.**)
 - 3. Proof of first aid training
 - a. 5000-23 MSHA form for training that includes at least 2 hours first aid training (new miner, annual refresher, supervisory retraining), within the last twelve months.
 - b. State of Kentucky training slip that includes at least 2 hours first aid training, within the last twelve months.
 - c. Any proof of first aid training in the last 12 months signed by an approved MSHA instructor, at least 2 hours of training
 - d. Valid Virginia EMT-B or EMT-First Responder or Advanced First Aid, certificate or card
 - e. Valid Kentucky MET or West Virginia EMT card
- B. Furnished by DM person conducting certification training:
 - 1. Coal Mine Safety Laws of Virginia, 1999 Edition
 - 2. General Coal Miner Study Guide
 - 3. DM-BCME-1 Form
 - 4. DM-BCME-3 Form
 - 5. General Coal Miner Study Questions
 - a. **Underground study questions if applicant wants GMUO (underground only); this includes surface area of underground mine**
 - b. **Surface study questions if applicant wants GMSO (surface only); this includes surface mine or auger mine only**
 - 6. Student Retention Quiz
 - a. GMUO – Underground Quiz – 20 questions
 - b. GMSO – Surface Quiz – 10 questions

II. Certification process:

- A. Applicant is given the applicable general coal miner study guide, study questions, and a copy of the Coal Mine Safety Laws of Virginia, 1999 Edition. The applicant uses the applicable study guide and Coal Mine Safety Laws to find answers to the questions.
- B. After answering the study questions, the person conducting the certification training shall review each question with the applicant to ensure the applicant understands and acknowledges the correct answers.
- C. After completion and discussion of the study questions, the applicant is given the applicable student retention quiz. If the applicant does not respond correctly to the questions, then the applicant should be required to review the appropriate sections of the Coal Mine Safety Laws of Virginia until that person can answer the questions correctly.
NOTE: This is not a test that implies a passing or failing score. This quiz is designed only to help the person administering the training to evaluate the student's retention of the training.

The total concept of the General Coal Miner Study Guide, study questions, and student retention quiz is to ensure that applicants have a general working knowledge of the Act and should not be perceived as a test with a passing or failing score.

- D. After the applicant completes the study questions and student retention quiz and both have been discussed by the person conducting the training, then that person completes the instructor section of the DM-BCME-3 form and signs in the appropriate place. **The proper code (GMUO or GMSO) must be written in the upper right corner of this form.** If more than one person is receiving training, than a roster must be filled out and attached to the DM-BCME-3 form.

III. Mailing procedure

- A. Attach copy of proof of first aid, DM-BCME-1, DM-BCME-3, and roster (if necessary) together, making sure all forms are completed and signed.

1. If this is being conducted at a Division of Mines office, the \$ 10.00 fee is to be paid to the appropriate person and receipted before the certification process begins. After the process is completed, the forms and the receipt are taken back to the person authorized to accept payment so they can be processed.

NOTE: A copy of completed form DM-BCME-3 needs to be given to the applicant to serve as proof that they have successfully completed all the requirements for the general coal miner certification until their card is received in the mail. Allow approximately one month to receive the card.

2. If this certification is being done at a mine site or other remote location, the completed material is given to the applicant in an envelope addressed to the DM office, either at KMO or BSG, and instructions are given in person or mail the material along with the fee to that address. If no copy machine is available, a TS-1 can be filled out with a statement saying the person has passed the requirements for general coal miner and include their name and social security number. Give the applicant a copy of the TS-1 to use as proof of training until the card arrives.



Board of Coal Mining Examiners
P.O. Drawer 900
Big Stone Gap, VA 24219
(276)523-8149

Verification of Training Completed for General Coal Miner Certification

Type or print this form in ink and submit it to the Board of Coal Mining Examiners with a \$10 processing fee in the form of a certified check, cashier's check, or money order made payable to the Treasurer of Virginia. Cash will be accepted if paid in person at a Division of Mines' (DM) office.

1. Full Name _____ S.S.# _____

2. Address _____
Street or P.O. Box _____ City _____ State _____ Zip Code _____

3. Home Phone No. (____) _____ Date of Employment _____

4. Employer Company Name _____ Mine Name _____

Address _____
Street or P.O. Box _____ City _____ State _____ Zip Code _____

5. Job title/description of job duties _____

6. I received training in first aid and Virginia's coal mining law and regulations on _____ or I have attached a copy of my valid first aid card.

I hereby certify that the above answers are true to the best of my knowledge and belief.

Signed _____ Date _____
Signature of applicant for certification

I hereby certify to the BCME that the training I provided to the applicant set forth above meets the requirements of Virginia Code §45.1-161.37 and the Virginia Administrative Code 4 VAC25-20, and the applicant has satisfactorily demonstrated to me the required knowledge of first aid practices and the mine safety laws of Virginia.

Name printed and signed _____
Certified foreman or instructor approved by DM providing training

Cert. No. _____

Name printed and signed when the applicant is hired _____
Mine operator employing applicant



Board of Coal Mining Examiners
 P.O. Drawer 900
 Big Stone Gap, VA 24219
 (276)523-8149

Verification of Work Experience Form

Complete this form for **each employer** to certify the experience requirements have been met and have it signed by a company official knowledgeable of your work history before a notary public. Type or print the information in ink and submit it to the **BCME**.

1. Full Name _____ S.S.# _____

2. Address _____
Street or P.O. Box City State Zip Code

3. Employer Company Name _____ Mine Name _____
 Address _____
Street or P.O. Box City State Zip Code

4. Job Title _____ From _____ To _____
Month/Day/Year Month/Day/Year

Description of job duties which are **applicable** to certification requested: _____

Job Title _____ From _____ To _____
Month/Day/Year Month/Day/Year

Description of job duties which are **applicable** to certification requested: _____

5. I hereby certify, under the penalties of perjury, that the information related to this applicant's experience as submitted on this form is correct.

