Virginia Administrative Code

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CHAPTER 35

CERTIFICATION REQUIREMENTS FOR MINERAL MINERS

4VAC25-35-5. Definitions.

The following words and items when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise:

"Commencing work" means after employment but before beginning job duties.

"Department" means the Department of Mines, Minerals and Energy.

"Division" means the Division of Mineral Mining of the Department of Mines, Minerals and Energy.

"MSHA" means the federal Mine Safety and Health Administration.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 30, Issue 6, eff. January 3, 2014.

Part I

General and Specific Requirements

4VAC25-35-10. Initial certification requirements.

A. Applicants shall submit:

1. An application for certification examination in a form acceptable to the division.

2. Verification of all degrees required for certification and a valid first aid certificate as noted in Part II, Minimum Certification Requirements (4VAC25-35-50 et seq.). When not otherwise specified, first aid certifications shall be issued by an organization that uses nationally recognized standards and is approved by the division, e.g., American Red Cross and National Safety Council.

3. A $10 fee for each examination application received at least five working days prior to an examination. Cash will be accepted if paying in person at a department office.

4. Verification of work experience in a form acceptable to the division and documentation of equivalent work experience for approval by the division, if required for the certification. Work experience shall be verified by a company official who is knowledgeable of the experience of the

applicant.

B. Applicants shall fulfill the requirements of this section and accumulate the required years of experience within five years of taking the examination or start the process over including payment of fee.

C. Applicants for the general mineral miner certification shall submit a $10 processing fee with their application.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 28, Issue 21, eff. July 18, 2012; Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-20. Examination requirements.

A. All applicants for certification shall take an examination except candidates for the general mineral miner certification and electrical certification applicants who hold a valid journeyman or master electrical license issued by the Department of Professional and Occupational Regulation. Applicants for the foreman certification shall score at least 85% and applicants for other certifications shall score at least 80% on each section of the examination. Examinations will be given in a manner specified by the division, including, but not limited to, online or written examinations.

B. If all or part of an examination is failed, the applicant must pay the examination fee and retake the failed section or sections within 90 days to continue the certification process. If a section of the examination is failed a second time, the applicant must pay the fee and retake the entire examination. If the examination is failed on the third try, the applicant must pay the fee and wait the longer of 90 days from the re-examination date or one year from the initial examination date before retaking the entire exam. After the third attempt, the application cycle starts over.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-30. Reciprocity requirements.

Reciprocity shall be available for certified persons in other states as provided for in § 45.1-161.292:24 of the Code of Virginia. Applicants for reciprocity must submit proof of current certification, examination grades, and documentation of equivalent work experience for review and approval by the department.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 28, Issue 21, eff. July 18, 2012.

4VAC25-35-40. Renewal requirements.

A. The division will send renewal notices to the last known address of the certificate holder at least 180 days prior to the expiration of the certificate. Certified persons shall apply for renewal of certificates by submitting an application for renewal and verification of work experience in a form acceptable to the division no more than 180 days prior to the expiration of their certificate. The application shall be submitted in time to be received at least five working days prior to the date of the examination or refresher class.

B. Certified persons, except mine inspectors, who have worked in the classification for which they are certified for a cumulative minimum of 24 months in the last five years shall select one of two options to renew their certificates; either take an examination or complete a refresher class on any changes in regulations and law since the initial certification or the certificate was last renewed.

C. Certified persons shall take the examination described in 4VAC25-35-20 if their certificate has expired, they have not worked in the classification for which they are certified for a cumulative minimum of 24 months in the last five years, or the division has issued the individual violations that have not been corrected.

D. Successful completion of the mine inspector renewal shall suffice for renewing the mine foreman certification.

E. Applicants for renewal of certifications shall hold a valid first aid certificate to renew their certification.

F. Applicants shall submit a $10 fee for the examination or the refresher class which shall be received at least five working days prior to the examination or class. Cash will be accepted if paying in person at a department office.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 28, Issue 21, eff. July 18, 2012; Volume 30, Issue 6, eff. January 3, 2014.

Part II

Minimum Certification Requirements

4VAC25-35-50. Underground foreman.

A. Applicants for certification as an underground foreman shall possess five years mining experience at an underground mineral mine or equivalent work experience approved by the division.

B. Applicants may be given three years credit for a surface foreman certificate or bachelor's degree in mining engineering, mining technology, civil engineering or geology, or two years credit for an associate's degree in mining technology or civil technology.

C. Applicants shall possess a valid first aid certificate verifying completion of an approved first aid course.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-60. Surface foreman (this certification is for a person whose job duties include overseeing blasting activities).

A. Applicants for certification as a surface foreman shall possess five years mining experience, at least one year at a surface mineral mine, or equivalent work experience approved by the division.

B. Applicants may be given three years credit for a bachelor's degree in mining engineering, mining technology, civil engineering, civil technology or geology, or two years credit for an associate's degree in mining technology or civil technology.

C. Applicants shall possess a valid first aid certificate verifying completion of an approved first aid

course.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-70. Surface foreman, open pit (this certification is for a person whose job duties do not include overseeing blasting activities).

A. Surface foreman, open pit applicants shall possess five years mining experience with at least one year at a surface mineral mine, or equivalent work experience approved by the division.

B. Applicants may be given three years credit for a bachelor's degree in mining engineering, mining technology, civil engineering, civil technology or geology, or two years credit for an associate's degree in mining technology or civil technology.

C. Applicants shall possess a valid first aid certificate verifying completion of an approved first aid course.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-75. Cement plant examiner.

A. Competent persons who are certified as a general mineral miner and who possess at least one year experience working at a cement plant may assist the surface foreman in performing examinations of active work areas of cement plants at the beginning of each shift.

B. The surface foreman shall oversee any examinations of the plant that are performed by a cement plant examiner.

C. Cement plant examiners shall be trained in the safety and health aspects of the plant area they may examine and be trained in the procedures for work place examination and recordkeeping. The operator shall maintain records of the training as required in 4VAC25-40-100.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 20, Issue 23, eff. August 25, 2004; amended, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-35-80. Surface blaster.

A. Surface blaster applicants shall possess one year of blasting experience on a surface mineral mine under the supervision of a certified blaster or possess equivalent work experience approved by the division.

B. Applicants shall possess a valid first aid certificate verifying completion of a first aid course approved by the division.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-90. Underground mining blaster.

A. Underground mining blaster applicants shall possess two years of work experience in an underground mine with at least one year handling and using explosives underground or possess equivalent work experience approved by the division.

B. Applicants shall possess a valid first aid certificate verifying completion of a first aid course approved by the division.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-100. Mineral mining electrician (electrical repairman).

A. Applicants for certification as a mineral mining electrician shall possess work experience as

demonstrated by a valid journeyman or master electrical license issued by the Department of Professional and Occupational Regulation, Tradesmen Section or as approved by the division as equivalent to that required for a journeyman license.

B. Applicants shall submit documentation of training or obtain training as required by 30 CFR Part 46 or 30 CFR Part 48 or provide evidence of their knowledge of safe working practices on the mine site as approved by the division.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-110. Mine inspector.

In addition to the requirements set forth in § 45.1-161.292:11 of the Code of Virginia, mine inspector applicants shall demonstrate knowledge and competence in those areas specified in § 45.1-161.292:12 of the Code of Virginia through the examination process. A certificate will not be issued until an applicant is employed by the department.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 30, Issue 6, eff. January 3, 2014.

4VAC25-35-120. General mineral miner.

A. As set forth in § 45.1-161.292:28 of the Code of Virginia, miners commencing work after January 1, 1997, shall have a general mineral miner certification. Persons excluded from the general mineral miner certification are those involved in delivery, office work, maintenance, service and construction work, other than the extraction and processing of minerals, who are contracted by the mine operator. Hazard training as required by 30 CFR Part 46 or 30 CFR Part 48 shall be provided to these persons.

B. Applicants shall complete certification training in first aid and mineral mining regulations and law, which is conducted by a training instructor approved by the division, a certified MSHA instructor, or a certified mine foreman. Training shall include the following topics, subtopics and practical applications:

1. First aid training shall convey knowledge of first aid practices including identification of trauma symptoms, recognition and treatment of external and internal bleeding, shock, fractures, and exposure to extreme heat or cold. Training shall include a demonstration of skills or passing an examination, as evidenced by the instructor certification submitted in a form acceptable to the division.

2. Law and regulation training shall convey highlights of the mineral mine safety laws of Virginia and the safety and health regulations of Virginia. Specifically, information shall be provided on miner responsibilities and accountability, certification requirements, violations, penalties, appeals and reporting violations to the division. Training shall include a demonstration of skills or passing an examination, as evidenced by the instructor certification submitted in a form acceptable to the division.

C. The trainer will certify to the department that the training and demonstrations required by § 45.1-161.292:28 B of the Code of Virginia and this section have occurred.

D. Applicants who hold a valid first aid certificate as noted in 4VAC25-35-10 shall be considered to have met the first aid requirements.

E. Applicants who have completed training may commence work and shall be considered provisionally certified for up to 60 days from the date the instructor completes the training.

F. The instructor shall submit verification of certification in a form acceptable to the division and the $10 fee for each applicant who completes the training, together with a class roster of all persons who complete the training, within 30 days of the training date.

G. The mine operator shall maintain the following records for those miners required to obtain a general mineral miner certification and those who qualify for exemption, starting January 1, 1997:

1. The employee name, address, and phone number.

2. The job title, employment date and general mineral miner number if applicable.

3. The date training was completed and the instructor providing it for nonexempt employees.

4. If the employee is exempt from the requirements, the date they began working in the mineral mining industry in Virginia.

Statutory Authority

§ 45.1-161.292:19 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 12, Issue 8, eff. February 7, 1996; amended, Virginia Register Volume 20, Issue 23, eff. August 25, 2004; Volume 28, Issue 21, eff. July 18, 2012; Volume 30, Issue 6, eff. January 3, 2014.

FORMS (4VAC25-35)

Application for Certification Examination, DMM-BMME-1 (rev. 8/12).

Verification of Work Experience Form-Mineral Mining, DMM-BMME-2 (rev. 8/12).

Application for Renewal-Mineral Mining, DMM-BMME-3 (rev. 8/12).

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CHAPTER 40

SAFETY AND HEALTH REGULATIONS FOR MINERAL MINING

Part I

General Administrative Provisions—Surface and Underground

4VAC25-40-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Abandoned mine" means a mine in which all work has stopped on the mine premises and where an office with a responsible person in charge is no longer maintained at the mine.

"Abandoned workings" means deserted mine areas in which further work is not intended.

"Acceptable" means tested and found to be appropriate for a specific purpose by a nationally recognized agency.

"ACGIH" means the American Conference of Governmental Industrial Hygienists.

"Angle of repose" means the maximum slope or angle at which material remains stable.

"Auxiliary fan" means a fan used to deliver air to a working place off the main airstream, generally used with ventilation tubing.

"Blast area" means the area of the mine in which concussion or flying material can reasonably be expected to cause injury during detonation.

"Blast site" means the 50-foot perimeter around boreholes being loaded, or 30 feet if demarcated by a barricade, and the 180° free-face area for a distance of at least four times the average depth of the boreholes being loaded.

"Bridle" means a cable or chain used to support a work platform in a raised position with more than three connection points.

"Burden" means the distance in feet between rows of boreholes or between the open face and boreholes.

"Company official" means a member of the company supervisory or technical staff.

"Department" means the Department of Mines, Minerals and Energy.

"Director" means the Director of the Division of Mineral Mining.

"Distribution box" means an apparatus with an enclosure through which an electric circuit is carried to one or more cables from a single incoming feedline, each cable circuit being connected through individual overcurrent protective devices.

"Division" means the Division of Mineral Mining.

"Escapeway" means a passageway by which persons may leave if the ordinary exit is obstructed.

"Face" or "bank" means that part of any mine where excavating is progressing or was last done.

"Flash point" means the minimum temperature at which sufficient vapor is released to form a flammable vapor-air mixture.

"Free-face" means the face area of a quarry bench to be blasted.

"Flyrock" means any uncontrolled material generated by the effect of a blast that was hazardous to persons, or to property not owned or controlled by the operator.

"Heavy duty mobile equipment" means any equipment used for loading, hauling, or grading and not normally intended for highway use.

"Hoist" means a power-driven windlass or drum used for raising ore, rock, or other material from a mine, and for lowering or raising persons and material.

"Lay" means the distance parallel to the axis of the rope in which a strand makes one complete turn about the axis of the rope.

"Loaded" means containing explosives, blasting agents, or detonators.

"Main fan" means a fan that controls the entire airflow of the mine or the airflow of one of the major air circuits.

"Major electrical installation" means an assemblage of stationary electrical equipment for the generation, transmission, distribution, or conversion of electrical power.

"Mine opening" means any opening or entrance from the surface into a mine.

"Misfire" means the partial or complete failure of a blast to detonate as planned.

"MSHA" means the Mine Safety and Health Administration.

"Occupational injury" means any injury to a miner which occurs at a mine for which medical treatment is administered, or which results in death or loss of consciousness, inability to perform all job duties on any day after an injury, temporary assignment to other duties, or transfer to another job as specified in the

30 CFR Part 50.2.

"Overburden" means material of any nature, consolidated or unconsolidated, that overlies a deposit of useful materials or ores that are to be mined.

"Potable" means fit for human consumption and, where required by the Code of Virginia, approved by the Virginia Department of Health.

"Powder chest" means a substantial, nonconductive portable container equipped with a lid and used at blasting sites for explosives other than blasting agents.

"Primer" means a cartridge or package of explosives which contains a detonator or detonating cord.

"Refuse" means mineral processing waste, tailings, silts, sediments, or slimes.

"Rollover protection" means a framework, safety canopy or similar protection for the operator when equipment overturns and which is acceptable for use on that particular type of equipment.

"Safety fuse" means a train of powder enclosed in cotton, jute yarn, and water-proofing compounds, which burns at a uniform rate, used for firing a cap containing the detonating compound which in turn sets off the explosive charge.

"Safety hazard" means any condition, function, or circumstance which may reasonably be expected to cause or assist an accident.

"Scaled distance (Ds)" means the actual distance (D) in feet divided by the square root of the maximum explosive weight (W) in pounds that is detonated per delay period for delay intervals of eight milliseconds or greater; or the total weight of explosive in pounds that is detonated within an interval less than eight milliseconds.

"Scaling" means removal of insecure material from a face or highwall.

"Shaft" means a vertical or inclined shaft, slope, incline, or winze.

"Stemming" means that inert material placed in a borehole after the explosive charge for the purpose of confining the explosion gases in the borehole or that inert material used to separate the explosive charges (decks) in decked holes.

"Substantial construction" means construction of such strength, material, and workmanship that the object will withstand all reasonable shock, wear, and usage to which it will be subjected.

"Suitable" means that which fits and has the qualities or qualifications to meet a given purpose, occasion, condition, function, or circumstance.

"Switch" means a device used to complete or disconnect an electrical circuit.

"Travelway" means a passage, walk or way regularly used and designated for persons to go from one place to another.

"Wet drilling" means the continuous application of water through the control hole of hollow drill steel to the bottom of the drill hole.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 1.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-20. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 1.2 A, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-25. Purpose and authority.

The purpose of this chapter is to provide for the protection of persons and property on and around mineral mines. The chapter works with the Virginia Mineral Mine Safety Act (§ 45.1-161.292:1 et seq.) of the Code of Virginia (as shown in Mineral Mine Safety Laws of Virginia, 2005 edition). Refer to the Act for other definitions and requirements related to this chapter.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-30. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 1.2 B, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-40. Certification.

Any person who is responsible for mining or blasting activities shall be certified by the department and governed by the Certification Requirements for Mineral Mining, 4VAC25-35.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 1.2 C, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 28, Issue 21, eff. July 18, 2012.

4VAC25-40-50. Duties of mine operators.

Reporting of accidents and injuries by the operator:

1. Report any accident involving serious personal injury or death to any person on the mine property. The report shall be made to the division by the quickest available means, and the scene of the accident shall not be disturbed until an investigation is conducted by the division. For accidents where the injured person is transported to a hospital, but confinement is not expected, the operator may either preserve the scene or collect relevant physical data and photographs as specified by the division. The division shall be notified immediately upon learning that the injured person has been admitted to the hospital for medical treatment. Head injuries that result in loss of consciousness at the site shall be reported immediately.

2. Keep on file a report of all accidents and occupational injuries occurring on the mine property for review by the division mine inspector. Such records shall be kept for five years.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 1.2 D, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-60. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 1.2 E, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-70. Approval procedure.

A. When approval by the Director of the Division of Mineral Mining is required, the mine operator shall submit written proposed standards for the person, equipment, material, or practice required by the regulation to the Division of Mineral Mining office.

B. The director will review the submittal, request additional material or corrections as required and notify the mine operator in writing of his determination within 30 days.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 1.2 F, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-80. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 1.2 G, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-90. Documents incorporated by reference.

A. 1996 Threshold Limit Values and Biological Exposure Indices published by the American Conference of Governmental Industrial Hygienists.

B. American Table of Distances, 1991 edition, published by the Institute of Makers of Explosives.

C. National Electrical Code, 2008 edition, published by the National Fire Protection Association.

D. Virginia Department of Labor and Industry, Boiler and Pressure Vessel Safety Division, Boiler and Pressure Vessel Regulations, amended 2007 by the Virginia Department of Labor and Industry.

E. Bureau of Mines Instruction Guide 19, Mine Emergency Training, U.S. Department of Labor, 1972 edition.

F. Blasting Guidance Manual, U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement, 1987 edition.

G. The American National Standard for Wire Rope for Miners, M11.1-1980, published by the American National Standards Institute.

H. Addresses for references may be obtained from the division.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 1.2 G, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

Part II

General Safety Provisions—Surface and Underground

4VAC25-40-100. Employee training.

New or reassigned employees shall be trained in state and company safety regulations and be task trained prior to being assigned a task or duty. Records of training shall be kept in writing at the mine site for two years or for 60 days after termination of employment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-110. Inexperienced employees.

Employees with less than six months of mining experience shall work with or under the direction of an experienced miner.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.2, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-120. When foreman required.