Signature of Company Official _____ (Print or Type Name) Title _____ Date _____

6. State of _____ county/city _____ of to wit:

I, _____ a notary public in and for the State and county/city aforesaid, do certify that _____ whose name is signed to #5 above, Company Official

on the _____ day of _____, 20____ has acknowledged the same before me in my county/city aforesaid. Given under my hand this _____ day of _____, 20____ .

 Notary Public

My commission expires the _____ day of _____, 20____ . SEAL

**GENERAL COAL MINER-SURFACE
COAL MINE SAFETY LAWS OF VIRGINIA**

OUTLINE-SURFACE COAL MINES

45.1-161.8	Definitions
45.1-161.10	Special safety rules
45.1-161.11	Persons not permitted to work in mines
45.1-161.12	Prohibited acts by miners
45.1-161.30	Performance of certain tasks by uncertified persons
45.1-161.35	Revocation of certificates
45.1-161.37	General coal miner certification
45.1-161.78	Report of accidents
45.1-161.79	Reports of other accidents and injuries
45.1-161.81	Frequency of mine inspections
45.1-161.84	Advance notice of mine inspection
45.1-161.90	Notice of violations
45.1-161.94	Violations; penalties
45.1-161.97	Reports of violations
45.1-161.256	Safety examinations
45.1-161.257	Records of examinations
45.1-161.258	Notification and reporting of certain conditions and events
45.1-161.259	Personal protection devices and practices
45.1-161.260	Housekeeping
45.1-161.262	First-aid equipment

45.1-161.263	First-aid training
45.1-161.265	Fire-fighting equipment; duties in case of fire; fire precaution transportation of mining equipment; fire prevention generally
45.1-161.266	Duties in case of fire
45.1-161.267	Fire precautions
45.1-161.268	Haulage and mobile equipment; operating condition
45.1-161.269	Equipment operating speeds; conditions, etc.
45.1-161.270	Safety measures on equipment
45.1-161.271	Transportation of personnel
45.1-161.273	Shop and other equipment
45.1-161.275	Stairways, platforms, runways, and floor openings
45.1-161.276	Loading and haulage work area requirements
45.1-161.277	Equipment operation
45.1-161.278	Control of dust
45.1-161.279	Overhead high-potential power lines; surface transmission lines; electrical wiring in surface buildings
45.1-161.280	Transformers
45.1-161.282	Circuit breakers and switches
45.1-161.283	Electrical trailing cables
45.1-161.284	Surface storage of explosives and detonators
45.1-161.285	Misfires
45.1-161.286	Minimum blasting practices
45.1-161.287	Ground control
45.1-161.288	Inspection of electrical equipment and wiring; checking and testing methane monitors

45.1-161.289	Auger mining highwall inspections
45.1-161.290	Auger hole penetration on underground mines; testing
45.1-161.291	Auger hole safety precautions
45.1-161.292	Surface coal mining; distance from wells; requirements

* Please note that this is a general description of what is important to you as a miner.

**GENERAL COAL MINER – SURFACE
COAL MINE SAFETY LAWS OF VIRGINIA**

GENERAL PROVISIONS

45.1-161.8

1. Authorized Person – A person assigned a duty by the operator or agent and has demonstrated the ability to perform such duty or duties safely and effectively.
2. Certified Person – A person assigned to perform a task that requires a certificate to be issued by the Board of Coal Mining Examiners, such as a mine foreman, repairman, shot firer, etc.
3. Experienced Surface Miner – A person with more than six months experience at a surface mine or the surface area of an underground mine.
4. Hazardous Condition – Conditions that are likely to cause death or serious personal injury to persons exposed to such conditions.
5. Imminent Danger – A condition or practice that could reasonably be expected to cause death or serious personal injury before such condition can be corrected.
6. Mine Fire – A fire that cannot be extinguished in 30 minutes.
7. Miner – Any individual working in a mine.
8. Serious Personal Injury – Any injury which has a reasonable potential to cause death or an injury other than a sprain or strain which requires an admission to a hospital for twenty-four hours or more for medical treatment.
9. Work Area – All areas of a surface coal mine in production or being prepared for production and those areas which may pose a danger to miners.

45.1-161.10

An operator has the right to adopt special safety rules but shall not be in conflict with the Mine Safety Laws of Virginia. The operator shall post such rules or furnish a printed copy to all miners.

45.1-161.11

No person under eighteen years of age shall be permitted to work in or around any mine.

45.1-161.12

No miner or other person shall carry in a mine any intoxicating liquors or controlled drugs without the prescription of a licensed physician; enter any part of a mine against caution; or disobey any order issued pursuant to the provisions of this Act. Each miner at any mine shall comply fully with the provisions of this Act and other mining laws of this Commonwealth that pertain to his duties.

CERTIFICATION OF COAL MINE WORKERS

45.1-161.30

It shall be unlawful for any person to perform any task requiring certification by the Board of Coal Mining Examiners until he has been certified. A violation of this subsection shall constitute a Class 1 misdemeanor.

45.1-161.35

The Board may revoke certificates for intoxication while on duty, neglect of duties, violation of the mining laws, using controlled drugs without the prescription of a physician or other just cause.

45.1-161.37

Every person commencing work in a coal mine after January 1, 1996, shall be issued a general coal miner certificate issued by the Board of Coal Mining Examiners.

Each applicant for a general coal miner certificate shall prove to the Board that he has knowledge of first aid practices and has a general working knowledge of the Mines Safety Laws of Virginia.

MINE EXPLOSIONS, MINE FIRES, ACCIDENTS

45.1-161.78

Each operator shall report promptly of any accident to the Department. The scene of the accident shall not be disturbed pending an investigation except to the extent necessary to rescue or recover a person, prevent or eliminate an imminent danger, prevent destruction of mining equipment, or prevent suspension of slope, entry or facility vital to the mine.

45.1-161.79

Each miner employed at a mine shall promptly notify his supervisor of any injury received during the course of his employment.

Each operator shall keep on file a report of each accident including any accident which does not result in a lost-time injury. Copies of such report shall be given to the person injured or to his designated representative to review the accident report and verify its accuracy prior to filing such report for the review of state or federal mine inspectors.

MINE INSPECTIONS

45.1-161.81

The Chief shall conduct a complete inspection of every surface coal mine not less frequently than once per year.

45.1-161.84

No person shall give advance notice of any mine inspection conducted in accordance with the Mine Safety Laws of Virginia.

ENFORCEMENT AND PENALTIES; REPORTS OF VIOLATIONS

45.1-161.90

If the Director, the Chief, or a mine inspector has reasonable cause to believe that a violation of the Act has occurred, he shall with reasonable promptness issue a notice of violation to the person who is responsible for the violation.

The notice of violation shall be deemed to be the final order of the Department and not subject to review by any court or agency unless, within twenty days following its issuance, the person to whom the notice of violation has been issued appeals its issuance.

45.1-161.94

Any person convicted of willfully violating any provisions of this Act or any regulation promulgated pursuant to this Act, unless otherwise specified in the Act, shall be guilty of a Class 1 misdemeanor.

45.1-161.97

Any person aware of a violation of this Act may report the violation to a mine inspector or to any other employee of the Department, in person, in writing, or by telephone call, at the mine, at an office of the Department, or at the mine inspector's residence.

The operator of every mine, or his agent shall display on a sign placed at the mine office, at the bath house, and on a bulletin board at the mine site, a notice containing the office and home telephone numbers of mine inspectors and other Department personnel, and office addresses, which may be used to report any violation of this act.

The Department shall not disclose the identity of any person who reports an alleged violation to the owner or operator of the mine or his agent, or to any other person or entity. Information regarding the identity of the person reporting the violation shall be excluded from access under the provisions of the Virginia Freedom of Information Act.

WORK AREA EXAMINATIONS, RECORD KEEPING AND REPORTING

45.1-161.256

On-shift examinations of work area including pit, auger, thin seam and highwall operations shall be conducted by certified persons once every production shift and at such other times or frequency as the Chief designates necessary for hazardous conditions.

On-shift examinations of all mobile equipment shall be conducted by an authorized person.

Silt retaining dams and mine refuse piles shall be examined daily by an authorized person on any day on which a person works at such location.

The location of all natural gas pipelines on permitted surface mine areas shall be identified and conspicuously marked. Pre-shift examinations shall be conducted of the location of pipelines whenever active workings are approaching within 500 feet unless otherwise approved by the Chief.

Air quality examinations shall be conducted by a certified person when a surface coal mining operation intersects an underground mine, auger hole or other underground working.

Examinations for methane shall be conducted in surface installations, enclosures or other facilities in which coal is handled or stored once each production shift. Such areas shall also be tested for methane before any activity involving welding, cutting or an open flame. Examinations pursuant to this subsection shall be made by an authorized person certified to make gas tests.

Electrical equipment and wiring shall be inspected as often as necessary but at least once a month.

Fire extinguishers shall be examined at least once every six months.

Areas of inactive surface coal mines shall be examined for hazardous conditions by a mine foreman immediately before miners are permitted to enter such areas to take emergency actions to preserve a mine.

45.1-161.257

Documentation of examinations and testing conducted as required by 45.1-161.256 shall be recorded in a mine record book provided for that purpose. The surface foreman shall maintain and sign a daily record book. The reports entered into the book shall be read and signed by the operator, or his agent. If the surface foreman also serves as the operator or agent, then he shall only be required to sign each report once. All records of inspections shall be open for inspections by interested persons and maintained at the mine site for a minimum of one year.

45.1-161.258

Any hazardous condition shall be corrected promptly or the affected area shall be barricaded or posted with warning signs specifying the hazard and proper safety procedures. Any imminent danger that cannot be removed within a reasonable time shall be reported to the Chief by the quickest available means.

PERSONAL PROTECTION

45.1-161.259

All persons at a surface coal mine shall wear the following protection in the specified conditions:
1. Hard hats in and around mines where falling objects may cause injury. 2. Hard-toed footwear in and around mines. 3. Safety goggles or shields where there is a hazard of flying materials. 4. protective shield or goggles when welding. 5. Snug fitting clothes when working around moving parts or machinery. 6. Gloves where hands could be injured. Gauntlet cuffs are prohibited around moving machinery.

Ear protection shall be supplied by the operator to all miners upon request.

45.1-161.260

Good housekeeping shall be practiced in and around buildings, shafts, slopes, yards and other areas of the mines. Such practices include cleanliness, orderly storage of materials, and the removal of possible sources of injury, such as stumbling hazards, protruding nails, broken glass, and material that may potentially fall or roll.

**FIRST AID EQUIPMENT, MEDICAL CARE, EMERGENCY MEDICAL SERVICES
PERSONNEL**

45.1-161.262

Each surface coal mine shall have an adequate supply of first aid equipment as determined by the Chief.

45.1-161.263

Each operator of a surface coal mine, upon request, shall make available to every miner employed in such mine first aid training, including refresher training.