When three or more persons are working in a mine, a certified mine foreman shall be employed who shall ensure that all activities under the foreman's supervision are conducted in a safe manner in compliance with applicable laws and regulations adopted by the department. The director may designate an approved competent person to perform the duties of a certified mine foreman except for the examination made at the beginning of each shift.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-130. Examination by foreman.

The certified mine foreman shall examine active workings at the beginning of each shift. Any hazardous or unsafe condition shall be corrected prior to personnel starting work in the affected area. If the hazardous or unsafe condition cannot be corrected immediately, the affected area shall be barricaded and posted with warning signs. A documented record of the examination shall be made and shall include the date, areas examined, time work began in the area, and time of examination. A documented record of hazards found and corrective actions taken shall also be made. The records shall be signed or certified by the certified mine foreman making the examination. Records of the examinations made at the beginning of each shift shall be kept for one year.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-140. First aid training for foreman.

The certified mine foreman shall be trained in first aid and possess a valid first aid certificate issued by an approved agency or organization.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-145. Inspection of mobile and stationary equipment.

Mobile and stationary equipment that is to be used during a shift shall be inspected by the equipment

operator. Equipment safety defects shall be reported to the certified mine foreman. Defects that affect the safety or health of persons shall be corrected before the equipment is used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-150. Assignment of persons to hazardous areas.

No person shall be assigned, allowed, or required to work alone in a hazardous area unless they can be seen or heard by another person in attendance.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.6, eff. July 19, 1989.

4VAC25-40-160. Emergency medical assistance.

Prior arrangements shall be made for emergency medical assistance and transportation of injured personnel.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.7, eff. July 19, 1989.

4VAC25-40-170. Emergency telephone numbers.

Emergency telephone numbers, including fire, rescue, and state mining officials shall be posted at appropriate telephones at the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.8, eff. July 19, 1989.

4VAC25-40-180. Emergency communication systems.

An approved operational communication system acceptable to the director shall be provided and maintained at the mine for obtaining assistance in the event of an emergency.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.9, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-190. Compliance with regulations.

Miners shall comply with all state safety and health regulations applicable to their task or duties.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.10, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-200. Illumination requirements.

Illumination sufficient to provide safe working conditions shall be provided at all active workings, structures, and travelways.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.11, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-210. Cleanliness.

All active workings, structures, and travelways shall be kept clean and orderly.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.12, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-220. Water supplies.

Potable water with a sanitary dispensing method shall be provided at all active workings.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.13, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-230. Toilet facilities.

Suitable, sanitary toilet facilities shall be provided for employees at readily available points in and around the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.14, eff. July 19, 1989.

4VAC25-40-240. Waste receptacles.

Receptacles with covers shall be provided at locations where waste food is disposed. Receptacles shall be emptied frequently and kept in a clean sanitary condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.15, eff. July 19, 1989.

4VAC25-40-250. Use of intoxicating substances.

Employees shall not use intoxicating beverages, narcotics or other substances that will impair their ability to perform their assigned task. Employees using substances, whether prescription or over-the-counter, that may impair their ability to perform their assigned task shall notify the person in charge of the mining site prior to starting their shift.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-260. Posting hazards.

Areas containing safety or health hazards that are not immediately obvious to personnel shall be barricaded or posted with warning signs specifying the hazard and proper safety procedures.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.17, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-270. Refuse piles, water and silt retaining dams.

A. Refuse piles, water and silt retaining dams that meet the size criteria of § 45.1-225.2 of the Code of Virginia shall be designed, constructed, maintained, inspected and abandoned in accordance with §§ 45.1-225.2 through 45.1-225.5 of the Code of Virginia.

B. Water and silt retaining dams that do not meet the size criteria of § 45.1-225.1 of the Code of Virginia shall be designed, constructed and abandoned in accordance with the Minerals Other Than Coal Surface Mining Law (§ 45.1-180 et seq. of the Code of Virginia).

C. Refuse shall be placed only in locations approved by the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.18, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-280. Horseplay prohibited.

No person shall engage in horseplay at mines.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.19, eff. July 19, 1989.

4VAC25-40-290. Restricted access.

Access to unattended mine roads or openings shall be restricted by use of gates, doors, or fences and warning signs shall be posted.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.20, eff. July 19, 1989.

4VAC25-40-300. Closure of roads or openings.

Upon abandonment of a mine, the operator shall effectively close or fence all roads or openings or pits where hazardous conditions exist and warning signs shall be posted. Upon temporary cessation of mining activities as provided for in § 45.1-181 of the Code of Virginia, the operator shall effectively close or barricade access roads and hazardous areas.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.21, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-310. Starting machinery.

Machinery or equipment shall not be started prior to ensuring that affected persons are in the clear. If the machinery or equipment is not visible from the starting switch, an audible warning signal shall be given.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.22, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-320. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 2.23, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-330. Proper use of machinery.

Machinery and equipment shall be used only for the purpose and within the capacity for which they were intended and designed.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.24, eff. July 19, 1989.

4VAC25-40-340. Lubricating machinery.

Machinery shall not be lubricated while in motion where a hazard exists, unless equipped with extended fittings or cups.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.25, eff. July 19, 1989.

4VAC25-40-350. Repairing machinery.

Repairs or maintenance shall not be performed on machinery until the power is off and the machinery is blocked against motion, except where machinery motion is necessary to make adjustments. Energy sources, other than those related to electricity (which are covered under 4VAC25-40-2140 and 4VAC25-40-2150) or internal combustion (which are covered under 4VAC25-40-1685), which pose a hazard to miners, shall be tagged out and marked by a means that identifies the individuals doing the work, and locked out if practical, by each authorized person exposed to the hazard. Tags or locks shall be removed only by the persons who installed them or by an authorized person, after ensuring that affected persons are in the clear.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.26, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-360. Maintaining machinery.

Machinery and equipment shall be maintained in accordance with manufacturer's specifications; defective equipment or machinery shall be removed from service immediately.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.27, eff. July 19, 1989.

4VAC25-40-365. Construction and maintenance of structures.

Structures shall be of substantial construction and maintained in safe condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-370. Operation of grinding wheels.

Grinding wheels shall be operated within the specifications of the manufacturer of the wheel.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.28, eff. July 19, 1989.

4VAC25-40-380. Stationary grinding machines.

Stationary grinding machines other than special bit grinders shall be equipped with:

1. Peripheral hoods (less than 90° throat openings) capable of withstanding the force of a bursting wheel;
2. Adjustable tool rests set as close as practical to the wheel; and
3. Safety washers.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 2.29, eff. July 19, 1989.

4VAC25-40-385. Mobile crane requirements for personnel hoisting.

A. The rated capacity of the crane at the radius at which the lift will be made shall be divided by four and this limit shall not be exceeded.

B. A full-cycle operational test lift shall be made prior to lifting of employees. The platform shall carry twice the intended load during the test lift.

C. All lifts shall be made in accordance with the manufacturer's lifting recommendations.

D. The stability of the footing shall be verified during the full-cycle operational test.

E. The load line on which the platform is suspended will have controlled load lowering. The free-fall option shall not be used with suspended work platforms.

F. The operating mechanism of the clutch of every man-hoist drum shall be provided with a locking mechanism, or interlocked electrically or mechanically with the brake, to prevent accidental withdrawal of the clutch.

G. Any boom crane used to hoist personnel shall be equipped with a brake or brakes which shall be capable of holding the work platform at any point.

H. Lifting bridles on working platforms suspended from cranes shall consist of four legs so attached that the stability of the platform is ensured. The lifting bridle on working platforms suspended from cranes shall be secured by a shackle or attached by a closed hook which cannot open due to load position in the hook.

I. Platform requirements.

1. The platform and its components must be capable of supporting, without failure, at least four times the maximum intended load.

2. The platform shall be enclosed with a guardrail system including a top guardrail of approximately 42 inches, a midrail, and a toe-board capable of keeping personnel and materials secured.

a. The number of employees to be hoisted shall be kept to a minimum and in no case shall the number exceed four.

b. Employees using the platform shall be considered to weigh 250 pounds each.

c. The platform shall not be used during high winds and electrical storms or other adverse

weather conditions which could endanger employees on the platform.

d. A safety cable shall be attached from the hook to the work platform which would be capable of supporting the suspended load in an upright position in the event of a failure of the main lifting bridle.

e. Personnel shall not ride on the work platform with supplies, materials, or tools other than small hand tools.

f. A standard code of hoisting signals shall be used; one person shall be designated to give hoisting signals.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-388. Rope requirements.

A. Unless damage or deterioration is removed by cut-off, wire ropes shall be removed from service when any of the following conditions exist:

1. The number of broken wires exceeds either:

a. Five percent of the total number of wires; or

b. Fifteen percent of the total number of wires within any strand;

2. On a regular lay rope, more than one broken wire in the valley between strands in one rope lay length;

3. A loss of more than one-third of the original diameter of the outer wire;

4. Rope deterioration from corrosion;

5. Distortion of the rope structure;

6. Heat damage from any source; or

7. Diameter reduction due to wear that exceeds 6.0% of the baseline diameter measurement;

B. Load end attachments.

1. Wire rope shall be attached to the load by a method that develops at least 80% of the nominal strength of the rope;

2. Except for terminations where use of other materials is a design feature, zinc (spelter) shall be

used for socketing wire ropes. Design feature means either the manufacturer's original design or a design approved by a registered professional engineer; and

3. Load end attachment methods using splices are prohibited.

C. Drum end attachment. For drum end attachment, wire rope shall be replaced when there is:

1. More than one broken wire at an attachment;

2. Improper installation of an attachment;

3. Slippage at an attachment; or

4. Evidence of deterioration from corrosion at an attachment.

D. Wire rope attachments shall be replaced when cracked, deformed, or excessively worn.

E. Safety devices attached to hoist ropes shall be selected, installed, and maintained according to manufacturers' specifications to minimize internal corrosion, weakening and breaking of the hoist rope.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part III

Ground Control—Surface and Underground

4VAC25-40-390. Stability requirements.

The operator shall use a mining method which will ensure ground, wall, bench and bank stability, including benching and sloping at the angle of repose as necessary.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-400. Open pit mine rims.

Rims of open pits shall be stripped back of loose, unconsolidated material and trees for at least 10 feet, and unconsolidated material beyond 10 feet shall be sloped to the angle of repose. Areas that were developed prior to the effective date of this chapter may be barricaded and posted with warning signs in

lieu of meeting this requirement.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.2, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-410. Benches.

Benches shall be wide enough to allow safe operation and passage of equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.3, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-420. Scaling of hazardous areas.

Safe means for scaling walls, benches, banks and roofs shall be provided; hazardous areas shall be scaled before other work is performed in the area.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.4, eff. July 19, 1989.

4VAC25-40-430. Hazardous conditions.

No person shall work under or near hazardous walls, benches, bank or roofs. Hazardous conditions shall be corrected promptly, or the area shall be barricaded and posted with warning signs.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.5, eff. July 19, 1989.

4VAC25-40-440. Installation of rock bolts.

When mechanical measures, such as rock bolts, must be used to stabilize ground movement, they shall be installed in accordance with a plan approved by the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-450. Correction of unsafe conditions.

The certified mine foreman designated by the mine operator shall examine active workings for unsafe conditions at least at the beginning of the shift and after blasting. Any unsafe condition found shall be corrected prior to employees starting or resuming work in the area.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.7, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-460. Examination for unsafe conditions.

All personnel shall examine their active workings for unsafe conditions prior to starting work and frequently thereafter. Any unsafe condition found shall be corrected or reported to the designated certified mine foreman.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.8, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-470. Keeping clear of equipment.

No person shall work between equipment and walls, benches, or banks if the equipment may hinder their escape from falling or sliding material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.9, eff. July 19, 1989.

4VAC25-40-480. Trimming of faces.

Stockpile and muckpile faces shall be trimmed to prevent hazards to personnel.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 3.10, eff. July 19, 1989.

Part IV

Fire Prevention and Control—Surface and Underground

4VAC25-40-490. Smoking near flammable and combustible materials.

No person shall smoke or use an open flame within 25 feet of locations used to store or handle flammable or combustible liquids.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-500. Warning and evacuation procedures.

Operators shall establish acceptable procedures for fire warning, emergency evacuation, and firefighting.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.2, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-510. Flammable and combustible liquid storage tanks.

Areas surrounding flammable and combustible liquid storage tanks shall be kept free of combustible materials for at least 25 feet in all directions and posted with readily visible fire hazard warning signs.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-520. Storage of flammable materials.

Flammable and combustible materials shall be stored in acceptable containers approved by the National Fire Protection Association or other approved rating agency.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-530. Distance of storage tanks from mine opening.

Flammable and combustible liquid or gas storage tanks shall not be located within 100 feet of any underground mine opening.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-540. Storage buildings or areas.

Buildings or areas used for storage of flammable or combustible materials shall be:

1. Of fire resistant construction;
2. Well-ventilated;
3. Kept clean and orderly;

4. Posted with fire hazard warning signs; and

5. Provided with means to confine or contain accidental spills.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-550. Shut-off valves.

Fuel lines shall be equipped with shut-off valves at the source. Such valves shall be readily accessible and maintained in operating condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.7, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-560. Solvents.

Solvents and combustibles shall not be used near an open flame, heat source or other ignition source.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.8, eff. July 19, 1989.

4VAC25-40-570. Waste materials.

Waste materials which could create a fire hazard shall not be allowed to accumulate; such materials shall be disposed of in a safe manner.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.9, eff. July 19, 1989.

4VAC25-40-580. Use of flammable liquids for cleaning.

Flammable liquids shall not be used for cleaning.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.10, eff. July 19, 1989.

4VAC25-40-590. Battery charging areas.

Battery charging areas shall be well-ventilated and posted with warning signs prohibiting smoking or open flames within 25 feet.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.11, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-600. Refueling engines.

Internal combustion engines, except diesels, shall be shut off prior to refueling.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.12, eff. July 19, 1989.

4VAC25-40-610. Fire equipment.

Equipment and devices used for detection, warning, and extinguishing of fires shall be:

1. Suitable for the type of fire hazard that may be encountered;
2. Maintained in fire-ready condition as specified by manufacturer;
3. Strategically located, readily accessible, and plainly identified;
4. Of the type, size, and quantity that can extinguish fires of any class that may occur at the mine; and
5. Inspected at least monthly to ensure fire-ready condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.13, eff. July 19, 1989.

4VAC25-40-620. Welding operations.

When welding or cutting, precautions shall be taken to ensure that sparks or other hot materials do not result in a fire.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.14, eff. July 19, 1989.

4VAC25-40-630. Training and practice drills.

All employees assigned to firefighting responsibilities by the operator shall be trained in firefighting, and practice drills shall be conducted at least every six months.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.15, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-640. Firefighting assistance.

Prior arrangements shall be made for obtaining assistance in firefighting.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.16, eff. July 19, 1989.

4VAC25-40-650. Conveyor belts.

Conveyor belts in locations where belt slippage may result in a fire shall be equipped with automatic detection and stoppage devices when the conveyor belt is unattended.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.17, eff. July 19, 1989.

4VAC25-40-660. Removing flammable and combustible gases from containers.

Prior to applying heat, cutting, or welding on any pipe or container that has contained a flammable or combustible material:

1. The pipe or container shall be drained, thoroughly cleaned and ventilated; and
2. The pipe or container shall be filled with an inert gas or material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.18, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-670. Fire extinguishers.

A. Whenever a fire or its effects could impede escape from self-propelled equipment, a fire extinguisher shall be on the equipment.

B. Whenever a fire or its effects would not impede escape from the equipment but could affect the escape of other persons in the area, a fire extinguisher shall be on the equipment or within 100 feet of the equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.19, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-680. Exits or escapeways.

At least two exits or escapeways shall be provided in surface buildings and structures where personnel work or congregate.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.20, eff. July 19, 1989.

4VAC25-40-690. Fire-resistant buildings near underground openings.

Buildings and other structures within 100 feet of underground mine openings shall be fire resistant.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.21, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-700. Grass, weeds and underbrush.

Areas surrounding main fan installations and other mine openings shall be kept free from grass, weeds, underbrush and other combustible materials for a safe distance in all directions.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.22, eff. July 19, 1989.

4VAC25-40-710. Dust or gases.

Dust or gases which may be explosive or combustible shall be tested and controlled in an acceptable manner.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 4.23, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part V

Air Quality and Physical Agents—Surface and Underground

4VAC25-40-720. Employee exposure limits to airborne contaminants.

With respect to airborne contaminants, the following shall apply:

1. Employees shall be withdrawn from areas where airborne contaminants given a "C" designation in Threshold Limit Values and Biological Exposure Indices are present in concentrations that exceed specified TLVs.

2. Control of employee exposure to harmful airborne contaminants shall be by feasible engineering control methods. If such control measures are not available, an approved program of controlling employee exposure to airborne contaminants shall be implemented by the operator. Miners exposed for short periods to gas, dust, fumes and mist-inhalation hazards shall wear acceptable respiratory equipment appropriate for the hazard. When the exposure is for prolonged periods, other measures to protect workers or to reduce the hazard shall be taken.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 5.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-730. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 5.2, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-740. Dust sources.

Sources of dust shall be wetted down unless controlled by dry collection measures.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 5.3, eff. July 19, 1989.

4VAC25-40-750. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 5.4, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-760. Silica compounds.

Silica sand or other materials containing more than 1.0% free silica shall not be used in abrasive cleaning equipment unless exposed persons are provided with self-contained respiratory equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 5.5, eff. July 19, 1989.

4VAC25-40-770. Employee exposure to noise limits.

Except for surface mines which are inspected by MSHA, employee exposure to noise shall not exceed the federal limit adopted for mineral mines. If exposure exceeds the federal limit, the director may require the mine operator to employ feasible engineering and administrative control measures. Operators shall provide hearing protection upon request.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 5.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part VI

Explosives—Surface and Underground

4VAC25-40-780. Storage of explosive materials.

A. Detonators and explosives, other than blasting agents, shall be stored in magazines accepted by the Institute of Makers of Explosives or other approved agency.