FIRE PREVENTION AND FIRE CONTROL

45.1-161.265

Each mine shall be provided with suitable fire-fighting equipment, adequate for the size of the mine and shall include at least three twenty pound dry chemical fire extinguishers.

Fire extinguishers, suitable from a toxic and shock standpoint, shall be provided and placed at or on all electrical stations, such as substations, transformer stations and permanent pump stations, self-propelled mobile equipment, belt heads, areas used for the storage of flammable materials, fueling stations, and other areas that may constitute a fire hazard.

45.1-161.266

Should a fire occur, the person discovering it and any person in the vicinity of the fire shall make a prompt effort to extinguish it. When a fire that may endanger persons at the mine cannot be extinguished immediately, all persons shall be withdrawn promptly from the area of the fire. Any unplanned fire not extinguished within thirty minutes of discovery shall be reported to the Chief by the quickest available means.

45.1-161.267

An examination for fire shall be made after every blasting operation.

No person shall smoke or use an open flame within twenty-five feet of locations used to handle or store flammable or combustible liquids or where an arc or flame may cause a fire or explosion.

Areas surrounding flammable liquid storage tanks, electrical substations and transformers shall be kept free of combustible material for at least twenty-five feet in all directions.

Such storage tanks, substations and transformers shall be posted with readily visible fire hazard warning signs.

Battery charging areas shall be well ventilated and posted with warning signs prohibiting smoking or open flames within twenty-five feet.

Oxygen and acetylene bottles shall be stored in racks designated and constructed for the storage of such bottles with caps in place and secured when not in use. Such bottles shall not be stored near oil, grease, or other flammable material.

Belt conveyors shall be equipped with control switches to automatically stop the driving motor or the conveyor in the event the belt is stopped by slipping on the driving pulley, by breakage or other accident.

Areas surrounding main fan installations and other mine openings shall be kept free from grass, weeds, underbrush, and other combustible materials for twenty-five feet in all directions.

SURFACE EQUIPMENT

45.1-161.268

All mobile equipment shall be maintained in a safe operating condition.

Where it is necessary for men to cross conveyors regularly, suitable crossing facilities shall be provided.

Persons shall not get on or off moving equipment.

Persons shall not work on or from a piece of mobile equipment in a raised position unless the equipment is specifically designed to lift persons.

Where seating facilities are provided on self-propelled mobile equipment, the operator shall be seated before such equipment is moved. No person shall be allowed to ride on top of self-propelled mobile equipment.

Operator provided man-trips shall be maintained in safe operating condition, and enough of them shall be provided to prevent their being overloaded.

Employees shall not board or leave moving man-trips; they shall remain seated while in moving cars, and shall proceed in an orderly manner to and from man-trips.

45.1-161.269

Equipment operating speeds, conditions and characteristics shall be prudent and consistent with conditions of roadway, grades, clearance, visibility, traffic, type and use of equipment.

Before starting or moving equipment, equipment operators must be certain by signal or other means that all persons are clear.

45.1-161.270

Seat belts shall be maintained in all mobile equipment that are required to have rollover protective structures. Operators of such equipment shall wear seat belts when the equipment is in motion.

Mobile equipment shall be equipped with adequate brakes and parking brakes.

Cab windows shall be of safety design, kept in good condition and clean from adequate visibility.

Tires shall be deflated before repairs on them are started and adequate means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation.

An audible warning device and headlights shall be provided on all self-propelled mobile equipment.

An automatic backup alarm, that is audible above surrounding noise levels, shall be provided on all mobile equipment.

All equipment raised for repairs or other work shall be securely blocked prior to persons positioning themselves where the falling of such equipment could create a hazardous condition.

45.1-161.271

No person shall be permitted to ride or be otherwise transported on or in: dippers, shovels, buckets, forks, outside cabs or beds of heavy equipment, or chain, belt or bucket conveyors unless designed to transport persons.

45.1-161.273

The following shall be guarded and maintained adequately: gears, sprockets, pulleys, fan blades or propellers, friction devices and couplings with protruding bolts or nuts; mine fans – the approach shall be guarded.

Machinery shall not be repaired or oiled while in motion, provided, that this shall not apply where safe remote oiling devices are used.

A guard or safety device removed from any machine shall be replaced before the machine is put in operation.

TRAVELWAYS, LOADING AND HAULAGE AREAS

45.1-161.275

Stairways, elevated platforms, floor openings and elevated runways shall be equipped with suitable handrails or guardrails.

45.1-161.276

Berms or guards shall be provided on the outer bank of elevated roadways.

Berms, bumper blocks, safety hooks or similar means shall be provided to prevent overtravel and overturning at dump points.

45.1-161.277

Dippers, buckets, scraper blades and similar movable parts shall be secured or lowered to the ground when not in use.

Dust control measures shall be taken so as to not obstruct visibility of equipment operators.

Mobile equipment shall not be left idling unattended; the wheels shall be turned into a bank or berm or blocked with the brakes set also.

DUST CONTROL

45.1-161.278

Coal dust shall not be permitted to accumulate on equipment or surface structures.

ELECTRICITY

45.1-161.279

Overhead high-potential power lines shall be placed at least fifteen feet above the ground and twenty feet above driveways and haulways, shall be supported and guarded to prevent contact with other circuits.

45.1-161.280

Unless surface transformers are isolated by elevation (eight feet or more above the ground), they shall be enclosed in a transformer house or surrounded by a suitable fence at least six feet high. If the enclosure or fence is of metal, it shall be grounded effectively. The gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

Suitable danger signs shall be posted conspicuously at all transformer stations on the surface.

No electrical work shall be performed on low, medium or high voltage circuits or equipment except by a certified person or a person trained to perform electrical work under the direct supervision of a certified person.

All power circuits and electric equipment shall be de-energized, tagged and locked out before electrical repairs are made.

45.1-161.282

When not in use, power circuits shall be de-energized on idle days and idle shifts or protected against short circuits in accordance with the load on such circuits.

Power circuits shall be labeled to indicate the unit or circuit they control.

Persons shall stay clear of an electrically powered shovel or other similar heavy equipment during an electrical storm.

45.1-161.283

Temporary splices in trailing cables shall be made in a workmanlike manner, mechanically strong, and well insulated.

The number of temporary, unvulcanized splices in a trailing cable shall be limited to one.

EXPLOSIVES AND BLASTING

45.1-161.284

Separate surface magazines shall be provided for the storage of explosives and detonators.

Surface magazines for storing and distributing explosives in amounts exceeding 150 pounds shall be provided with suitable warning signs so located that a bullet passing directly through the face of a sign will not strike the magazine and kept locked securely when unattended.

Surface magazines for storing detonators need not be bulletproof, but they shall be in accordance with other provisions for storing explosives.

Explosives in amounts of 150 pounds or less or 5,000 detonators or less shall be stored in accordance with preceding standards or in separated locked box-type magazines. Box type magazines may also be used as distributing magazines when quantities do not exceed those mentioned.

The location of magazines shall not be less than 300 feet from any mine opening, occupied building or public road which the Chief designates in order to promote safety. However, in the event that a magazine cannot be practicably located at such distance, if sufficiently barricaded and approved by the Chief, such magazine may be located less than 300 feet from any mine opening, occupied building or road.

The area surrounding magazines for not less than 25 feet in all directions shall be kept free of rubbish, dry grass or other materials of a combustible nature.

Smoking, carrying smokers' articles or open flames shall be prohibited in or near any explosive magazine.

45.1-161.285

Misfires shall be reported promptly to the mine foreman and no other work shall be performed in the blasting area until the hazard has been corrected. A waiting period of at least fifteen minutes shall lapse before anyone returns to the misfired holes. If explosives are suspected of burning in a hole, all persons affected shall move to a safe location for the longer of one hour or until the danger has passed. When such failure involves electric detonators, the blasting cable shall be disconnected from the power source and the battery ends short – circuited before electric corrections are made.

A very careful search of the blasting area, and if necessary, of the coal after it reaches the tippie shall be made after blasting a misfired hole to recover any undetonated explosive.

The handling of a misfired shot shall be under the direct supervision of the foreman or an authorized person designated by him.

45.1-161.286

When explosives are in use on the surface and an electrical storm approaches, all persons shall be removed from such blast area until the storm has passed.

GROUND CONTROL

45.1-161.287

All surface coal mining operations shall establish and follow a ground control plan to ensure a safe work area. The ground control plan shall be consistent with prudent engineering design. Mining methods shall ensure wall and bank stability, including benching, to obtain a safe overall slope.

Unless required for the purpose of repairs, all persons shall be restricted from areas between equipment and walls, or banks if the equipment may hinder their escape from falling or sliding material. Special precautions shall be taken when persons are required to perform such repairs.

AUGER, HIGHWALL, AND THIN SEAM MINING

45.1-161.288

Electric equipment and wiring shall be inspected by a certified person at least once a week and more often if necessary to assure safe operating conditions, and any defect found shall be corrected.

The Chief may require the operator of a mine to functionally check on a daily basis methane monitors on electrical face equipment to determine that such monitors are de-energizing the electrical face equipment properly. Such check shall be made on each production shift and shall be conducted by the equipment operator in the presence of a foreman, and shall be recorded in the on-shift report of the section foreman.

The Chief may require the operator of a mine to perform weekly calibrations test on methane monitors on electrical face equipment to determine the accuracy and operation of such monitors.

45.1-161.289

The face of highwalls, for a distance of twenty-five feet in both directions from an auguring operation, shall be inspected by a mine foreman before any auguring operation is begun and at least once during each coal producing shift.

Mine foreman shall examine the face of all highwalls for a distance of twenty-five feet in both directions from an auguring operation frequently during periods of heavy rainfall or intermittent freezing/thawing.

Hazardous conditions shall be corrected and loose material removed from above the drilling site before any work is begun in the area.

45.1-161.290

A qualified person shall, using approved devices, test for methane and oxygen deficiency when an auger hole penetrates an abandoned or mined out area of an underground mine.

If methane or oxygen deficiency is found to exist, then no further work shall be performed until the atmosphere has been made safe.

45.1-161.291

No person shall enter an auger hole.

Auger machines which are exposed to highwall hazards shall be provided with operator coverage capable of preventing injuries to workers from falling material. At least one person shall be assigned to observe the highwall for possible movement while a crew is connecting or disconnecting auger sections.

Persons shall stay clear of any moving auger train and no persons shall pass over or under a moving auger train unless adequate crossing facilities are provided.

PROXIMITY OF MINING TO GAS, OIL WELLS AND VERTICAL VENTILATION HOLES

45.1-161.292

Any mine operator who plans to mine within 500 feet of a gas well, oil well or vertical ventilation hole shall file a written notice to the Chief.

Any mine operator who plans to mine within 200 feet of a gas well, oil well or vertical ventilation hole shall have written approval from the Chief.