B. Detonators shall not be stored in the same magazine with explosives.

C. Explosives magazines shall be:

1. Located in accordance with the American Table of Distances;

2. Detached structures located away from power lines, fuel storage areas, and other possible sources of fire;

3. Of substantial construction and constructed of noncombustible material or covered with fire-resistant material;

4. Reasonably bullet resistant;

5. Electrically bonded and grounded if constructed of metal;

6. Made of nonsparking material on the inside, including floors;

7. Provided with adequate and effectively screened ventilation openings near the floor and ceiling;

8. Kept locked securely when unattended;

9. Posted with suitable danger signs so located that a bullet passing through the sign will not strike the magazine;

10. Used exclusively for storage of explosives or detonators and blasting-related materials;

11. Kept clean and dry in the interior and in good repair;

12. Unheated, unless heated in a manner that does not create a fire or explosion hazard. Electrical heating devices shall not be used inside a magazine; and

13. Located at least 300 feet away from any underground mine opening, occupied building, public road, or private road not used in connection with the mine.

D. An accurate inventory log of explosives stored in the magazine shall be maintained on site.

E. Any theft or unaccounted loss of explosives shall be reported immediately by telephone to local police, state police, the U.S. Department of Justice, The Bureau of Alcohol, Tobacco, Firearms and Explosives and the Division of Mineral Mining.

F. Smoking or open flames shall be prohibited within 50 feet of explosives magazines or blasting agents storage facilities.

G. Areas surrounding magazines and facilities for the storage of blasting agents shall be kept clear of combustible materials, except live trees over 10 feet tall, for a distance of 50 feet in all directions.

H. Prior to repairs of a magazine which may cause a fire or explosion, the contents shall be removed to a safe location and guarded.

I. Explosives stored in magazines shall be:

1. Arranged so that the oldest stock is used first;

2. Separated by brand and type;

3. Stored with their top sides up; and

4. Stacked in a stable manner not over eight feet high.

J. When stored with other explosives, ammonium nitrate fuel oil blasting agents shall be physically

separated to prevent contamination.

K. Damaged or deteriorated explosives and blasting agents shall be destroyed in a safe manner by a certified blaster.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-790. Transportation.

A. Vehicles used to transport explosives shall be:

1. In good mechanical condition;

2. Posted with warning signs;

3. Provided with suitable fire extinguishers;

4. Provided with a nonsparking cargo area equipped with sides and tailgate;

5. Kept free of extraneous materials in the cargo area;

6. Operated at safe speeds over routes that expose the minimum number of personnel; and

7. Operated with the minimum number of persons required to safely transport the explosives.

B. Explosives and detonators shall be transported in separate vehicles unless they are separated by four inches of hardwood or the equivalent.

C. When explosives or detonators are transported by an electrically-powered vehicle, the cargo area shall be electrically insulated and covered.

D. Vehicles containing explosives shall not be left unattended or taken into a shop or building for any reason.

E. No person shall smoke while transporting explosives.

F. Explosives, detonators, or blasting agents shall not be transported on mantrips.

G. Explosives and detonators shall be transported in substantial, nonconductive, closed containers. Containers shall not be stacked higher than the sides or tailgate of the vehicle.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.2, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-800. Use of explosives.

A. A certified blaster shall be in direct charge of blasting activities.

B. Persons who assist in blasting activities shall be under the direct supervision of the certified blaster in charge and shall be alerted to the hazards involved.

C. Black powder or safety fuse shall not be used without approval from the director. Special approvals shall specify use restrictions and procedures necessary for safe storage, transportation, and use.

D. The design and loading of a blast shall provide sufficient burden, spacing, and stemming to prevent flyrock or other dangerous effects. Flyrock incidents shall be reported to the division immediately and details noted in the blast record.

E. Boreholes shall not be drilled where there is a danger of intersecting a loaded or misfired hole.

F. No person shall smoke or use an open flame within 50 feet of explosives or detonators.

G. Prior to bringing explosives and detonators to the blast site, the certified blaster in charge shall:

1. Monitor weather conditions to ensure safe loading and firing;

2. Inspect the blast site for hazards;

3. Inspect and clear the boreholes of obstructions; and

4. Remove personnel and equipment, except those used in loading the shot, from the blast site.

H. The certified blaster in charge shall review the drill logs to determine specific downhole conditions prior to loading the shot.

I. Boreholes to be blasted shall be loaded as near to the blasting time as practical. Loaded shots shall be blasted as soon as possible upon completion of loading and connection to the initiation device. Surface blasting shall be conducted during daylight hours only.

J. Explosives shall be kept a safe distance from detonators until they are made into a primer.

K. Primers shall not be made up or assembled in advance of the borehole being loaded.

L. Only wooden or other nonsparking implements shall be used to punch holes in an explosive cartridge.

M. Detonators shall be inserted completely and securely into explosive cartridges used as primers.

Priming shall be sufficient to detonate the explosive column in the borehole.

N. Primers shall be inserted into the borehole slowly to prevent accidental detonation from impact, and tamping shall not be done directly on the primer.

O. Tamping poles shall be constructed of wood and/or nonsparking materials.

P. Unused explosives, detonators, and blasting agents shall be returned to the magazine or storage facility upon completion of loading activities and prior to firing the blast.

Q. Equipment and machinery used to load or stem boreholes shall not be operated over loaded boreholes for any reason. Areas containing loaded boreholes shall be guarded or barricaded and posted to prevent unauthorized entry.

R. Blast warning signals shall be established and posted at the mine. Audible warning signals shall be given prior to firing a blast.

S. All personnel shall be removed from the blast area prior to connection to the initiation device and the firing of a blast.

T. Blasting personnel shall fire shots from a safe location.

U. A post-blast examination of the blast area shall be made by the certified blaster in charge. Other personnel shall not return to the blasting area until an all clear signal is received from the certified blaster in charge.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-810. Recordkeeping.

A detailed record of each surface blast shall be prepared immediately by the certified blaster. Records shall be maintained for three years and subject to inspection by the division mine inspectors. Records shall contain the following information:

1. Name of company or contractor;

2. Location, date, and time of blast;

3. Name, signature, and certification number of the certified blaster in charge;

4. Type of material blasted;

5. Number of holes, and burden and spacing for each hole;

6. Drill logs of boreholes as required by 4VAC25-40-1095;

7. Types of explosives used;

8. Total amount of explosives used;

9. Maximum amount of explosives per delay period of eight milliseconds or greater;

10. Method of firing and type of circuit;

11. Direction and distance in feet to nearest dwelling house, public building, school, church, commercial or institutional building neither owned nor leased by the person conducting the blasting;

12. Weather conditions (including such factors as wind directions, etc.);

13. Height or length of stemming;

14. Whether mats or other protections were used;

15. Type of detonators used and timing of detonation for each detonator used;

16. The person taking the seismograph reading shall accurately indicate exact location of seismograph, if used, and shall also show the distance of seismograph from blast;

17. Seismograph records, including seismograph readings, where required:

a. Name and signature of person operating seismograph;

b. Name of person analyzing the seismograph record; and

c. Seismograph reading;

18. Maximum number of holes per delay period of eight milliseconds or greater; and

19. All anomalies or abnormalities occurring during the execution of the blast and actions taken to correct or address them.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-820. Procedure where a misfire occurs during a blast.

A. No person shall enter the blasting area for at least 15 minutes except in the case of safety fuse where special approvals apply.

B. Misfires shall be disposed of in a safe manner by the certified blaster.

C. The blast area shall be guarded or barricaded and posted with warning signs until the misfire has been cleared.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-830. When traffic to be stopped.

Prior to blasting near a mine haul road or public highway, traffic shall be stopped at a safe distance.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-840. Mudcapping.

Mudcapping in blasting operations shall be permitted only where the driller would be in a hazardous position in attempting to drill the rock or material to be blasted.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.7, eff. July 19, 1989.

4VAC25-40-850. Blasting near underground mines.

When conducting surface blasting activities near an underground mine, advance notice of blasting shall be given to the underground mine operator by the certified blaster.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.8, eff. July 19, 1989.

4VAC25-40-860. Blasting near pipelines or electrical lines.

When conducting surface blasting activities within 300 feet of private pipelines or electrical transmission lines, advance notice of blasting shall be given to the owners of the pipeline or transmission lines by the certified blaster.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.9, eff. July 19, 1989.

4VAC25-40-870. Streams and watercourses.

Surface blasting shall be prohibited if effects are liable to change the course or channel of any stream without a variance issued by the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.10, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-880. Ground vibration from blasting.

A. Ground vibration, measured as peak particle velocity resulting from blasting, shall not exceed the limits set forth below at any inhabited building not owned or leased by the operator, without approval of the director. A seismographic record shall be provided for each blast.

Distance (D) to nearest inhabited building, feet	Peak Particle Velocity, inches per second
0 - 300	1.25
301 - 5,000	1.00
5,001 and beyond	0.75

B. Seismic monitoring of each blast shall be conducted, unless the scaled distance, Ds, as calculated

with the following scaled distance formulas, is 90 or greater:

$$W = \left(\frac{D}{Ds}\right)^2 \qquad Ds = \frac{D}{\sqrt{W}}$$

W = Maximum charge weight of explosives per delay period of 8.0 milliseconds or more.

D = Distance in feet from the blast site to the nearest inhabited building not owned or leased by the mine operator.

C. The operator may use the alternative ground vibration limits shown below to determine the maximum allowable ground vibration. If these limits are used, a seismographic record including both particle velocity and vibration frequency levels shall be kept for each blast. Ground vibration levels and airblast levels are taken from the Blasting Guidance Manual.

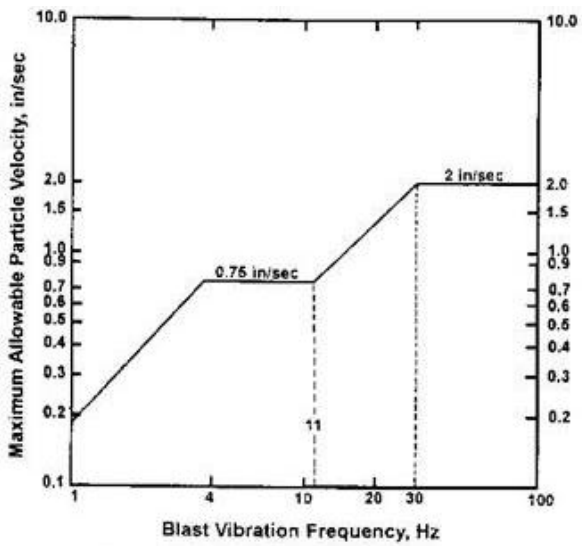

Figure 1. Alternative blasting level criteria.
(Source modified from figure B-1. Bureau of Mines R18507)

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.11, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-890. Air overpressure limits.

Air overpressure resulting from surface blasting shall not exceed 133 decibels, as measured with a 2Hz or lower flat response microphone, at any inhabited building not owned or leased by the operator.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.12, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-893. Action plans.

Each operator shall maintain a plan to control the effects of blasting on areas adjacent to the operation. This plan will be documented and made available for review by the Division of Mineral Mining upon request.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-895. Lower vibration and airblast levels.

If necessary to prevent damage, the director may specify lower allowable ground vibration and airblast levels than those provided by 4VAC25-40-880 and 4VAC25-40-890.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-900. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 6.13, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-910. Seismic testing and evaluation.

Seismic testing and evaluation to determine compliance with blasting regulations shall:

1. Utilize acceptable instrumentation which measures ground vibration, airblast and vibration frequency when applicable;
2. Be conducted and analyzed by a qualified person; and
3. Be conducted whenever directed by the division.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.14, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-920. Electric detonators.

A. When electric detonators are used, an acceptable blaster's galvanometer or blaster's multi-meter shall be used to test detonators, firing lines, series circuits, and total circuit resistance prior to firing.

B. Electric detonators of different brands shall not be used in the same blast.

C. Except when being tested with an acceptable instrument:

1. Electric detonators shall be kept shunted until they are connected into the series circuit;

2. Series circuits shall be kept shunted until they are connected onto the firing line; and

3. Firing lines shall be kept shunted until immediately before blasting.

D. Blasting machines or other acceptable power sources shall be suitable for the number of electric detonators to be fired and for the type of circuits to be used.

E. When electric detonators are used, sources of stray current to the blasting area shall be de-energized. Blasting activities shall be stopped immediately if stray current or static electricity in amounts sufficient to cause a premature detonation are encountered.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.15, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-925. Electronic detonators.

Electronic detonation systems shall be approved by the director as providing performance equivalent to that required in 4VAC25-40-920, and shall be used in accordance with the manufacturer's instructions.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-930. Nonelectric blasting.

A. When detonating cord manufactured with more than three grains per foot is used within 800 feet of inhabited buildings, not owned or leased by the operator, trunk lines shall be covered with at least six inches of loose earth or other acceptable material.

B. All detonating cord knots shall be tight and all connections kept at right angles to the trunk lines.

C. Detonators and delay connectors shall not be attached to exposed detonating cord by the certified blaster until the blast area is cleared.

D. Detonating cord blasting shall use a double trunk line or loop system to ensure complete detonation.

E. Detonating cord trunk lines, in multiple row blasts, shall make one or more complete loops, with crossties between loops at intervals not more than 200 feet.

F. When using a gas-charged initiation system, the certified blaster shall ensure that all components are fully charged prior to firing the blast. The blast area shall be cleared of personnel prior to charging the components.

G. Shock tube and other nonelectric detonation systems shall be used in accordance with manufacturers' recommendations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 6.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-940. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 7.1, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-950. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 7.2, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25, eff.

September 26, 2013.

4VAC25-40-960. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 7.3, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-970. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 7.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

Part VII

Drilling--Surface and Underground

4VAC25-40-980. Drilling of boreholes.

Boreholes shall not be drilled where there is a chance of intersecting a loaded or misfired hole.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.5, eff. July 19, 1989.

4VAC25-40-990. Drills to be attended.

While in operation, drills shall be attended at all times.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.6, eff. July 19, 1989.

4VAC25-40-1000. Storage of steel and tools.

Receptacles or racks shall be provided for drill steel and tools stored on drills.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.7, eff. July 19, 1989.

4VAC25-40-1010. Moving vehicle-mounted drills.

When moving a track-mounted or truck- mounted drill from one drilling location to another:

1. The mast shall be lowered to a safe position;
2. Tools and other equipment shall be secured in a safe location; and
3. The drill helper, when used, shall remain in sight of the drill operator.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.8, eff. July 19, 1989.

4VAC25-40-1020. Power failures.

In the event of a power failure, drill controls shall be placed in the neutral position until power is restored.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.9, eff. July 19, 1989.

4VAC25-40-1030. Hands to be kept clear.

Drillers shall not hold or rest their hands on any rotating part of a drill.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.10, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1040. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 7.11, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-1050. Boreholes.

Boreholes large enough to create a hazard shall be covered or guarded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.12, eff. July 19, 1989.

4VAC25-40-1060. Moving handheld drills.

Prior to moving handheld pneumatic drills from one working area to another, the air shall be turned off and bled from the hose.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.13, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1070. Handling of boulders.

Prior to drilling large boulders, drills shall be moved to a safe location and positioned securely in place.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.14, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1080. Walls or benches.

When drilling next to a wall or bench, drillers shall:

1. Remove any loose, unconsolidated material from the bench or wall above the work area;

2. Position the drill in such a manner that the controls are on the side of the drill away from the bench or wall; and

3. Never work between the drill and the bench or wall if their escape from the work area may be hindered by falling material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.15, eff. July 19, 1989.

4VAC25-40-1090. Rotary jet piercing equipment.

Prior to using rotary jet piercing equipment, the operator shall obtain approval from the director who shall specify safety procedures to be used in operating this equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 7.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1095. Drill logs required for boreholes intended for blasting.

For each borehole intended for blasting, the driller shall produce a drill log as each hole is being drilled. The drill log shall include, at minimum, the name of the driller, borehole diameter, borehole depth, depth of broken material at the collar, and other geological conditions (for example, cracks, seams, voids, mud, or any other anomalies that could affect the blast) encountered during drilling. A signed copy of the drill log shall be provided to the mine operator and a copy shall be included in the record of the blast.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

Part VIII

Compressed Air, Gases, and Boilers—Surface and Underground

4VAC25-40-1100. Boilers and pressure vessels.

Boilers and pressure vessels shall be constructed, installed, and maintained in accordance with the Boiler and Pressure Vessel Regulations (16VAC25-50-10 et seq.). Operators shall, upon request, provide proof that the boiler or pressure vessel meets the Boiler and Pressure Vessel Regulations. Boilers and pressure vessels shall be inspected by an inspector certified by the Virginia Department of Labor and

Industry at the time periods specified in the Boiler and Pressure Vessel Regulations. Records of such inspections shall be kept.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1110. Air compressors.

Air compressors shall be equipped with automatic temperature activated shutoff mechanisms set for 400°F or with fusible plugs installed in the compressor discharge lines as near the compressors as possible. Fusible plugs shall melt at temperatures 50° less than the flash points of the lubricating oils.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.2, eff. July 19, 1989.

4VAC25-40-1120. Compressed-air receivers.

Compressors and compressed-air receivers shall be equipped with automatic pressure-release valves, pressure gauges, and drain valves.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.3, eff. July 19, 1989.

4VAC25-40-1130. Compressor-air intakes.

Compressor-air intakes shall be installed to ensure that only clean, uncontaminated air enters the compressors.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-1140. Draining compressed-air receivers.

Compressed-air receivers shall be drained of moisture, oil, or carbon buildup in accordance with manufacturers' recommendations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1150. Inspection openings in compressed-air receivers.

Compressed-air receivers shall have inspection openings which, when the tanks are over 36 inches in diameter, shall be manholes.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.6, eff. July 19, 1989.

4VAC25-40-1160. Operating compressors.

Compressors shall be operated and lubricated in accordance with the manufacturers' recommendations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.7, eff. July 19, 1989.

4VAC25-40-1170. Discharge pipes.

Compressor discharge pipes shall be cleaned periodically.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.8, eff. July 19, 1989.

4VAC25-40-1180. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 8.9, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-1190. Repairs.

Repairs involving the pressure system of compressors, receivers, or compressed-air-powered equipment, shall not be attempted until the pressure has been bled off.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.10, eff. July 19, 1989.

4VAC25-40-1200. Improper uses.

At no time shall compressed air be directed towards a person unless a diffuser limiting pressure to no more than 30 pounds per square inch is used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.11, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1210. Locking devices.

Safety chains or suitable safety devices shall be used at connections to machines of high pressure hose lines of 3/4 inch inside diameter or larger, and between high pressure hose lines of 3/4 inch inside diameter or larger, where a connection failure would create a hazard.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.12, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1220. Storage of oxygen cylinders.

Oxygen cylinders shall not be stored near oil or grease.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.13, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1230. Maintaining regulators.

Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.14, eff. July 19, 1989.

4VAC25-40-1240. Tank valves to be kept closed.

Valves on oxygen and acetylene tanks shall be kept closed when the contents are not being used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.15, eff. July 19, 1989.

4VAC25-40-1250. Securing cylinders.

Compressed gas or liquid gas cylinders shall be safely secured in an upright position.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1260. Valves and gauges to be protected.

Valves and gauges on compressed gas cylinders shall be protected by covers when being transported and stored, or if a hazard from falling material exists when used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.17, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1270. Use of gauges, regulators and valves.

Pressure gauges, regulators, and reverse flow check valves shall be used on all compressed air and gas cylinders and shall be maintained in safe working condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.18, eff. July 19, 1989.

4VAC25-40-1280. Boiler equipment and maintenance.

Boilers shall be equipped and maintained as follows:

1. Boilers shall be equipped with guarded, well-maintained water gauges and pressure gauges placed so that they can be observed easily. Water gauges and pipe passages to the gauges shall be kept clean and free of scale and rust;

2. Boilers shall be equipped with automatic pressure-relief valves; valves shall be opened manually at least once a week to determine that they will function properly;

3. Boiler installations shall be provided with acceptable safety devices to protect against hazards of flame outs, fuel interruptions, and low water level; and

4. Blowoff valves shall be piped outside the building and shall have outlets so located or protected that persons passing by, near, or under them will not be scalded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.19, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-1290. Welding operations.

Welding operations shall be shielded and well-ventilated.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 8.20, eff. July 19, 1989.

4VAC25-40-1300 to 4VAC25-40-1310. [Repealed]

Historical Notes

Derived from VR480-05-1.2 §§ 9.1, 9.2, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part IX

Mobile Equipment—Surface and Underground

4VAC25-40-1320. Brakes on mobile equipment.

Powered mobile equipment shall be provided with adequate service brakes capable of stopping and holding the equipment with its typical load on the maximum grade it travels.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1330. Emergency brakes.

Mobile equipment shall be equipped with emergency brakes separate and independent of the regular braking system when generally available for a particular class of equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.4, eff. July 19, 1989.

4VAC25-40-1340. Requirements for starting or moving equipment.

Equipment operators shall be certain, by signal or other means, that all persons are clear before starting or moving equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1350. Construction of operators' cabs.

Cabs shall be maintained to provide visibility for safe operation.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1360. Windows of cabs.

Cab windows shall be of safety glass or equivalent, in good condition, and shall be kept clean.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.7, eff. July 19, 1989.

4VAC25-40-1370. Safety equipment.

Heavy duty mobile equipment manufactured after June 30, 1969, shall be equipped with acceptable roll-over protection structures and seat belts. Equipment operators shall use the seat belts provided.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.8, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-1380. Extraneous materials in cabs.

Cabs of mobile equipment shall be kept free of extraneous materials.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.9, eff. July 19, 1989.

4VAC25-40-1390. Operating speeds.

Equipment operating speeds shall be consistent with conditions of roadways, grades, clearance, visibility, traffic, and the type of equipment used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.10, eff. July 19, 1989.

4VAC25-40-1400. Dust control measures.

Dust control measures shall be taken where dust significantly reduces visibility of equipment operators.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.11, eff. July 19, 1989.

4VAC25-40-1410. Restraining berms or guards.

Berms or guards capable of restraining the largest vehicle used in the area shall be provided on the outer bank of elevated roadways.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.12, eff. July 19, 1989.

4VAC25-40-1420. Operation under power control.

Mobile equipment shall be operated under power control at all times.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.13, eff. July 19, 1989.

4VAC25-40-1430. Maintaining control of equipment.

Mobile equipment operators shall have full control of the equipment while it is in motion.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.14, eff. July 19, 1989.

4VAC25-40-1440. Suspending loads over cabs.

Dippers, buckets, loading booms, or heavy suspended loads shall not be swung over the cabs of haulage vehicles until the drivers are out of the cabs and in safe locations unless the trucks are designed specifically to protect the drivers from falling material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.15, eff. July 19, 1989.

4VAC25-40-1450. Mounting and dismounting moving equipment.

Persons shall not get on or off moving equipment, except that trainmen may get on or off slowly moving trains.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.16, eff. July 19, 1989.

4VAC25-40-1460. Prohibited means of transportation.

Persons shall not be transported:

1. In or on dippers, forks, clamshells, or the bed of trucks, unless special provisions are made for their safety;

2. In or on buckets except shaft buckets;

3. On top of loaded haulage equipment;

4. Outside the cabs and beds of mobile equipment, except trains;

5. Between cars of trains; or

6. In conveyances equipped with unloading devices unless means are provided to prevent accidental starting of the unloading mechanism.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.17, eff. July 19, 1989.

4VAC25-40-1470. Securing equipment in travel position.

When traveling between work areas, the equipment shall be secured in the travel position.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.18, eff. July 19, 1989.

4VAC25-40-1480. Securing dippers, buckets and scraper blades.

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

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.19, eff. July 19, 1989.

4VAC25-40-1490. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 9.20, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1500. Securing electrically-powered mobile equipment.

Electrically-powered mobile equipment shall not be left unattended unless the master switch is in the off position, all operating controls are in the neutral position, and the brakes are set or other equivalent precautions are taken against rolling.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.21, eff. July 19, 1989.

4VAC25-40-1510. Setting brakes.

Mobile equipment shall not be left unattended unless the brakes are set. Mobile equipment with wheels or tracks, when parked on a grade, shall be either blocked or turned into a bank or rib unless the bucket or blade lowered to the ground prevents movement.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.22, eff. July 19, 1989.

4VAC25-40-1520. Warning lights.

When in the dark or under conditions of limited visibility, all vehicles carrying loads which project beyond the sides or more than four feet beyond the rear of the vehicles shall display a warning light at the end of the projection. In the light, a warning flag not less than 12 inches square shall be displayed at the end of the projection.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.23, eff. July 19, 1989.

4VAC25-40-1530. Removal of hazards.

Water, debris, or spilled material which creates hazards to moving equipment shall be removed.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.24, eff. July 19, 1989.

4VAC25-40-1540. Traffic rules.

Traffic rules, including speed, signals, and warning signs, shall be posted at each mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.25, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1550. Heating and cooling cabs.

Heavy duty mobile equipment with cabs being operated in extreme weather conditions shall use control measures to limit exposure of the equipment operator to extreme heat and cold.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.26, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1560. Getting on or off equipment.

When an operator is present, persons shall notify him before getting on or off heavy duty mobile equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.27, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1570. Audible warning devices.

Heavy duty mobile equipment shall be provided with audible warning devices.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.28, eff. July 19, 1989.

4VAC25-40-1580. Backup alarms.

A. An automatic backup alarm which is audible above surrounding noise levels shall be provided on heavy duty mobile equipment which has an obstructed view to the rear.

B. An automatic reverse-activated strobe light may be used at night in lieu of an audible reverse alarm.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.29, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1590. Railroad equipment.

Railroad equipment shall be installed or maintained by the operator as follows:

1. Public and permanent railroad crossing shall be posted with warning signs or signals or shall be guarded when trains are passing and shall be planked or otherwise filled between the rails;

2. Operators shall sound a warning before starting trains and when trains approach crossing, other trains on adjacent tracks, persons, and any place where vision is obscured;

3. Persons shall not go over, under, or between cars unless the train is stopped and the motorman has been notified and the notice acknowledged;

4. Only authorized persons shall be permitted to ride on trains or locomotives and they shall ride in a safe position;

5. Movement of two or more pieces of rail equipment operating independently on the same track shall be regulated by an efficient signal block, telephone, or radio system; movements on complex haulage systems shall be adequately controlled if not under the supervision of a dispatcher;

6. Positive-acting stop blocks, derail devices, track skates, or other adequate means shall be installed wherever necessary to protect persons from runaway or moving railroad equipment;

7. Whenever a locomotive on one track is used to move equipment on a different track, a suitable chain, cable, or drawbar shall be used;

8. Persons in charge of trains shall ensure that tracks are clear and personnel are in safe locations prior to moving trains;

9. Cars shall not be coupled or uncoupled manually from the inside of curves unless the railroad and cars are so designed to eliminate any hazard from manual coupling;

10. Rocker-bottom or bottom-dump rail cars shall be equipped with locking devices;

11. Roadbeds, rails, joints, switches, frogs, and other elements on railroads shall be designed, installed, and maintained in a safe manner consistent with the speed and type of haulage;

12. Switch throws shall be installed so as to provide adequate clearance for switchmen;

13. Track guardrails, lead rails, and frogs shall be protected or blocked so as to prevent a person's foot from becoming wedged;

14. Railcars shall not be left on side tracks unless ample clearance is provided for traffic on adjacent tracks;

15. Parked railcars, unless held effectively by brakes, shall be blocked securely;

16. Railroad cars with braking systems shall be equipped with effective brake shoes when in use;

17. Where necessary, bumper blocks, or the equivalent, shall be provided at all track dead ends; and

18. At least 30 inches continuous clearance from the farthest projection of moving railroad equipment shall be provided on at least one side of the tracks; all places where it is not possible to provide 30-inch clearance shall be marked conspicuously.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.30, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1600. Avoiding mobile equipment in operation.

Persons shall remain clear of mobile equipment in operation and shall not work or pass under the buckets or booms of equipment in operation.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.31, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-1610. Design of chute-loading installations.

Chute-loading installations shall be designed so that the persons pulling chutes are not required to be in a hazardous position while loading cars or trucks.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.32, eff. July 19, 1989.

4VAC25-40-1620. Berms or bumper blocks.

Berms, bumper blocks, or similar means shall be provided to prevent overtravel and overturning at dumping locations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.33, eff. July 19, 1989.

4VAC25-40-1630. Anchoring of sizing devices.

Grizzlies, grates, and other sizing devices at dump and transfer points shall be anchored securely in place.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.34, eff. July 19, 1989.

4VAC25-40-1640. Truck spotters.

If truck spotters are used, they shall be well in the clear while trucks are backing into dumping position

and dumping; lights shall be used at night to direct trucks.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.35, eff. July 19, 1989.

4VAC25-40-1650. Warning devices where clearance is restricted.

Where clearance is restricted, warning devices shall be installed and the restricted area shall be conspicuously marked.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.36, eff. July 19, 1989.

4VAC25-40-1660. Tire repairs.

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.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.37, eff. July 19, 1989.

4VAC25-40-1670. Towing equipment.

A tow bar and safety chain shall be used to tow heavy equipment that is not being operated under its own power.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.38, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1680. Working on equipment in raised position.

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.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 9.39, eff. July 19, 1989.

4VAC25-40-1685. Repairs or maintenance.

Repairs or maintenance shall not be performed on mobile equipment until tagged out. The power shall be off and the mobile equipment shall be blocked against hazardous motion, except where power or motion is necessary to make adjustments.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part X

Personal Protection—Surface and Underground

4VAC25-40-1690. First aid materials.

Suitable first aid materials shall be provided. First aid materials shall be adequate for the number of employees and accessible to all work areas.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1700. Life jackets or belts.

Life jackets or belts shall be worn where there is danger of falling into water.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.2, eff. July 19, 1989.

4VAC25-40-1710. Hard hats.

All persons shall wear suitable hard hats when in or around a mine or plant where falling objects may create a hazard.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.3, eff. July 19, 1989.

4VAC25-40-1720. Protective footwear.

All persons shall wear suitable protective footwear when in or around an area of a mine or plant where a hazard exists which could cause an injury to the feet.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.4, eff. July 19, 1989.

4VAC25-40-1730. Safety glasses or goggles.

All persons shall wear safety glasses, goggles, or face shields or other suitable protective devices when in or around an area of a mine or plant where a hazard exists which could cause injury to unprotected eyes.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.5, eff. July 19, 1989.

4VAC25-40-1740. Safety harnesses.

A safety harness with a line shall be worn when persons work where there is danger of falling. Also see 4VAC25-40-2550.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1750. Requirements for welding or cutting.

Protective clothing or equipment and face shields or goggles shall be worn when welding, cutting, or working with molten metal.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.7, eff. July 19, 1989.

4VAC25-40-1760. Loose fitting clothing.

Loose fitting clothing or gloves shall not be worn where they could create a hazard by becoming entwined or caught in moving parts of machinery.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.8, eff. July 19, 1989.

4VAC25-40-1770. When gloves to be worn.

Protective gloves shall be worn by employees handling materials which may cause injury.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.9, eff. July 19, 1989.

4VAC25-40-1780. Wearing of rings.

Finger rings shall not be worn while operating or working on equipment or tools.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.10, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1785. Light reflecting personal protection material.

Reflective tape or material shall be worn on the hats or clothing of persons working underground or during hours of darkness.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1790. Requirements for grinding wheels.

Face shields or goggles, in good condition, shall be worn when operating a grinding wheel.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.11, eff. July 19, 1989.

4VAC25-40-1800. Dumping locations.

Adequate protection shall be provided at dumping locations when persons may be endangered by falling material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 10.12, eff. July 19, 1989.

Part XI

Travelways—Surface and Underground

4VAC25-40-1810. Safe access.

Safe means of access shall be provided and maintained to all work locations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1820. Requirements for walkways and stairways.

Crossovers, elevated walkways, elevated ramps, and stairways shall be of substantial construction, provided with handrails, and maintained in good condition. Where necessary, toeboards shall be provided.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.2, eff. July 19, 1989.

4VAC25-40-1830. Condition of ladders.

Ladders shall be of substantial construction and maintained in good condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.3, eff. July 19, 1989.

4VAC25-40-1840. Portable ladders.

Portable straight ladders shall be provided with nonslip bases, shall be placed against safe backing, and set on secure footing.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.4, eff. July 19, 1989.

4VAC25-40-1850. Anchoring fixed ladders.

Fixed ladders shall be anchored securely and installed to provide at least three inches of toe clearance.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.5, eff. July 19, 1989.

4VAC25-40-1860. Fixed ladders to project above landings.

Fixed ladders shall project at least three feet above landings, or substantial handholds shall be provided above the landings.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.6, eff. July 19, 1989.

4VAC25-40-1870. Painting wooden ladders.

Wooden members of ladders shall not be painted.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.7, eff. July 19, 1989.

4VAC25-40-1880. Debris to be cleared.

Ladders, stairways, walkways, and ramps shall be kept free of loose rock and extraneous materials.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.8, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1890. Railings and walkway surfaces.

Railed walkways shall be provided wherever persons are regularly required to walk alongside elevated conveyor belts. Inclined railed walkways shall be nonskid or provided with cleats.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.9, eff. July 19, 1989.

4VAC25-40-1900. Clearances above travelways.

Vertical clearance above travelways shall be a minimum of seven feet or adequate warning shall be provided to indicate an impaired clearance.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.10, eff. July 19, 1989.

4VAC25-40-1910. Climbing or descending ladders.

Persons climbing or descending ladders shall face the ladders and have both hands free for climbing.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.11, eff. July 19, 1989.

4VAC25-40-1920. Protective covers.

Openings above, below, or near travelways through which persons or materials may fall shall be protected by railings, barriers, or covers. Where it is impractical to install such protective devices, adequate warning signals shall be installed.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.12, eff. July 19, 1989.

4VAC25-40-1930. Crossovers.

Crossovers shall be provided and used where it is necessary to cross moving conveyors.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.13, eff. July 19, 1989.

4VAC25-40-1940. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 11.14, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-1950. Slippery walkways.

Slippery walkways shall be provided with cleats and handrails.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.15, eff. July 19, 1989.

4VAC25-40-1960. Snow and ice removal.

Regularly used walkways and travelways shall be sanded, salted, or cleared of snow and ice as soon as practicable.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.16, eff. July 19, 1989.

4VAC25-40-1970. Inclining fixed ladders.

Fixed ladders shall not incline backward at any point unless provided with backguards.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.17, eff. July 19, 1989.

4VAC25-40-1980. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 11.18, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25,

eff. September 26, 2013.

4VAC25-40-1990. Landings for fixed ladders.

Fixed ladders shall be offset and have substantial railed landings at least every 30 feet unless backguards are provided.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.19, eff. July 19, 1989.

4VAC25-40-2000. Steep fixed ladders.

Steep fixed ladders (70° to 90° from the horizontal), 30 feet more in length, shall be provided with backguards, cages, or equivalent protection, starting at a point not more than seven feet from the bottom of the ladder.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.20, eff. July 19, 1989.

4VAC25-40-2010. Scaffolds and working platforms.

Scaffolds and working platforms shall be of substantial construction and provided with handrails and maintained in good condition. Floorboards shall be laid properly and the scaffolds and working platform shall not be overloaded. Working platforms shall be provided with toe-boards when necessary.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 11.21, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part XII

Electricity—Surface and Underground

4VAC25-40-2015. Installation of electrical circuits; supervision of electrical work.

A. Electrical equipment and circuits shall be installed in accordance with the standards in the National

Electrical Code, unless provided for in this part.

B. All work on electric systems performed in accordance with the National Electrical Code and this part shall be done by, or under the supervision of, a certified electrical repairman or other appropriately licensed electrical repairman.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2020. Fuses or circuit breakers to be used.

Circuits shall be protected against excessive overloads or short circuits by fuses or circuit breakers of the correct type and capacity.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.1, eff. July 19, 1989.

4VAC25-40-2030. Switches to be provided.

Electric equipment and circuits shall be provided with switches or other controls. Such switches or controls shall be of acceptable design and construction and shall be properly installed.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.2, eff. July 19, 1989.

4VAC25-40-2040. Trailing cables of mobile equipment.

Individual overload protection and short circuit protection shall be provided for the trailing cables of mobile equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2050. Current-carrying capacity.

Power wires and cables shall have adequate current carrying capacity and shall be protected from mechanical injury.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.4, eff. July 19, 1989.

4VAC25-40-2060. Running over cables.

Mobile equipment shall not run over trailing cables, unless the cables are properly bridged or protected.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.5, eff. July 19, 1989.

4VAC25-40-2070. Distribution boxes.