**GENERAL COAL MINER – SURFACE
COAL MINE SAFETY LAWS OF VIRGINIA**

1. _____ examinations of the work area including pit, auger, thin seam, and highwall operations shall be conducted by certified persons once every production shift. (weekly, onshift, aftershift)
45.1-161.256
2. Examinations for _____ shall be conducted in surface installations, enclosures, or facilities in which coal is handled or stored once each production shift. (nitrogen, water, methane)
45.1-161.256
3. _____ examinations of all mobile equipment shall be conducted by an authorized person. (weekly, on-shift, monthly)
45.1-161.256
4. Fire extinguishers shall be inspected at least once every _____ months. (twelve, nine, six)
45.1-161.256
5. Areas of inactive surface coal mines shall be examined for hazardous conditions by a mine foreman _____ miners are permitted to enter such area. (the day before, immediately before, four hours after)
45.1-161.256
6. The surface foreman shall maintain and sign a daily record book. These records shall be read and signed by the operator or his agent, open to inspections by interested persons and maintained at the mine site for a minimum of _____. (one year, three months, six months)
45.1-161.257
7. Any imminent danger that cannot be removed within _____ shall be reported to the Chief by the quickest available means. (one week, one day, a reasonable time)
45.1-161.258
8. Safety goggles or shields are required at a surface mine where there is a danger of _____. (falling material, flying material, moving machinery)
45.1-161.259
9. Ear protection shall be supplied by the _____ to all miners upon request. (state, employee, operator)
45.1-161.259
10. Each mine shall be provided with suitable fire-fighting equipment, adequate for the size of the mine and shall include at least _____ twenty pound dry chemical fire extinguishers. (three, two, one)
45.1-161.265

11. Fire extinguishers shall be provided and placed at or on all electrical stations, such as substations, transformer stations, and _____ pump stations. (float, temporary, permanent)
45.1-161.265
12. Any unplanned fire not extinguished within _____ of discovery shall be reported to the Chief by the quickest available means. (2 hours, 1 hour, 30 minutes)
45.1-161.266
13. An examination for _____ shall be made after every blasting operation.
(smoke, fire, survivors)
45.1-161.267
14. Areas surrounding flammable liquid storage tanks, electrical substations and transformers shall be kept free of combustible material for at least _____ feet in all directions. (ten, fifteen, twenty-five)
45.1-161.267
15. Areas surrounding main fan installations and mine openings shall be kept free from grass, weeds, underbrush and other _____ materials for twenty-five feet in all directions. (non-combustible, combustible, incombustible)
45.1-161.267
16. Oxygen and acetylene bottles shall not be stored near oil, _____, and other flammable material. (water, grease, welders)
45.1-161.267
17. Persons shall not get on or off _____ equipment. (stationary, mobile, moving)
45.1-161.268
18. Before starting or moving equipment, an equipment operator must be certain by _____ or other means that all persons are clear. (signal, hand signs, checking mirrors)
45.1-161.269
19. Operators of all rubber tired and crawler mounted equipment equipped with roll-over protective structures shall wear _____ when the equipment is in motion. (safety goggles, seat belts, safety glasses)
45.1-161.270
20. An audible warning device, _____ adequate brakes, parking brakes and automatic backup alarm shall be provided on all self-propelled mobile equipment. (goggles, headlights, spare tire)
45.1-161.270
21. _____ or guards shall be provided on the outer bank of elevated roadways. (berms, trees, signs)
45.1-161.276

22. Dippers, _____, scraper blades and similar moving parts shall be secured or lowered to the ground when not in use. (tow bars, buckets, persons)
45.1-161.277
23. Overhead high potential power lines shall be placed at least _____ feet above the ground. (fifteen, ten, five)
45.1-161.279
24. Overhead high potential power lines shall be placed at least twenty feet above _____ and haulways. (equipment, driveways, buildings)
45.1-161.279
25. All power circuits and electric equipment shall be de-energized, _____ and locked-out before electrical repairs are made. (grounded, tagged, checked)
45.1-161.280
26. Suitable _____ signs shall be posted conspicuously at all transformer stations on the surface. (information, lighted, danger)
45.1-161.280
27. Unless surface transformers are isolated by elevation (_____ feet or more above the ground) they shall be enclosed in a transformer house or surrounded by a suitable fence at least _____ feet high. (six, eight, five) (six, three, five)
45.1-161.280
28. Surface magazines for storing and distributing explosives in amounts exceeding 150 pounds shall be _____ when unattended. (left open, kept concealed, kept locked)
45.1-161.284
29. Surface magazines for storing _____ need not be bulletproof. (cable, detonators, power)
45.1-161.284
30. The area surrounding magazines for not less than _____ feet in all directions shall be kept free of rubbish, dry grass, or other materials of a combustible nature. (ten, twenty-five, fifteen)
45.1-161.284
31. Magazines shall be no less than _____ feet from any mine opening, occupied building, or public road or any road which the Chief designates in order to promote safety. (100, 250, 300)
45.1-161.284
32. Magazines shall be provided with suitable warning signs placed so that a _____ passing directly through the sign will not strike the magazine. (vehicle, rock, bullet)
45.1-161.284