Distribution boxes shall be provided with disconnect switches.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.6, eff. July 19, 1989.

4VAC25-40-2080. Making connections under load.

Trailing cable and power cable connections to junction boxes shall not be made or broken under load.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.7, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-2090. Insulating wires and cables.

Power wires and cables shall be adequately insulated where they pass into or out of electrical compartments.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.8, eff. July 19, 1989.

4VAC25-40-2100. Avoiding power lines.

Telephone and electric signal wires shall be protected from contacting energized power lines.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.9, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2110. Electrical transmission wires.

Electrical transmission wires shall be covered, insulated, or placed to prevent contact with low-potential conductors.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.10, eff. July 19, 1989.

4VAC25-40-2120. Splices in cables.

Splices in power cables, including ground conductor, where provided, shall be:

1. Mechanically strong with adequate electrical conductivity;

2. Effectively insulated and sealed to exclude moisture; and

3. Provided with mechanical protection and electrical conductivity as near as possible to that of the original.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.11, eff. July 19, 1989.

4VAC25-40-2130. Shovel trailing cables.

Shovel trailing cables shall not be moved with the shovel dipper unless cable slings or sleds are used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.12, eff. July 19, 1989.

4VAC25-40-2140. De-energizing electrical equipment.

Electrically-powered equipment shall be de-energized before mechanical work is done on such equipment. Power switches shall be locked out or other measures taken which shall prevent the equipment from being energized without the knowledge of the individual working on it. Suitable warning notices shall be posted at the power switch and signed by the individuals doing the work. Such locks, tags or other devices, shall be removed only by the person who installed them or by authorized personnel after ensuring that affected persons are in the clear.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.13, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2150. De-energizing power circuits.

Power circuits shall be de-energized before work is done on such circuits unless hot-line tools are used. Suitable warning signs shall be posted by the individuals who are to do the work. Switches shall be locked out or other measures taken which shall prevent the power circuits from being energized without the knowledge of the individuals working on them. Such locks, signs, or preventative devices shall be removed only by the person who installed them or by an authorized person.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.14, eff. July 19, 1989.

4VAC25-40-2160. Labeling of switches.

Principal power switches shall be labeled to show which units they control, unless identification can be made readily by location.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.15, eff. July 19, 1989.

4VAC25-40-2170. Clearance around equipment.

At least three feet of clearance shall be provided around all parts of stationary electric equipment or switch gear where access or travel is necessary.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2180. Nonconductive electrical safety mats.

Dry, wooden platforms, insulating mats, or other electrically nonconductive material shall be kept in place at all switchboards and power-control switches where shock hazards exist. However, metal plates on which a person normally would stand and which are kept at the same potential as the grounded, metal, noncurrent-carrying parts of the power switches to be operated may be used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.17, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2190. Posting danger signs.

Suitable danger signs shall be posted at all major electrical installations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.18, eff. July 19, 1989.

4VAC25-40-2200. Access by authorized persons.

Areas containing major electrical installations shall be entered only by authorized persons.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.19, eff. July 19, 1989.

4VAC25-40-2210. Guarding accessible equipment.

Electrical connections and resistor grids that are difficult or impractical to insulate shall be guarded, unless protection is provided by location.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.20, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2220. Grounding equipment.

All metal enclosed, electrically-operated circuits or equipment shall be grounded back to the on-site source from which the electric circuit originates, and which is effectively connected to the earth or provided with equivalent protection.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.21, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2230. Grounding metal fences and buildings.

Metal fencing and metal buildings enclosing transformers and switchgear shall be grounded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.22, eff. July 19, 1989.

4VAC25-40-2240. Frame grounding.

Frame grounding or equivalent protection shall be provided for mobile equipment powered through trailing cables.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.23, eff. July 19, 1989.

4VAC25-40-2250. Testing after installation or repair.

Continuity and resistance of grounding systems shall be tested immediately after installation, repair, and modification; and annually thereafter. A record of the resistance measured in each equipment ground conductor, grounding electrode conductor, and the earth around the grounding electrode shall be made, and the most recent test record shall be available upon request by the director or division mine inspector.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.24, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2260. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 12.25, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2270. Correcting dangerous conditions.

Electric equipment and wiring shall be inspected by a competent person as often as necessary to ensure safe operating conditions. When a potentially dangerous condition is found, it shall be corrected before equipment or wiring is energized.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.26, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2280. Dust-proof and water-proof electrical equipment.

Electric motors, switches, and controls exposed to damaging dust or water shall be of dust tight or watertight construction.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.27, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2290. Inspection and cover plates to be kept in place.

Inspection and cover plates on electrical equipment and junction boxes shall be kept in place at all times except during testing or repairs.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.28, eff. July 19, 1989.

4VAC25-40-2300. Handheld electric tools.

Handheld electric tools shall not be operated in excess of 130 volts.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.29, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2310. Extension lights.

Portable extension lights and other lights that may present a shock or burn hazard shall be guarded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.30, eff. July 19, 1989.

4VAC25-40-2320. Lamp sockets.

Lamp sockets exposed to the weather shall be of weatherproof type.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.31, eff. July 19, 1989.

4VAC25-40-2330. Removing or replacing fuses.

Fuses shall not be removed or replaced by hand in an energized circuit, and they shall not otherwise be removed or replaced in an energized circuit unless equipment and techniques especially designed to prevent electrical shock are provided and used for such purpose.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.32, eff. July 19, 1989.

4VAC25-40-2340. Fuse replacement tools.

Fuse tongs or hot line tools shall be used when fuses are removed or replaced in electrical circuits.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.33, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

4VAC25-40-2350. Trailing cables to be clamped.

Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.34, eff. July 19, 1989.

4VAC25-40-2360. Storing surplus trailing cables.

Surplus trailing cables to shovels, cranes, and similar equipment shall be stored in cable boots or on reels mounted on the equipment or otherwise protected from mechanical damage.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.35, eff. July 19, 1989.

4VAC25-40-2370. Operating controls.

Operating controls shall be installed so that they can be operated without danger of contact with energized conductors.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.36, eff. July 19, 1989.

4VAC25-40-2380. Design of switches and boxes.

Switches and starting boxes shall be of safe design and capacity.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.37, eff. July 19, 1989.

4VAC25-40-2390. Lightning grounds.

Lightning-arrester grounds on trolley tracks shall be connected to earth at least 25 feet from the underground mine opening.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.38, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2400. Overhead power lines.

Surface overhead power lines shall be installed and maintained as specified by the National Electrical Code.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.39, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2410. Incompatible line installations.

Telegraph, telephone, or signal wires shall not be installed on the same crossarm with power conductors. When carried on poles supporting power lines, they shall be installed as specified by the National Electrical Code.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.40, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2420. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 12.41, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-2430. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 12.42, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-2440. Protecting power lines.

Power lines, including trolley wires, and telephone circuits, shall be protected against short circuits and lightning.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.43, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2450. Bare power line precautions.

Where metallic tools or equipment can come in contact with bare power lines, the lines shall be guarded or de-energized.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.44, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2460. Transformer requirements.

Transformers shall either be totally enclosed, placed at least eight feet above the ground, installed in a transformer house, or surrounded by the substantial fence at least six feet high and at least three feet from any energized parts, casings, or wiring.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.45, eff. July 19, 1989.

4VAC25-40-2470. Transformer enclosures to be locked.

Transformer enclosures shall be kept locked against unauthorized entry.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.46, eff. July 19, 1989.

4VAC25-40-2480. Lightning arrester for telephone circuits.

A lightning arrester shall be provided where telephone circuits enter a mine; mine telephone extensions in surface buildings shall be provided with a lightning arrester for each circuit entering the building.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.47, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2490. Lightning arrester for power circuits.

Each exposed power circuit that leads underground shall be equipped with a lightning arrester of an acceptable type at or near the point where the circuit enters the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.48, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2500. Moving equipment near power lines.

Electric wiring shall be installed in a manner to prevent fire and contact hazards. When equipment must be moved or operated near energized power lines and the clearance is less than 10 feet, the lines shall be de-energized or a warning sign posted or other precautionary measures shall be taken. Also see 4VAC25-40-3890.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 12.49, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2510. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 12.50, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part XIII

Materials Handling—Surface and Underground

4VAC25-40-2520. Water or neutralizing agents.

Water or neutralizing agents shall be available where corrosive chemicals or other harmful substances are stored, handled or used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.1, eff. July 19, 1989.

4VAC25-40-2530. Personal protection equipment.

Acceptable protective clothing, respiratory protection, gloves, and goggles or face shields, accepted by the National Institute for Occupational Safety and Health (NIOSH) or other approved agency, shall be worn by persons exposed to chemical substances that are corrosive, flammable, reactive, or toxic.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.2, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2540. Storage of materials.

Materials shall be stored and stacked in a manner which minimizes stumbling or fall of material hazards.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2550. Confined space hazard.

A safety harness attached to an attended life line shall be worn by persons before they enter bins, hoppers, silos, tanks, surge, or storage piles. Persons shall not enter the above areas until the supply and discharge of materials has ceased and the supply and discharge equipment is locked out. No person shall enter an area where they are exposed to entrapment by the caving or sliding of loose, unconsolidated material. Also see 4VAC25-40-1740.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2560. Safe storage of hazardous materials.

Material that can create hazards if accidentally liberated from their containers shall be stored in a manner that minimizes the dangers.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.5, eff. July 19, 1989.

4VAC25-40-2570. Storage of corrosive and other materials.

Corrosive, flammable, reactive, and toxic materials shall be stored in acceptable containers and shall be labeled appropriately.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.6, eff. July 19, 1989.

4VAC25-40-2580. Hitches and slings.

Hitches and slings used to hoist materials shall be of safe design and used in a safe manner.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.7, eff. July 19, 1989.

4VAC25-40-2590. Tag lines.

Tag lines shall be attached to suspended loads that require steadying or guidance.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.8, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2600. Suspended loads.

Persons shall stay clear of suspended loads.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.9, eff. July 19, 1989.

4VAC25-40-2610. Dropping elevated materials.

Materials shall not be dropped from an excessive height unless the drop area is guarded or sufficient warning is given.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.10, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2620. Riding loads or hooks.

Personnel shall not ride on loads being moved by cranes or derricks, nor shall they ride the hoisting hooks unless such method eliminates a greater hazard.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.11, eff. July 19, 1989.

4VAC25-40-2630. Storage of reactive materials.

Substances that react violently or liberate dangerous fumes when mixed shall be stored in such a manner that they cannot come in contact with each other.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.12, eff. July 19, 1989.

4VAC25-40-2640. Handling of molten material.

Only personnel wearing protective equipment shall stand near pots or ladles when molten material is being handled; warning shall be given before a pour is made or the pot is moved.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.13, eff. July 19, 1989.

4VAC25-40-2650. Overhead crane equipment.

Overhead cranes with operator cabs shall be provided with:

1. Bumpers at each end of each rail;
2. Automatic switches to halt uptravel of the blocks before they strike the hoist;
3. Effective audible warning signals within easy reach of the operator; and
4. A means to lock out the disconnect switch.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.14, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2660. Overhead crane bridges.

No person shall work from or travel on the bridge of an overhead crane unless the bridge is provided with substantial foot-walks with toe-boards and railing the length of the bridge.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.15, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2670. Lift trucks.

Fork and other similar types of lift trucks shall be moved with the load in a low position and shall descend grades with the load behind.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 13.16, eff. July 19, 1989.

Part XIV

Guards

4VAC25-40-2680. Accessible moving parts.

Gears, sprockets, chain drives, flywheels, couplings, shafts, saw and fan blades, and other similar exposed moving machine parts which are within seven feet reach by persons shall be guarded to prevent accidental contact.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2690. Overhead belts.

Overhead belts shall be guarded if the whipping action from a broken belt would be hazardous to persons below.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.2, eff. July 19, 1989.

4VAC25-40-2700. Conveyor guarding; conveyor belts and idlers.

A. Equipment guarding on conveyor drives, head pulleys, tail pulleys, and take-up pulleys that are within seven feet reach shall extend a sufficient distance to prevent a person from reaching behind, over, or under the guard and becoming caught in the moving parts. Other accessible, moving parts on the conveyor shall be guarded to prevent accidental contact.

B. Conveyor belts and idlers that are accessible from walkways shall be guarded or provided with emergency stop cords or railings positioned to prevent a person from falling on or against the moving belts or idlers.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2710. Conveyor openings.

Openings where conveyors pass through wall or floors shall be guarded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.4, eff. July 19, 1989.

4VAC25-40-2720. Use of stop cords.

When emergency stop cords are used on conveyors with walkways, the cord shall extend along the full length of the conveyor.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2730. Protruding setscrews.

Protruding setscrews on revolving parts shall be guarded.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.6, eff. July 19, 1989.

4VAC25-40-2740. When guards to be in place.

Except when testing the machinery, guards shall be securely in place while machinery is being operated.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.7, eff. July 19, 1989.

4VAC25-40-2750. Maintenance of guards.

Guards shall be sufficiently strong and maintained to prevent contact with moving parts. Guards shall not be required where the exposed moving parts are at least seven feet away from walking or working surfaces.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.8, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2760. Flying or falling material protection.

Guards or shields shall be provided in areas where flying or falling materials present a hazard.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 14.9, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part XV

Safety and Health Regulations—Underground Only

Article 1

Ground Control

4VAC25-40-2770. Ground support.

A. Upon encountering suspected hazardous geological conditions, the operator shall suspend mining activities in the area until a ground control plan has been approved by the director.

B. Ground support shall be used if the operating experience of the mine, or any particular area of the mine, indicates that it is required. If it is required, support, including timbering, rock bolting, or other methods shall be consistent with the nature of the ground and the mining method used. Also see 4VAC25-40-440.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.1, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2780. Loose ground.

Persons shall be trained in the proper methods of testing for, taking down, and supporting loose ground.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.2, eff. July 19, 1989.

4VAC25-40-2790. Inspection of work area.

Miners shall examine and test, where possible, the back, face, and ribs of their working areas, visually and by sounding, at the beginning of each shift and frequently thereafter. Competent persons shall examine the ground conditions during daily visits to ensure that proper testing and ground control practices are being followed. Loose ground shall be taken down or adequately supported before any other work is done. Ground conditions along haulageways and travelways shall be examined periodically and scaled or supported as necessary.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.3, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-2800. Scaling bar to be provided.

A scaling bar of proper length and design shall be provided where manual scaling may be required. Picks or other short tools shall not be used for scaling when this use places the user in danger from falling material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.4, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-2810. Timbers to be blocked or wedged.

Timbers used for support of ground in active working areas shall be blocked or wedged tightly. Loosened or dislodged timbers shall be promptly repaired or replaced.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.5, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2820. Installation of ground support in shafts.

When necessary, permanent or temporary ground support shall be installed near enough to the bottom of the shaft during shaft sinking to prevent falls of rocks from the sides of the shaft.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.6, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2830. Shaft pillars.

Shaft pillars shall have sufficient strength to protect operating shafts.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.7, eff. July 19, 1989.

4VAC25-40-2840. Rock-bolt installations.

Rock-bolt installations, where needed, shall be installed in a manner to provide safe and effective ground support as soon as possible after an area is exposed.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.8, eff. July 19, 1989.

4VAC25-40-2850. Acceptable rock-bolting materials.

Only rock-bolting materials acceptable to the MSHA or other approved agency shall be used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.9, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2860. Rock-bolt hole drill bits.

Rock-bolt hole drill bits shall be easily identifiable by sight or feel and diameters shall be within a tolerance of 0.030 inches of the manufacturer's recommended hole diameter for the anchor used.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.10, eff. July 19, 1989.

4VAC25-40-2870. Rock-bolt torque tests.

Rock bolts used as a means of ground support and which require torquing shall be torqued to a value within the range determined from information obtained by tests in the strata in which the rock-bolt assembly is used. In no case shall the applied torque cause a bolt tension that would exceed the yield point or anchorage capacity of the rock-bolt assembly being used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.11, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2880. Rock-bolt anchorage tests.

When rock bolts are used as a means of ground support, anchorage test procedures shall be established and tests shall be conducted to determine the anchorage capacity of rock-bolt installations. The results shall be in writing and made available to the director or his duly authorized representative.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.12, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2890. Torque test requirements.

When installing point-anchor rock bolts:

1. A torque test shall be conducted on at least every fourth installed bolt;

2. Torque testing shall be conducted immediately after bolt installation;

3. If the recommended torque has not been achieved, the equipment used to install the bolt shall be adjusted and the next bolt installed shall then be tested; and

4. If the recommended torque has not been achieved on the majority of bolts installed in a working place through equipment adjustment, supplemental support equivalent to longer roof bolts with adequate anchorage, steel or wood sets, or cribs shall be installed.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.13, eff. July 19, 1989.

Article 2

Fire Prevention and Control

4VAC25-40-2900. Accumulation of flammable materials.

All flammable and combustible waste materials, grease, lubricants or flammable liquids shall not be allowed to accumulate where they can create a fire hazard.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.14, eff. July 19, 1989.

4VAC25-40-2910. Fire alarm systems.

Fire alarm systems adequate to warn all employees shall be provided and maintained in operating condition.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.15, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2915. No smoking near flammable materials.

Signs shall be posted which prohibit smoking or an open flame within 25 feet of places where

flammable materials are stored.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2920. Use of flammable materials underground.

No gasoline, benzene, kerosene, or other flammable petroleum products shall be used in powering machinery underground without prior approval of the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.16, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2930. Use of liquefied petroleum gases.

The use of liquefied petroleum gases shall be limited to maintenance work.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.17, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-2940. Underground storage of petroleum products.

Oil, grease, or diesel fuel stored underground shall be kept in suitable tightly sealed containers in fire-resistant areas, at safe distances from explosives, magazines, electrical installations, and shaft stations.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.18, eff. July 19, 1989.

4VAC25-40-2950. Where transformer stations and other rooms to be placed.

Transformer stations, pump rooms, compressor rooms, and similar installations shall be in fire-resistant areas.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.19, eff. July 19, 1989.

4VAC25-40-2960. Oil or fuel storage areas.

Oil or fuel storage areas shall not be located in main ventilation airways.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.20, eff. July 19, 1989.

4VAC25-40-2970. Trailing cables.

Trailing cables shall be fire-resistant.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.21, eff. July 19, 1989.