33. _____, carrying smoking articles, or open flames shall be prohibited in or near any explosive magazine. (horseplay, loitering, smoking)
45.1-161.284
34. When a misfire occurs, a waiting period of at least _____ minutes shall elapse before anyone returns to the misfired holes. (5, 10, 15)
45.1-161.285
35. The handling of a misfired shot shall be under the direct supervision of the _____ or an authorized person designated by him. (foreman, welder, mechanic)
45.1-161.285
36. Unless for _____, no persons shall place themselves between equipment and walls, banks, or benches. (lunch, refueling, repairs)
45.1-161.287
37. All surface coal mining operations shall establish and follow a _____ control plan to ensure a safe work area. (roof, ventilation, ground)
45.1-161.287
38. Electrical equipment methane monitor _____ check shall be made on each production shift. (powder, ground, functional)
45.1-161.288
39. _____ calibration tests on methane monitors shall be conducted to determine the accuracy and operation of such monitors. (quarterly, monthly, weekly)
45.1-161.288
40. The face of all highwalls, for a distance of _____ in both directions shall be inspected before auguring operations begin and at least one during each coal production shift. (10 feet, 15 feet, 25 feet)
45.1-161.289
41. The face of all highwalls shall be inspected by the _____ before auguring operations begin and at least once during each coal producing shift. (assistance owner, mechanic welder, mine foreman)
45.1-161.289
42. The _____ shall examine the face of all high-walls for a distance of 25 feet in both directions during heavy rainfall or intermittent freezing and thawing. (mine foreman, auger operator, auger mechanic)
45.1-161.289
43. _____ shall be corrected and loose material removed from above any auger drilling site. (auger replacement, auger adjustments, hazardous conditions)
45.1-161.289
44. A _____ shall test for methane and oxygen deficiency when an auger hole penetrates an abandoned underground mine. (mechanic welder, repairman electrician, qualified person)
45.1-161.290

45. If _____ or _____ is found when an auger hole penetrates an old underground mine, no further work shall be performed until the atmosphere is made safe. (methane-oxygen, nitrogen-sulfur, sulfur-carbon)
45.1-161.290
46. Auger machines shall be provided with _____ capable of preventing injuries to workers from falling material. (safety goggles, operator coverage, safety glasses)
45.1-161.291
47. At least one person shall be assigned to observe the _____ for possible movement while the crew is connecting or disconnecting auger sections. (equipment, roadway, highwall)
45.1-161.291 (D)
48. Any mine operator who plans to mine within _____ feet of a gas well, oil well or vertical ventilation hole shall have written approval of the chief. (50, 100, 200)
45.1-161.292
49. _____ can enter an auger hole. (experienced persons, no person, auger operators)
45.1-161.291
50. Mobile equipment should not be left unattended while _____. (loading, idling, dumping) 45.1-161.291

Answers are available through the Department of Mines, Minerals and Energy's Division of Mines for all persons meeting the Division of Mines criteria. For more information please contact our office at (276)523-8227 or via e-mail at rlm@mme.state.va.us

GENERAL COAL MINER – SURFACE

COAL MINE SAFETY LAWS OF VIRGINIA

1. How often shall a certified person (mine foreman) conduct an examination of the work area including the pit, thin seam or highwall mine operation?
 - A. At least once each shift
 - B. At least once each week
 - C. Monthly
 - D. Examinations are not required if miners have 1 year mining experience

2. When shall areas of inactive surface mines be examined for hazardous conditions by a mine foreman before other miners enter?
 - A. Within 8 hours of the beginning of the shift
 - B. Immediately before
 - C. Anytime during the shift
 - D. Examinations are not required if miners have 1 year mining experience

3. Which of the following shall be reported to the Chief by the quickest available means?
 - A. Leaking fuel tank
 - B. Collision involving a bulldozer and front end loader with no one injured
 - C. An unplanned fire not extinguished within 30 minutes
 - D. Flyrock thrown onto a main highway

4. What safety device shall be worn by equipment operators that operate mobile equipment equipped with roll-over protective structures?
 - A. Safety glasses
 - B. Hearing protection
 - C. Gloves
 - D. Seat belts

5. Which of the following is not required to be provided on all mobile equipment?
 - A. Two forty ton safety jacks
 - B. Adequate brakes and brake parts
 - C. Audible warning device and automatic backup alarm
 - D. Headlights and cab windows maintained in good condition

6. What shall be done with energized electric circuits and equipment before electrical repairs are made?
 - A. Test for effective grounding
 - B. Test for open circuits
 - C. De-energize, lock out and tag
 - D. Test for short circuits

7. Which of the following is not prohibited when personnel are working around explosive magazines or other explosive material?
 - A. Smoking
 - B. Carrying smoking articles
 - C. Open flames
 - D. Personnel with no blasting experience

8. What safety precautions shall be taken when an auger crew is connecting or disconnecting auger sections?
 - A. The auger machine shall be de-energized
 - B. One person shall be assigned to observe the highwall for possible movement
 - C. Only one person is allowed to connect or disconnect auger sections
 - D. Gas tests shall be taken

9. How long a waiting period is required before personnel can return to misfired holes where a misfire has occurred?
 - A. 3 minutes
 - B. 5 minutes
 - C. 10 minutes
 - D. 15 minutes

10. How far in both directions shall the face of all highwalls be inspected before auguring operations begin?
 - A. 5 feet
 - B. 10 feet
 - C. 15 feet
 - D. 25 feet

Answers are available through the Department of Mines, Minerals and Energy's Division of Mines for all persons meeting the Division of Mines criteria. For more information please contact our office at (276)523-8227 or via e-mail at rlm@mme.state.va.us

SURFACE GENERAL COAL MINER

HIGHWALLS

- **Always conduct a thorough examination of highwalls and assigned work areas prior to performing assigned work in that area as often as necessary to maintain a safe workplace. Highwalls must be monitored continuously to identify changing conditions. Many surface miners, especially drill operators have been killed or seriously injured when sections of the highwall collapsed.**
- **All surface miners should be thoroughly trained to conduct highwall examinations/evaluations and to recognize and safely react to hazardous conditions.**
- **Recognize that cracks, faults, voids and water weaken highwall conditions and that any of these conditions could result in the collapse of the highwall.**
- **Watch for loose, falling rocks when near a highwall and always anticipate that changing weather conditions including intermittent freezing/thawing and rainfall affect highwall stability.**
- **All miners should restrict travel between equipment and highwalls, benches or banks. A fatality occurred in Virginia when a coal miner was positioned between a track loader and a dirt bank and the dirt bank collapsed engulfing the loader operator.**