4VAC25-40-2980. Open flame restrictions.

Fires shall not be built underground; open flame torches shall be attended at all times while lit.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.22, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-2990. When power circuits to be de-energized.

Power circuits shall be de-energized in all areas on idle shifts or idle days, except where power is required. Circuits which remain energized shall be protected by fuses or circuit breakers of the correct

type and capacity consistent with the power load on such idle shifts or idle days.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.23, eff. July 19, 1989.

4VAC25-40-3000. Fire doors to be provided.

A. Fire doors shall be provided at shaft stations or other appropriate locations where necessary to prevent the spread of smoke or gas; the doors shall be equipped with latches operable from both sides. To confine or prevent the spread of toxic gases from a fire originating in an underground shop where maintenance work is routinely done on mobile equipment, one of the following measures shall be taken:

1. Use of control doors or bulkheads;

2. Routing of the mine shop air directly to an exhaust system;

3. Reversal of mechanical ventilation; or

4. Use of an automatic fire suppression system in conjunction with an alternate escape route.

The alternative used shall at all times provide at least the same degree of safety as control doors or bulkheads.

B. If used as an alternative, control doors and bulkheads shall:

1. Be constructed to serve as a barrier to fire, the effects of fire, and air leakage at each opening to the shop; and

2. Be constructed and maintained as follows:

a. So that, once closed, it will not reopen as a result of a differential in air pressure;

b. So that it can be opened from either side by one person or be provided with a personnel door that can be opened from either side;

c. To be clear of obstruction;

d. Provided with a means of remote or automatic closure unless a person specifically designated to close the door in the event of a fire can reach the door within three minutes;

e. If located 20 feet or more from exposed timber or other combustible material, the control doors or bulkheads shall provide protection at least equivalent to a door constructed of no less than one-quarter inch of plate steel with channel or angle-iron reinforcement to minimize

warpage. The framework assembly of the door and the surrounding bulkhead, if any, shall be at least equivalent to the door in fire and air-leakage resistance and in physical strength; and

f. If located less than 20 feet from exposed timber or other combustibles, the control door or bulkhead shall provide protection at least equivalent to a door constructed of two layers of wood, each a minimum of three quarters of an inch in thickness. The wood grain of one layer shall be perpendicular to the wood grain of the other layer. The wood construction shall be covered on all sides and edges with no less than 24-gauge sheet steel. The framework assembly of the door and the surrounding bulkhead, if any, shall be at least equivalent to the door in fire and air-leakage resistance and in physical strength. Roll down steel doors with a fire resistance rating of 1-1/2 hours or greater, but without an insulation core, are acceptable, provided that an automatic sprinkler or deluge system is installed that provides even coverage of the door on both sides.

C. If routing of mine shop air to exhaust system is used as an alternative, routing the mine shop exhaust air directly to an exhaust system shall be done so that no person would be exposed to toxic gases in the event of a shop fire.

D. If mechanical ventilation is used as an alternative, reversal of mechanical ventilation shall be accomplished by a main fan. If the main fan is located underground:

1. The cable or conductors supplying power to the fan shall be routed through areas free of fire hazards; or

2. The main fan shall be equipped with a second, independent power cable or set of conductors from the surface. The power cable or conductors shall be located so that an underground fire disrupting power in one cable or set of conductors will not affect the other; or

3. A second fan capable of accomplishing ventilation reversal shall be available for use in the event of failure of the main fan; and

4. The mechanical ventilation shall provide rapid air reversal that allows persons underground time to exit in fresh air by the second escapeway or find a place of refuge and be done according to predetermined conditions and procedures.

E. If automatic fire suppression system and escape route is used as an alternative, the automatic fire suppression system and alternate escape route shall:

1. Be located in the shop area;

2. Be of the appropriate size and type for the particular fire hazards involved;

3. Be inspected at weekly intervals and properly maintained; and

4. In the case of the escape route, bypass the shop area so that the route will not be affected by a fire in the shop area.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.24, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3010. Timbered mine entrances.

Timbered mine entrances shall be fire resistant for at least 200 feet inside the mine portal or collar or provided with fire protection adequate to control a fire for at least 200 feet inside the mine portal or collar.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.25, eff. July 19, 1989.

4VAC25-40-3020. Waterline outlets.

Waterline outlets, if required, shall be located so as to be accessible if a fire is at stations or storage areas.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.26, eff. July 19, 1989.

4VAC25-40-3030. Welding or cutting near combustible materials.

When welding or cutting near combustible material, the surrounding area shall, if practical, be wet down thoroughly before and after work is done. A fire patrol of the area shall be maintained afterward for so long as necessary to ensure that no danger of fire exists as determined by a responsible supervisor. In addition, when welding or cutting in shafts, winzes or raises, barriers, bulkheads or other protective measures shall be used to prevent injury to anyone working or traveling below.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.27, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3040. Fire protection at conveyor pulleys.

Adequate fire extinguishers or equivalent fire protection shall be provided at the head, tail, and drive pulleys of belt conveyors and at suitable intervals along the belt line.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.28, eff. July 19, 1989.

4VAC25-40-3050. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.29, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3060. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.30, eff. July 19, 1989; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3070. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.31, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3080. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.32, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3090. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.33, eff. July 19, 1989; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3100. Firefighting personnel.

Only trained mine rescue persons shall participate in firefighting operations in advance of the fresh air base.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.34, eff. July 19, 1989.

4VAC25-40-3110. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.35, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3120. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.36, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; repealed, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3130. Conveyor switches.

Belt conveyors shall be equipped with slippage and sequence switches.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.37, eff. July 19, 1989.

4VAC25-40-3140. Stationary diesel equipment installation.

Stationary diesel equipment shall not be supported on a combustible base.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.38, eff. July 19, 1989.

4VAC25-40-3150. Stationary diesel equipment sensors.

Stationary diesel equipment shall be provided with a thermal sensor which automatically stops the diesel engine should overheating occur.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.39, eff. July 19, 1989.

Article 3

Air Quality, Radiation and Physical Agents

4VAC25-40-3160. Oxygen content in mines.

Air in all active areas shall contain at least 19.5% volume oxygen as measured by an acceptable oxygen analyzer.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.40, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3170. Ventilation.

Main fans shall be installed on the surface; if it is necessary to locate them underground, they shall be in fire-resistant areas and shall be provided with remote controls.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.41, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3180. Fan housings and air ducts.

Fan housings and air ducts connecting main fans to underground openings shall be fire resistant.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.42, eff. July 19, 1989.

4VAC25-40-3190. Air intakes and returns.

Separate mine openings shall be provided for main intake and return air currents except during early stages of development. A multiple compartment shaft is a single opening for the purpose of this standard.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 5.43, eff. July 19, 1989.

4VAC25-40-3200. Air current effectiveness.

The air current passing through the mine shall have a sufficient volume and velocity to dilute or remove dangerous amounts of noxious impurities and explosive gases.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.44, eff. July 19, 1989.

4VAC25-40-3210. Fan maintenance.

Main fans shall be inspected and maintained properly.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.45, eff. July 19, 1989.

4VAC25-40-3220. Mine atmosphere test instruments.

Instruments shall be provided to test the mine atmosphere quantitatively for carbon monoxide,

nitrogen dioxide, and other gases that occur in the mine. Tests shall be conducted as frequently as necessary by the operator to ensure that the required quality of air is maintained.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.46, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3230. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 15.47, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3240. Access to inadequately ventilated areas.

Access to inadequately ventilated areas shall be sealed, or barricaded and posted against entry.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.48, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3250. Installation of ventilation tubing.

When used, ventilation tubing shall be installed so that the air current sweeps the face areas effectively. Maximum distance of the end of the tubing from the face generally shall be 30 feet for blowing and six feet for exhausting.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.49, eff. July 19, 1989.

4VAC25-40-3260. Ventilation door operation.

Ventilation doors not operated mechanically shall be designed and installed so that they are self-closing and will remain closed regardless of the direction of the air movement.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.50, eff. July 19, 1989.

4VAC25-40-3270. Requirements for ventilation doors.

Ventilation doors shall be:

1. Substantially constructed;
2. Covered with fire-retardant material, if constructed of wood;
3. Maintained in good condition;
4. Self-closing, if manually operated; and
5. Equipped with audible or visual warning devices, if mechanically operated.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.51, eff. July 19, 1989.

4VAC25-40-3280. Ventilation door closing.

When ventilation control doors are opened as a part of the normal mining cycle, they shall be closed as soon as possible to reestablish normal ventilation to active areas.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.52, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3290. Sampling for radon gas.

Mine atmospheres shall be sampled to determine if hazardous concentrations of radon gas are present. Where potentially hazardous concentrations are found, or known sources of radon exist, each active area shall be sampled as often as necessary by a competent person.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.53, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3300. Maximum annual exposure.

No person shall be permitted to receive an exposure to radon gas in excess of four working level months in any calendar year.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.54, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3310. Maximum concentrations.

Persons shall not be exposed to air containing concentrations of radon gas exceeding 1.0 working level in active areas.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.55, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3320. Changes in permissible exposures.

If levels of permissible exposures to concentrations of radon gas differ from those prescribed in this chapter are recommended by the Environmental Protection Agency and approved by the President of the United States, no employee shall be permitted to receive exposures in excess of those levels after the effective dates established by the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.56, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17,

eff. July 1, 1998.

Article 4

Explosives

4VAC25-40-3325. Storage and use of explosives.

See 4VAC25-40-3475 on gassy mines for blasting requirements.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3328. Certified underground blaster.

Shots shall be fired by a certified underground blaster.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3330. Construction of underground storage magazines.

Main storage magazines used to store explosives or detonators near working faces shall be constructed with only nonsparking material inside and equipped with covers or doors and shall be located out of the line of blasts, 25 feet from roadways, power lines and in a reasonably dry place protected from roof and rib falls.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.57, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3340. Use of storage magazines.

Box-type, main storage magazines shall be used to store detonators or explosives other than blasting agents near working faces and shall be located not less than 50 feet from the face.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.58, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3350. Day-box magazines.

A. Day boxes shall be suitably labeled.

B. Contents not used during the shift shall be returned to the main magazine at the end of each shift.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.59, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3360. Detonator-storage magazines.

Detonator-storage magazines shall be of the same construction as explosive-storage magazines and shall be separated by at least 25 feet from explosive-storage magazines.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.60, eff. July 19, 1989.

4VAC25-40-3370. Notification of hoisting personnel.

Persons assigned to and responsible for hoisting shall be notified whenever explosives or detonators are being transported in a shaft conveyance.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.61, eff. July 19, 1989.

4VAC25-40-3380. When hoisting to be stopped.

Hoisting in adjacent shaft compartments shall be stopped when explosives or detonators are being

handled.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.62, eff. July 19, 1989.

4VAC25-40-3390. Attending vehicles loaded with explosives.

Vehicles shall be attended, whenever practical and possible, while loaded with explosives or detonators.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.63, eff. July 19, 1989.

4VAC25-40-3400. Cars containing explosives to be pulled.

Cars containing explosives or detonators shall be pulled, except when hand-trammed.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.64, eff. July 19, 1989.

4VAC25-40-3410. Warning of blasting.

Ample warning shall be given before blasts are fired. All persons shall be cleared and removed from areas endangered by the blast. Clear access to exits shall be provided for personnel firing the rounds.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.65, eff. July 19, 1989.

4VAC25-40-3420. Leaving blasting area; reentering blasting area.

A. In areas where dangerous accumulations of water, gas or mud could be encountered, persons shall be removed to safe places before blasting.

B. Blasting areas shall not be reentered after firing for a minimum time limit of 30 minutes and not until the concentration of smoke, dust, and fumes has been reduced to safe limits.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.66, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3430. Misfires to be reported.

Misfires shall be reported to the certified foreman. The blast area shall be barricaded and posted with warning signs until the misfire has been disposed of by a certified underground blaster.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.67, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3440. Secondary blasting.

In secondary blasting, if more than one shot is to be fired at one time, blasting shall be done electrically or with detonating cord.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.68, eff. July 19, 1989.

4VAC25-40-3450. Isolating explosives from static electricity.

Explosives, detonators, and blasting lines shall be isolated from sources of static electricity and stray currents and from extraneous sources.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.69, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3460. Electric blasting.

Where electric blasting is to be performed, electric circuits and equipment in the immediate area to be blasted shall be de-energized before explosives or detonators are brought into the area; the power shall not be turned on again until after the shots are fired.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.70, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3470. Initiating blasts from safe location.

Blasts in shafts or winzes shall be initiated from a safe location outside the shaft or winze.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.71, eff. July 19, 1989.

4VAC25-40-3475. Blasting in gassy mines.

Blasts in gassy mines shall be initiated electrically, and multiple shot blasts shall be initiated with millisecond delay detonators. Permissible blasting units of capacity suitable for the number of holes in a round to be blasted shall be used unless the round is fired from the surface when all persons are out of the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3478. Stemming.

Boreholes shall be stemmed as prescribed for the explosives used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Article 5

Drilling

4VAC25-40-3480. Drilling machine operation.

Persons operating or working near drilling machines shall position themselves so that they will not be struck or lose their balance if the steel breaks or sticks.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.72, eff. July 19, 1989.

4VAC25-40-3490. Drilling machine control levers.

Persons shall not attempt to operate drills from positions that hinder their access to the control levers.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.73, eff. July 19, 1989.

4VAC25-40-3500. Secure footing when drilling.

Drilling shall not be attempted from insecure footing or staging or from atop equipment not designed for this purpose.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.74, eff. July 19, 1989.

4VAC25-40-3510. Procedure when collaring holes.

Persons shall not hold the drill steel while collaring holes, rest their hands on the chuck or centralizer while drilling.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.75, eff. July 19, 1989.

4VAC25-40-3520. Procedure for moving portable drills.

Air shall be turned off before moving portable drills from one face to another.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.76, eff. July 19, 1989.

4VAC25-40-3530. Receptacles or racks.

Receptacles or racks shall be provided for drill steel stored on jumbos.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.77, eff. July 19, 1989.

4VAC25-40-3540. Warning to persons below jumbo decks.

Before drilling cycle is started, warning shall be given to persons working below jumbo decks.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.78, eff. July 19, 1989.

4VAC25-40-3550. Anchoring of drills on columns.

Drills on columns shall be anchored firmly before drilling is started and shall be retightened frequently thereafter.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.79, eff. July 19, 1989.

Article 6

Loading, Hauling, and Dumping

4VAC25-40-3560. Carrying tools or materials on top of locomotives.

Tools or materials, except properly located and secured rerailing devices, shall not be carried on top of locomotives. Tools or materials shall not be carried in the cab if they would interfere with the operation of the locomotive.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.80, eff. July 19, 1989.

4VAC25-40-3570. Coupling or uncoupling cars.

Trains shall be brought to a complete stop, then moved very slowly when coupling or uncoupling cars manually.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.81, eff. July 19, 1989.

4VAC25-40-3580. Makeshift couplings.

Makeshift couplings shall not be used.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.82, eff. July 19, 1989.

4VAC25-40-3590. Mantrip cars.

Supplies, materials, and tools other than small hand tools shall not be transported with persons in mantrip cars. Mantrip cars shall be operated independently of ore and supply trips.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.83, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3595. Transportation of miners.

A. Each mantrip shall be operated independently of any loaded trip of minerals or other material.

B. All miners, except the motorman and trip rider, shall ride inside the cars.

C. Miners shall remain seated while in moving mantrip cars, shall not board or leave moving mantrip cars, and shall proceed to and from mantrips in an orderly manner.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3600. Signalmen.

When a signalman is used during slushing operations, he shall positioned in a safe place.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.84, eff. July 19, 1989.

4VAC25-40-3610. Open dry hole collars.

Collars of open dry holes shall be kept free of muck and material.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.85, eff. July 19, 1989.

4VAC25-40-3620. Hazardous chute lips.

Warning devices, barricades or conspicuous markings shall be installed when chute lips create a hazard to personnel.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.86, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3630. Empty chutes.

Empty chutes shall be properly guarded prior to filling or sufficient material shall be left in the chute bottom to prevent rock from flying out when broken material is dumped into the chute.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.87, eff. July 19, 1989.

4VAC25-40-3640. Danger from chute-pulling operations.

Ample warning shall be given to persons who may be affected by the draw or otherwise exposed to danger from chute-pulling operations.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.88, eff. July 19, 1989.

4VAC25-40-3650. Safety lines to be provided.

Persons shall not stand on broken rock or ore over draw points if there is danger that the chute will be pulled. Suitable platforms or safety lines shall be provided when work must be done in such areas.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.89, eff. July 19, 1989.

4VAC25-40-3660. Loosening hang-ups.

Persons attempting to loosen hang-ups shall wear and use safety belts with tag lines or ropes to

prevent their falling into the chute; if working near the chute opening, a bar sufficient in length to protect the person from dislodged material shall be used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.90, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3670. Shelter holes to be provided.

Shelter holes shall be provided to ensure the safety of persons along haulageways where continuous clearance of at least 30 inches from the farthest projection of moving equipment on at least one side of the haulageway cannot be maintained.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.91, eff. July 19, 1989.

4VAC25-40-3680. Design of shelter holes.

Shelter holes shall be at least four feet wide; marked conspicuously with lights, reflective signs, reflective tape, reflectors or luminous paint; provide a minimum of 40 inches clearance from the farthest projection of moving equipment; and shall not be used for storage of timber, tools, or other materials unless a 40-inch clearance is maintained.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.92, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3690. Trip lights.

Trip lights or approved reflectors shall be used on the rear of pulled trips and on the front of pushed trips.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.93, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3700. Operation of mantrip cars.

Mantrip cars shall be operated at speeds consistent with the condition of tracks and equipment used.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.94, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3710. Discharge and boarding points.

Where mantrip cars are used, discharge and boarding points shall be designated. Persons shall not board or leave moving mantrip cars.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.95, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3720. Mantrip passengers.

Mantrip passengers shall ride on the side of the car opposite the trolley wire when the trolley wire is not centrally located unless covered mantrip cars are provided.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.96, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3730. Movement of rock or material trains.

During shift changes, the movement of rock or material trains shall be limited to areas where such trains could not present a hazard to persons coming on or going off shift.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.97, eff. July 19, 1989.