SURFACE GENERAL COAL MINER

MACHINERY

- **Equipment operation accounts for 65% of nationwide surface fatalities, while slips and falls and handling materials are the leading causes of surface lost time injuries in Virginia. Most lost time injuries in Virginia occur January through March. The weather conditions contribute to these accidents that occur at this time of year.**
- **Surface equipment, especially large equipment, creates numerous blind spots. Always make sure equipment operators are aware of your presence and location when near equipment. Before starting or moving equipment, an equipment operator must always make certain by signal or other means that all persons are clear.**
- **Equipment operators should always receive thorough training on operational characteristics, manufacturer performance specifications and capabilities/limitations, potential hazards and safety precautions associated with site specific equipment. Such training should include load characteristics, operational behavior, braking and stopping distances, gear-grade relationships, etc.**
- **Equipment operators should be properly trained on how to conduct an equipment walk-around inspection prior to operating to identify potential hazards including mechanical problems, fluid leaks, air leaks and damages or defective safety devices.**
- **Training should be conducted on reacting to emergency situations such as engine failure, loss of vehicle control, steering problems, brake failure, fires, etc.**
- **Many coal miners have been seriously injured or killed while operating equipment on grades and steep inclines and most often while traveling downgrade. As a general rule, an equipment operator should travel downgrade in the same gear that they traveled upgrade.**
- **Weather conditions including dust, rain, snow or ice directly affect equipment operation, especially braking and stopping distances.**

SURFACE GENERAL COAL MINER

ELECTRICITY

- **Work performed near overhead low, medium and high voltage power lines can present an extremely dangerous situation when adequate safety precautions are not taken. The voltages in these lines can range from 110 volts to 169,000 volts. Electrical shocks received from any of these lines can cause serious injury or death. Contact with a 110 volt line can be just as deadly as contact with 169,000 volts in a given situation. Contact with low voltage lines doesn't cause as serious trauma injuries at exit areas as compared to high voltages, especially those circuits of 1000 volts and higher.**
- **Any shock sensation felt going through the body can be fatal depending on various conditions including: (1) amount of voltage and current; (2) path to ground; (3) area of the body traveled through; (4) heart rhythm stage; and (5) chemical state of the body. Electrical shocks that pass through the heart are the most dangerous and could stop the heart from beating.**
- **Equipment operators must be cautious and constantly alert of the presence and hazards of overhead power lines when working in these areas. Equipment such as coal trucks and drill masts are especially likely to be accidentally raised into overhead power lines. A serious accident of this type occurred in Virginia when a coal truck driver standing on the ground raised his bed tarp into an energized 12,470 volt power line and received a serious shock and electrical burns. An accident of this same type resulted in a fatality in West Virginia.**
- **Electrical storms present lightning strike hazards to surface mining operations. Lightning has been known to strike drill masts and even areas where explosives have been loaded into boreholes causing premature detonations. Never forget to take adequate safety precautions when an electrical storm is approaching.**

SURFACE GENERAL COAL MINER

EXPLOSIVES

- **The use of explosives can present potential risks of serious injuries and death when these materials are not handled, transported or used properly. Always ensure that you receive the proper training prior to working with explosives.**
- **The prevention of explosive accidents depends mainly on two major factors; (1) the knowledge and experience of persons responsible for the use of explosives and; (2) well defined safety precautions to guide miners in the safe conduct of blasting operations.**
- **Miners designated to handle explosives must use their intelligence, common sense, and training in the use of explosives. They must know what is and what is not safe.**
- **The following are but a few of the safety precautions that should be taken when handling explosive material:**
 - **Explosives should be handled very carefully. Never throw explosives on the ground or other areas.**
 - **Never smoke near explosive products.**
 - **Never use metal tools to open explosive containers.**
 - **Never carry explosives in the pockets of your clothing, unauthorized containers, or personal vehicles.**
 - **Never use damaged or deteriorated explosive products.**
 - **Never strike, tamper or attempt to investigate the contents of explosive products.**
 - **Never handle, use or be near explosive products before or during the approach of an electrical storm.**
 - **Never force detonators into primers.**
 - **Never attempt to force explosives into a borehole or through an obstruction in a borehole.**
 - **Never position yourself over a borehole when loading.**
 - **Never deform, drop, tamp, or abuse a primer and never drop a primer into a borehole.**
 - **Never drop other explosive cartridges on top of a primer.**
 - **Never load explosives into hot boreholes. Hot boreholes have been suspected of causing premature detonations resulting in fatal injuries.**
 - **Never run over any explosives products with vehicles. This unsafe practice has been suspected of causing premature detonations of explosives resulting in serious accidents.**

SURFACE GENERAL COAL MINER

NATURAL GAS LINES

- **Gas lines present unique hazards to surface operations when work is performed near such lines and proper safety precautions are not taken. Gas lines are required to be marked. Serious accidents have occurred when equipment ruptured lines that were not marked.**
- **A major fire hazard is always present if a gas line is ruptured. The gas is pressurized in these lines and until cut off devices are activated, the flow of this gas cannot be controlled. Only gas company representatives will know where and how to stop the flow of gas in these lines. It could take hours for someone to cut off the gas flow in these lines.**
- **Surface mining equipment has been totally destroyed by fire and equipment operators have suffered fatal burn injuries when equipment ruptured these lines.**
- **The location of all natural gas pipelines located on surface mine areas must be identified with conspicuously marked signs. Always look for these signs and take adequate safety precautions when operating equipment near these lines.**
- **Immediately report to the foreman, any unmarked areas that you suspect contains a gas line. Very few equipment operators have punctured a gas line and lived to talk about it.**