4VAC25-40-3740. Use of flexible ladders.

Flexible ladders shall be used only where rigid ladders may be impractical.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.98, eff. July 19, 1989.

4VAC25-40-3750. Trap doors in ladderways.

Trap doors or adequate guarding shall be provided in ladderways at each level. Doors shall be kept operable.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.99, eff. July 19, 1989.

4VAC25-40-3760. Size of openings in ladderways.

The minimum, unobstructed cross-sectional opening in ladderways shall be 24 inches by 24 inches.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.100, eff. July 19, 1989.

4VAC25-40-3770. Entering manways.

Warning shall be given and acknowledged before entering a manway above or below where persons are working.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.101, eff. July 19, 1989.

4VAC25-40-3780. Working floors in stopes.

Working floors in square-set stopes shall be lagged closely and securely, and open sets shall be equipped with guardrails.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.102, eff. July 19, 1989.

4VAC25-40-3790. Steep travelways.

Travelways steeper than 30° from the horizontal shall provided with ladders or stairways.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.103, eff. July 19, 1989.

4VAC25-40-3800. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.104, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-3810. Maintaining separate escapeways.

Every mine shall have two separate properly maintained escapeways to the surface which are so positioned that damage to one shall not lessen the effectiveness of the other, or a method of refuge shall be provided when only one opening to the surface is possible.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.105, eff. July 19, 1989.

4VAC25-40-3820. Escape routes.

Escape routes shall be:

1. Inspected at regular intervals and maintained in safe, travelable condition; and

2. Marked with conspicuous and easily read direction signs that clearly indicate the ways of escape.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.106, eff. July 19, 1989.

4VAC25-40-3830. Refuge areas.

Refuge areas shall be:

1. Of fire-resistant construction, preferably in untimbered areas of the mine;

2. Large enough to accommodate readily the normal number of persons in the particular area of the mine;

3. Constructed so they can be made gas-tight; and

4. Provided with telephones, adequate air and water supplies, suitable hand tools, and stopping materials.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.107, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3840. Development of escape and evacuation plan.

A specific escape and evacuation plan, and revisions thereof, suitable to the conditions and mining system of the mine and showing assigned responsibilities of all key personnel in the event of an emergency shall be developed by the operator and set out in written form. A copy of the plan and revisions thereof shall be available to the director or an authorized representative, and any affiliated mine rescue teams. Also copies of the plans and revisions thereof shall be posted at locations convenient to all

persons on the surface and underground. Such a plan shall be updated as necessary and shall be reviewed jointly by the operator and the director or his authorized representative at least once every six months from the date of the last review. The plan shall include:

1. Mine maps or diagrams showing all underground workings, locations of surface and underground ventilation fans and ventilation controls, directions of principal air flow, locations of refuge chambers, locations of first aid supplies and firefighting equipment, locations of main electrical installations and disconnects, locations of surface and underground fuel storage, locations of surface and underground facilities to store explosives and detonators, location of escape routes and locations of existing telephones or other voice communication devices (see 4VAC25-40-3120 and 4VAC25-40-3850);

2. A plan for fire prevention, warning, emergency evacuation, firefighting and emergency medical assistance;

3. Surface procedure to follow in an emergency, including the notification of proper authorities;

4. A statement of the location and availability of mine rescue personnel and equipment;

5. A plan for instruction of mine workers and rescue personnel; and

6. A statement of the availability of emergency communications, transportation, power and ventilation equipment.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.108, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-3850. Telephone or voice communications.

Telephone or other voice communication shall be provided between the surface and refuge chambers and such systems shall be independent of the mine power supply.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.109, eff. July 19, 1989.

4VAC25-40-3855. Communications.

Telephone service or equivalent two-way communication facilities shall be provided from underground working areas to the surface.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3860. Inclined escapeways.

Designated escapeways inclined more than 30° from the horizontal shall be equipped with stairways, ladders, cleated walkways, or emergency hoisting facilities.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.110, eff. July 19, 1989.

4VAC25-40-3870. Emergency hoisting facilities.

Emergency hoisting facilities shall conform to the extent possible to safety requirements for other man hoists, shall be adequate to remove the persons from the mine with a minimum of delay, be maintained in ready condition, and be tested at least every 30 days; records shall be kept of these tests.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.111, eff. July 19, 1989.

4VAC25-40-3880. Check-in and check-out system.

Each operator of an underground mine shall establish a check-in and check-out system which shall provide an accurate record of persons in the mine. These records shall be kept on the surface in a place chosen to minimize the danger of destruction by fire or other hazards. Every person underground shall carry a positive means of being identified.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.112, eff. July 19, 1989.

Article 7

Electricity

4VAC25-40-3890. Bare wires and cables.

Wires and cables not encased in armor shall be supported by well-installed insulators and shall not touch combustible materials, roof, or ribs; however, this requirement shall not apply to ground wires, grounded power conductors, and trailing cables.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.113, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3900. Metal pipelines.

Metal pipelines 1,000 feet or more in length along haulage roads where grounded return circuits are used shall be bonded to the return at the ends and at intervals not exceeding 500 feet.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.114, eff. July 19, 1989.

4VAC25-40-3910. Insulation of power lines.

Power lines shall be well separated or insulated from waterlines, telephone lines, and air lines.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.115, eff. July 19, 1989.

4VAC25-40-3920. Fastening power cables.

Power cables in shafts and boreholes shall be fastened securely in such manner as to prevent undue

strain on the sheath, insulation, or conductors.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.116, eff. July 19, 1989.

4VAC25-40-3930. Disconnecting switches.

Disconnecting switches that can be opened safely under load shall be provided underground at all primary power circuits near shafts, levels, and boreholes. Disconnecting switches shall be installed underground in all main power circuits within approximately 500 feet of the bottoms of shafts and boreholes, and at other places where main power circuits enter the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.117, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3940. Transformer stations.

Transformer stations shall be enclosed to prevent persons from unintentionally or inadvertently contacting energized parts.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.118, eff. July 19, 1989.

4VAC25-40-3950. Trolley feeder wires.

Trolley and trolley feeder wires shall be installed opposite the clearance side of haulageways.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.119, eff. July 19, 1989.

4VAC25-40-3955. Fire precautions in transportation of mining equipment.

A. Prior to moving or transporting any unit of off-track mining equipment in areas of the active workings where energized trolley wires or trolley feeder wires are present:

1. The unit of equipment shall be examined by a certified person to ensure that accumulation of oil, grease, and other combustible materials have been removed from such unit of equipment; and

2. A qualified person shall examine the trolley wires, trolley feeder wires, and the associated automatic circuit interrupting devices to ensure that proper short circuit protection exists.

B. A record shall be kept of the examinations and shall be made available, upon request, to the director.

C. Off-track mining equipment shall be moved or transported in areas of the active workings where energized trolley wires or trolley feeder wires are present only under the direct supervision of a certified person who shall be physically present at all times during moving or transporting such equipment.

D. The frames of off-track mining equipment being moved or transported in accordance with this section shall be covered on the top and on the trolley wire side with fire-resistant material, where appropriate, as determined by the director.

E. Electrical contact shall be maintained between the mine track and the frames of off-track mining equipment being moved in-track and trolley entries, except that rubber-tired equipment need not be grounded to a transporting vehicle if no metal part of such rubber-tired equipment can come into contact with the transporting vehicle.

F. To avoid accidental contact with power lines, the equipment being transported or trammed shall be insulated or assemblage removed, if necessary, if the clearance to the power lines is six inches or less.

G. Sufficient prior notice shall be given the department so that a mine inspector may travel the route of the move before the actual move is made, if he deems it necessary.

H. A minimum vertical clearance of 12 inches shall be maintained between the farthest projection of the unit of equipment which is being moved and the energized trolley wires or trolley feeder wires at all times during the movement or transportation of such equipment. If the height of the seam of minerals does not permit 12 inches of vertical clearance to be so maintained, the following additional precautions shall be taken:

1. Electric power shall be supplied to the trolley wires or trolley feeder wires only from out by the unit of equipment being moved or transported. Where direct current electric power is used and

such electric power can be supplied only from the equipment being moved or transported, power may be supplied from such equipment if a miner with the means to cut off the power, and in direct communication with persons actually engaged in the moving or transporting operation, is stationed out by the equipment being moved;

2. The settings of automatic circuit interrupting devices used to provide short circuit protection for the trolley circuit shall be reduced to not more than one-half of the maximum current that could flow if the equipment being moved or transported were to come into contact with the trolley wire or trolley feeder wire;

3. At all times the unit of equipment is being moved or transported, a miner shall be stationed at the first automatic circuit breaker out by the equipment being moved. Such miner shall be in direct communication with persons actually engaged in the moving or transporting operation and capable of communicating with the authorized person on the surface required to be on duty;

4. Where trolley phones are utilized to satisfy the requirements of subsection C of this section, telephones or other equivalent two-way communication devices that can readily be connected with the mine communication system shall be carried by the miner stationed at the first automatic circuit breaker out by the equipment being moved and by a miner actually engaged in the moving or transporting operation; and

5. No person shall be permitted to be in by the unit of equipment being moved or transported, in the ventilating current of air that is passing over such equipment, except those persons directly engaged in moving such equipment. The provisions of this section shall not apply to units of mining equipment that are transported in mine cars, provided that no part of the equipment extends above or over the sides of the mine car.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3958. Use of track as electrical power conductor.

The following standards shall apply where track is used as a power conductor:

1. Both rails of main line tracks shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet. If the rails are paralleled with a feeder circuit of like

polarity, such paralleled feeder shall be bonded to the track rails at intervals of not more than 1,000 feet.

2. At least one rail on secondary track haulage roads shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet.

3. Track switches on entries shall be well-bonded.

4. Rails shall not be used as power conductors in rooms.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3960. Splices in trailing cables.

Not more than five splices shall be made in any trailing cable unless they are vulcanized.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.120, eff. July 19, 1989.

4VAC25-40-3970. Machines not using cable reels.

On machines not using cable reels, no splices shall be present in the first 25 feet of trailing cable adjacent to the equipment.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.121, eff. July 19, 1989.

Article 8

Personal Protection

4VAC25-40-3980. Welding operations.

Welding operations shall be shielded and well-ventilated.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.122, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-3990. Self-rescue requirements.

Each mine having underground workings shall submit to the division a plan for the number, type, and location(s) of self-rescue devices sufficient for the number of persons working underground and the hazards particular to the underground workings of the mine. At a minimum, a one hour filter self-rescue device approved by the MSHA shall be made available by the operator to all personnel underground. The filter self-rescue devices shall be maintained in good condition by a daily visual check and weighing of the devices every six months, with maintenance records kept.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.123, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4000. Requirements for self-rescue devices.

Use of self-rescue devices shall meet the following standards:

1. Except as otherwise provided in this section, self-rescue devices meeting the requirements of 4VAC25-40-3990 shall be worn or carried by all persons underground;

2. Where the wearing or carrying of self-rescue devices meeting the requirements of 4VAC25-40-3990 is hazardous to a person, such self-rescue devices shall be located at a distance no greater than 25 feet from such person; and

3. Where a person works on or around mobile equipment, self-rescue devices may be placed in a readily accessible location on such equipment.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.124, eff. July 19, 1989.

4VAC25-40-4010. Landing shaft conveyances.

Chairs should be use to land shaft conveyances when heavy supplies or equipment are being handled.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.125, eff. July 19, 1989.

4VAC25-40-4020. Individual lamps to be carried.

Individual electric lamps shall be carried for illumination by all persons underground.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.126, eff. July 19, 1989.

4VAC25-40-4030. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.127, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

4VAC25-40-4040. Inspections to follow fire or explosion.

In the event of a mine fire or an explosion, operations shall not be resumed until such mine or portion of such mine has been inspected and pronounced safe by a state mine inspector.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.128, eff. July 19, 1989.

4VAC25-40-4050. (Repealed.)

Historical Notes

Derived from VR480-05-1.2 § 15.129, eff. July 19, 1989; repealed, Virginia Register Volume 29, Issue 25, eff. September 26, 2013.

Article 9

Safety Program

4VAC25-40-4060. Mine emergency and self-rescue training.

A. On an annual basis all persons who are required to go underground shall be instructed in applicable sections of the Bureau of Mines Instruction Guide 19, Mine Emergency Training.

B. On an annual basis all persons who are required to go underground shall be instructed in the use of the individual self-rescue device provided to them. The instruction shall be given by a competent person using a training model of the same type as the self-rescue device provided to the employee.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.130, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4061. Mine rescue stations.

Mines employing 75 or more persons underground shall either:

1. Maintain a mine rescue station equipped with at least 10 self-contained oxygen breathing apparatus, each with a minimum of two hours capacity, along with adequate supplies and spare parts; or

2. Affiliate with central or cooperative mine rescue stations that can provide two fully equipped mine rescue teams in the event of an emergency. Such affiliations shall be in writing and must be approved annually by the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4062. Rescue apparatus.

Mine rescue apparatus shall be acceptable to the MSHA or other approved agency and shall be properly maintained for immediate use. The equipment shall be tested at least once a month and records kept of the tests for at least one year.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4063. Rescue crews to be provided.

At any mine employing 75 or more persons underground, at least two rescue crews of five persons each shall be trained at least annually in the use, care, and limitations of self-contained oxygen breathing and firefighting apparatus and in mine rescue procedures. The training shall be given by division personnel or by persons approved to give such instruction. Rescue crews shall include supervisory and key personnel familiar with all mine installations that could prove vital to firefighting and rescue operations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4064. Alternative mine rescue capability.

Mines employing fewer than 75 persons underground shall maintain mine rescue capabilities as described in 4VAC25-40-4061 through 4VAC25-40-4063, or the operator may request in writing and obtain approval from the director for an alternative mine rescue capability. Such alternative mine rescue plans shall be subject to annual review and approval.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4065. Mine evacuation drills.

Mine evacuation drills shall be held for each shift once every six months. These evacuation drills shall involve all employees each shift and shall include:

1. Activation of the fire alarm system; and
2. Evacuation of all persons from their work areas to the surface or to designated central

evacuation points at some time other than a shift change.

Records of such drills, showing the time and date, shall be kept for at least two years after each drill.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4066. Instruction in escape plans.

All persons who work underground shall be instructed at least once each calendar year on current escape and evacuation plans, fire alarm signals, and applicable procedures to be followed in case of fire or other emergency. New employees shall receive such instructions before going underground. Whenever an employee is assigned to work in another area of the mine, he shall be instructed on the escapeway for that area at the time of such assignment. However, employees who normally work in more than one area of the mine shall be instructed at least once each calendar year in the location of escapeways for all areas of the mine in which they normally work or travel. Whenever a change is made in escape and evacuation plans and procedures for any area of the mine, all affected employees shall be instructed of such change. Records of instruction shall be kept for two years.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

Article 10

Personnel Hoisting

4VAC25-40-4070. Capacities of hoists.

Hoists shall have rated capacities consistent with the loads handled and the recommended safety factors of the ropes used.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.131, eff. July 19, 1989.

4VAC25-40-4080. Anchoring hoists.

Hoists shall be anchored securely.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.132, eff. July 19, 1989.

4VAC25-40-4090. Connecting driving mechanisms to personnel hoists.

Belts, ropes, or chains shall not be used to connect driving mechanisms to personnel hoists.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.133, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4100. Brakes on personnel hoists.

Any hoist used to hoist persons shall be equipped with a brake or brakes which shall be capable of holding its fully loaded cage, skip, or bucket at any point in the shaft.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.134, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4110. Personnel hoist clutches.

The operating mechanism of the clutch of every personnel hoist drum shall be provided with a locking mechanism, or interlocked electrically or mechanically with the brake, to prevent accidental withdrawal of the clutch.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.135, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4120. Brakes on automatic hoists.

Automatic hoists shall be provided with devices that automatically apply the brakes in the event of power failure.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.136, eff. July 19, 1989.

4VAC25-40-4130. Friction hoist overtravel protection.

In a friction hoist installation, tapered guides or other acceptable devices shall be installed above and below the limits of regular travel of the conveyance and arranged to prevent overtravel in the event of failure of other devices.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.137, eff. July 19, 1989.

4VAC25-40-4140. Overtravel prevention on personnel hoists.

All personnel hoists shall be provided with devices to prevent overtravel. When utilized in shafts exceeding 100 feet in depth, such hoists shall also be provided with over-speed devices.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.138, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4150. Friction hoists.

Friction hoists shall be provided with synchronizing mechanisms that recalibrate the overtravel devices and position indicators to correct for rope creep or stretch.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.139, eff. July 19, 1989.

4VAC25-40-4160. Overtravel bypass switches.

When an overtravel bypass switch is installed, the switch shall function so as to allow the conveyance to be moved through the overtravel position when the switch is held in the closed position by the hoist person. The overtravel bypass switch shall return automatically to the open position when released by the hoist person.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.140, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4170. Emergency braking for electric hoists.

Each electric hoist shall be equipped with a manually operable switch that will initiate emergency braking action to bring the conveyance and the counterbalance safely to rest. This switch shall be located within reach of the hoist person in case the manual controls of the hoist fail.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.141, eff. July 19, 1989.

4VAC25-40-4180. Position indicators.

An accurate and reliable indicator of the position of the cage skip, bucket, or cars in the shaft shall be provided.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.142, eff. July 19, 1989.

4VAC25-40-4190. Placement of hoist controls.

Hoist controls shall be placed or housed so that the noise from machinery or other sources will not prevent hoist persons from hearing signals.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.143, eff. July 19, 1989.

4VAC25-40-4200. Drum flanges.

Flanges on drums shall extend radially a minimum of two rope diameters and not less than four inches beyond the last wrap.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.144, eff. July 19, 1989.

4VAC25-40-4210. Drum grooves.

Where grooved drums are used, the grooves shall be of the proper size and pitch for the ropes used.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.145, eff. July 19, 1989.

4VAC25-40-4220. Engine-powered hoists.

Where any diesel or similar fuel injection engine is used to power a hoist, the engine shall be equipped with a damper or other cutoff in its air intake system. The control handle shall be clearly labeled to indicate that its intended function is for emergency stopping only.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.146, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4230. Standards for wire ropes.

The American National Standard for Wire Rope for Miners shall be used as a guide in the selection, installation, and maintenance of wire ropes used for hoisting, except in those instances where the recommendations cited herein are more stringent.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.147, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4240. Installation of wire ropes.

At installation, the nominal strength (manufacturer's published catalog strength) of wire ropes used for hoisting shall meet the minimum rope strength values obtained by the following formulas in which "L" equals the maximum suspended rope length in feet:

1. Winding drum ropes (all constructions, including rotation resistant):

   For rope lengths less than 3,000 feet:

   Minimum Value = Static Load X (7.0 - 0.001L)

   For rope lengths 3,000 feet or greater:

   Minimum Value = Static Load X 4.0

2. Friction drum ropes:

   For rope lengths less than 4,000 feet:

   Minimum Value = Static Load X (7.0 - 0.0005L)

   For rope lengths 4,000 feet or greater:

   Minimum Value = Static Load X 5.0

3. Tail ropes (balance ropes):

   Minimum Value = Weight of Rope X 7.0

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.148, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4250. Guide ropes.

If guide ropes are used in shafts for personnel hoisting applications other than shaft development, the nominal strength (manufacturer's published catalog strength) of the guide rope at installation shall meet the minimum value calculated as follows:

Minimum Value = Static Load X 5.0.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.149, eff. July 19, 1989.

4VAC25-40-4260. Wire rope examination.

A. Wire rope attachments shall be replaced when cracked, deformed, or excessively worn.

B. At least once every 14 calendar days, each wire rope in service shall be visually examined along its entire active length for visible structural damage, corrosion, and improper lubrication or dressing. In addition, visual examination for wear and broken wires shall be made at stress points, including the area near attachments, where the rope rests on sheaves, where the rope leaves the drum, at drum crossovers, and at change of layer regions. When any visible condition that results in a reduction of rope strength is present, the affected portion of the rope shall be examined on a daily basis.

C. Before any person is hoisted with a newly installed wire rope or any wire rope that has not been examined in the previous 14 calendar days, the wire rope shall be examined in accordance with subsection B of this section.

D. At least once every six months, nondestructive tests shall be conducted of the active length of the rope, or rope diameter measurements shall be made:

1. Wherever wear is evident;

2. Where the hoist rope rests on sheaves at regular stopping points; and

3. Where the hoist rope leaves the drum at regular stopping points and at drum crossover and change of layer regions.

E. At the completion of each examination required by subsections B, C and D of this section, the

person making the examination shall certify by signature and date that the examination has been made. If any condition listed in subsection B of this section is present, the person conducting the examination shall make a record of the condition and the date. Certifications and records of examinations shall be retained for one year.

F. The person making the measurements or nondestructive tests as required by subsection D of this section shall record the measurements or test results and the date. This record shall be retained until the rope is retired from service.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.150, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998; Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4270. Requirements for rope ends.

The end of the rope at the drum shall make at least one full turn on the drum shaft, or a spoke of the drum in the case of a free drum, and shall be fastened securely by means of rope clips or clamps. There shall be three full turns of cable or rope on the hoisting drum when the cable or rope is extended to its maximum working length. This standard does not apply to friction hoists.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.151, eff. July 19, 1989.

4VAC25-40-4280. Load end attachment.

The rope shall be attached to the load by the thimble and clip method, the socketing method, or other approved method. If the socketing method is employed, zinc or its equivalent shall be used. The use of Babbitt metal or lead for socketing wire ropes is prohibited. If the thimble and clip method is used, the following shall be observed:

1. The rope shall be attached to the load by passing one end around an oval thimble that is attached to the load bending the end back so that it is parallel to the long or "live" end of the rope and fastening the two parts of the rope together with clips.

2. The u-bolt of each clip shall encircle the short or "dead" end of the rope and the distance between clips shall not be less than the figures given in the accompanying table.

3. As a minimum, the following number of clips or equivalent shall be used for various diameters of six-strand 19-wire plow steel ropes:

Diameter of rope, inches	Number of clips	Center to center spacing of clips, inches
3/4	4	4-1/2
7/8	4	5-1/4
1	4	6
1-1/8	5	6-3/4
1-1/4	5	7-1/2
1-3/8	6	8-1/4
1-1/2	6	9
1-5/8	6	9-3/4
1-3/4	7	10-1/2
1-7/8	8	11-1/4
2	8	12
2-1/8	8	13
2-1/4	8	14

Follow manufacturer's recommendations for other kinds of wire, rope and clips.

4. For all ropes less than 3/4 inch in diameter, at least four clips or equivalent shall be used.

5. When special conditions require the attachment of a sling to the hoisting cable to handle equipment in the shaft, the sling shall be attached by clips or equivalent in accordance with the table in subdivision 3 of this section.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.152, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4290. New ropes.

New ropes shall be broken in according to the manufacturer's recommendations.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.153, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4300. Safety device attachments.

Safety device attachments to hoist ropes shall be selected, installed and maintained according to manufacturer's specifications to minimize internal corrosion and weakening of the hoist rope.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.154, eff. July 19, 1989.

4VAC25-40-4310. Secondary safety connections.

Where possible, conveyances attached to single ropes used to hoist persons shall be provided with secondary safety connections.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.155, eff. July 19, 1989.

4VAC25-40-4320. Headframes and sheaves.

Headframes and sheaves shall be designed and constructed to withstand pulls by the hoists greater than the breaking strengths of the hoist ropes.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.156, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4330. Clearance requirements.

Headframes shall be high enough to provide at least 15 feet of clearance between the bottom of the sheave or drum and the uppermost part of the highest rope connection of the conveyance when the conveyance is at its uppermost person-landing area.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.157, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4340. Fleet angles.

Fleet angles shall not exceed 1 ½°.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.158, eff. July 19, 1989.

4VAC25-40-4350. Platforms.

Platforms with toe-boards and handrails shall be provided around elevated head sheaves.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.159, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4360. Diameter specifications.

Diameters of head sheaves and hoist drums shall conform to the following specifications:

Rope construction	Diameter of sheave and drum	
	Recommended Times rope diameter	Minimum Times rope diameter
6 x 7 classification	72	42
6 x 19	45	30
6 x 37	20	18
6 x 25 type B, flattened strand	45	30
6 x 27 type H, flattened strand	45	30
6 x 30 type G, flattened strand	45	30
18 x 7 classification	51	34

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.160, eff. July 19, 1989.

4VAC25-40-4370. Support grooves.

Head, idler, knuckle, and curve sheaves shall have grooves that support the ropes properly. Before installing new ropes, the grooves shall be inspected and, where necessary, machined to the proper contour and the proper groove diameter.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.161, eff. July 19, 1989.

4VAC25-40-4380. Metal bonnets.

Man cages and skips used for hoisting or lowering employees or other persons in any vertical shaft or any incline shaft with an angle of inclination of 45° from the horizontal, shall be covered with a metal bonnet.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.162, eff. July 19, 1989.

4VAC25-40-4390. Use of buckets to hoist persons.

Buckets shall not be used to hoist persons except during shaft sinking operations, inspection, maintenance, and repairs.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.163, eff. July 19, 1989.

4VAC25-40-4400. Specifications for buckets used to hoist persons.

Buckets used to hoist persons during shaft sinking operations shall be provided with adequate guide ropes and shall have crossheads equipped with safety catches and protective bonnets when the shaft depth exceeds 50 feet.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.164, eff. July 19, 1989; amended, Virginia Register Volume 25, Issue 20, eff. July 8, 2009.

4VAC25-40-4410. Ratings for ropes suspending platforms.

In shaft sinking where a platform is suspended by wire ropes, such ropes shall have an approved rating for the suspended load.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.165, eff. July 19, 1989.

4VAC25-40-4420. Rope guides.

Where rope guides are used in shafts, they shall be of locked coil construction.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.166, eff. July 19, 1989.

4VAC25-40-4430. Use of manually-operated hoists.

When a manually-operated hoist is used, a hoist person approved by the director shall remain within hearing of the telephone or signal device at all times while any person is underground.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.167, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4440. Use of automatic hoists.

When automatic hoisting is used, a hoist person approved by the director shall be in attendance on

the premises while any person is underground.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.168, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4450. Fitness requirements for hoist persons.

Hoist persons shall be physically fit and shall undergo yearly examinations to determine their continued fitness; certification to this effect shall be available at the mine.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.169, eff. July 19, 1989.

4VAC25-40-4460. Competency of hoist persons.

Only hoist persons approved by the director shall operate the hoist except in cases of emergency and in the training of new hoist persons.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.170, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4470. Use of extreme caution.

Hoist persons shall use extreme caution when hoisting or lowering persons.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.171, eff. July 19, 1989.

4VAC25-40-4480. Speed for hoisting persons.

The safe speed for hoisting persons in a cage shall be determined for each shaft, and this speed shall not be exceeded. Persons shall not be hoisted at a speed faster than 2,500 feet per minute, except in an emergency.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.172, eff. July 19, 1989.

4VAC25-40-4490. Maximum speeds.

Maximum acceleration and deceleration shall not exceed six feet per second.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.173, eff. July 19, 1989.

4VAC25-40-4500. Authorized persons.

Only authorized persons shall be in hoist rooms.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.174, eff. July 19, 1989.

4VAC25-40-4510. Balancing cages.

Balancing of cages shall not be done while persons are on cages.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.175, eff. July 19, 1989.

4VAC25-40-4520. Lowering conveyances by brakes.

Conveyances shall not be lowered by the brakes alone except during emergencies.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.176, eff. July 19, 1989.

4VAC25-40-4530. Maximum number of persons to ride.

The director shall designate the maximum number of persons permitted to ride on a trip at one time; this limit shall be posted on each landing.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.177, eff. July 19, 1989.

4VAC25-40-4540. Persons in charge.

Authorized persons shall be in charge of all mantrips.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.178, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4550. Conduct on conveyances.

Persons shall enter, ride, and leave conveyances in an orderly manner.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.179, eff. July 19, 1989.

4VAC25-40-4560. Moving conveyances.

Persons shall not enter or leave conveyances which are in motion or after a signal to move the conveyance has been given to the hoist person.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.180, eff. July 19, 1989.

4VAC25-40-4570. Doors to be closed.

Cage doors or gates shall be closed while persons are being hoisted; they shall not be opened until the cage has come to a stop.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.181, eff. July 19, 1989.

4VAC25-40-4580. Riding in loaded buckets.

Persons shall not ride in skips, or buckets with muck, supplies, materials, or tools other than small hand tools.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.182, eff. July 19, 1989.

4VAC25-40-4590. When skips shall be empty.

When combinations of cages and skips are used, the skips shall be empty while persons are being transported.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.183, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4600. Hoisting rock or supplies.

Rock or supplies shall not be hoisted in the same shaft as persons during shift changes, unless the compartments and dumping bins are partitioned to prevent spillage into the cage compartment.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.184, eff. July 19, 1989.

4VAC25-40-4610. Limitations on riding shaft conveyance.

Persons shall not ride the bail, rim, or bonnet of any shaft conveyance, except where necessary for the inspection and maintenance of the shaft and lining.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.185, eff. July 19, 1989.

4VAC25-40-4620. Open hooks.

Open hooks shall not be used to hoist buckets or other conveyances.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.186, eff. July 19, 1989.

4VAC25-40-4630. Speeds for open buckets.

When persons are hoisted in an open bucket, speeds shall not exceed 500 feet a minute and shall not exceed 200 feet a minute when within 100 feet of a landing.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.187, eff. July 19, 1989.

4VAC25-40-4640. Where buckets to be stopped on lowering.

Buckets shall be stopped about 15 feet from the shaft bottom to await a signal from one of the crew on the bottom for further lowering.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.188, eff. July 19, 1989.

4VAC25-40-4650. Where buckets to be stopped on raising.

Buckets shall be stopped after being raised three feet when persons are hoisted from the bottom; a second hoisting signal shall be given after the bucket has been stabilized. Hoisting shall be at a minimum speed and the bell cord shall be attended constantly until the crosshead has been engaged.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.189, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4660. Blocking cars.

Where mine cars are hoisted by cage or skip, means for blocking cars shall be provided at all landings and also on the cage.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.190, eff. July 19, 1989.

4VAC25-40-4670. Securing materials in buckets.

When tools, timbers, or other materials are being lowered or raised in a shaft by means of a bucket, skip, or cage, they shall be secured or so placed that they will not strike the sides of the shaft.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.191, eff. July 19, 1989.

4VAC25-40-4680. Placement of conveyances not in use.

Conveyances not in use shall be released and raised or lowered at least 10 feet from the floor of the landing.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.192, eff. July 19, 1989.

4VAC25-40-4690. Signaling between stations and hoist room.

There shall be at least two effective approved methods of signaling between each of the shaft stations and the hoist room, one of which shall be a telephone or speaking tube.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.193, eff. July 19, 1989.

4VAC25-40-4700. When telephone instructions are acceptable.

Hoist persons shall not accept hoisting instructions by telephone unless the regular signaling systems are out of order. During such an emergency, one person shall be designated to direct movement of the conveyance.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.194, eff. July 19, 1989.

4VAC25-40-4710. Signals to hoist operator.

A method shall be provided to signal the hoist operator from cages or other conveyances at any point in the shaft.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.195, eff. July 19, 1989.

4VAC25-40-4720. Standard hoisting signals.

A standard code of hoisting signals shall be adopted and used each mine.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.196, eff. July 19, 1989.

4VAC25-40-4730. Posting of signal codes.

A legible signal code shall be posted prominently in the hoist house within easy view of the hoist persons and at each place where signals are given or received.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.197, eff. July 19, 1989.

4VAC25-40-4740. Positioning signal devices.

Hoisting signal devices shall be positioned within easy reach of persons on the shaft bottom or constantly attended by a person stationed on the lower deck of the sinking platform.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.198, eff. July 19, 1989.

4VAC25-40-4750. Qualifications of persons giving signals.

Any person responsible for receiving or giving signals for cages, skips, and mantrips when persons or materials are being transported shall be familiar with the posted signaling code.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.199, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4760. Safety gates on landings.

Shaft landings shall be equipped with substantial safety gates so constructed that materials will not go

through or under them; gates shall be closed except when loading or unloading shaft conveyances.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.200, eff. July 19, 1989.

4VAC25-40-4770. Stop blocks or derail switches.

Positive stop blocks or a derail switch shall be installed on all tracks leading to a shaft collar or landing.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.201, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4780. Where guides to be provided.

Guides shall be provided in each hoisting compartment in shafts inclined more than 45° from the horizontal.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.202, eff. July 19, 1989.

4VAC25-40-4790. Construction of dumping facilities.

Dumping facilities and loading pockets shall be constructed so as to minimize spillage into the shaft.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.203, eff. July 19, 1989.

4VAC25-40-4800. Shaft station clearance requirements.

Adequate clearance shall be maintained at shaft stations to allow persons to pass safely and to allow

materials to be handled safely.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.204, eff. July 19, 1989.

4VAC25-40-4810. Safe passage around compartments.

A safe means of passage around open shaft compartments shall provided on landings with more than one entrance to the shaft.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.205, eff. July 19, 1989.

4VAC25-40-4820. Maintaining shaft sets.

Shaft sets shall be kept in good repair and clean of hazardous material.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.206, eff. July 19, 1989.

4VAC25-40-4830. Persons working in shafts.

Hoist personnel shall be informed when persons are working in a compartment affected by that hoisting operation and a "Persons Working in Shaft" sign shall be posted at the hoist.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.207, eff. July 19, 1989.

4VAC25-40-4840. Posting of signs.

When persons are working in a shaft, "Persons Working in Shaft" signs shall be posted at all devices controlling hoisting operations that may endanger such persons.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.208, eff. July 19, 1989.

4VAC25-40-4850. Performing inspections and repairs.

Shaft inspection and repair work in vertical shafts shall be performed from substantial platforms equipped with bonnets or equivalent overhead protection.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.209, eff. July 19, 1989.

4VAC25-40-4860. Bulkheads or equivalent protection.

A substantial bulkhead or equivalent protection shall be provided above persons at work deepening a shaft.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.210, eff. July 19, 1989.

4VAC25-40-4870. Ladders in shafts.

Substantial fixed ladders shall be maintained as near the shaft bottom as practical during shaft sinking operations. Chain, wire rope, or other extension ladders shall be used from the fixed ladder to the shaft bottom, unless other suitable means are approved.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.211, eff. July 19, 1989.

4VAC25-40-4880. Inspection and testing procedures.

A systematic procedure of inspection, testing, and maintenance of shaft and hoisting equipment shall

be developed and followed. If it is found or suspected that any part is not functioning properly, the hoist shall not be used until the malfunction has been located and repaired or adjustments have been made.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.212, eff. July 19, 1989.

4VAC25-40-4890. Records to be kept.

Complete records shall be kept of installation, lubrication, inspection, tests, and maintenance of shafts and hoisting equipment.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.213, eff. July 19, 1989.

4VAC25-40-4900. Replacement parts.

Parts used to repair hoists shall have properties equal to or better than the original parts; replacement parts shall be designed to fit the original installation.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.214, eff. July 19, 1989.

4VAC25-40-4910. Lubrication of ropes.

Ropes shall be kept well-lubricated from end to end as recommended by the manufacturer.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.215, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4920. Cutting of ropes for inspections.

On other than friction hoists, ropes shall be cut off and reconnected to the conveyance as often as necessary to ensure adequate inspection of rope condition and to distribute wear of the rope. At least six feet shall be cut from the rope above the highest connection; this portion shall be examined carefully for corrosion, damage, wear, and fatigue by the rope manufacturer or an acceptable agency.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.216, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4930. Cutting of ropes to distribute wear.

Hoisting ropes wound in multiple layers shall be cut off and repositioned on the drum at regular intervals as necessary to distribute wear of the rope. The length of cutoff at the drum end should not be an even multiple of the circumference of the drum.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.217, eff. July 19, 1989.

4VAC25-40-4940. Ropes to be calipered.

Ropes shall be calipered at regular interval as necessary to effectively determine the rate of wear and damage. Caliper measurements shall be taken immediately above the socket or clips and above the safety connection.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.218, eff. July 19, 1989.

4VAC25-40-4950. Electromagnetic or other nondestructive testing.

Electromagnetic or other nondestructive rope testing systems shall be used only as supplements to, and not as substitutes for, recommended inspection and tests.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.219, eff. July 19, 1989.

4VAC25-40-4960. Substandard ropes.

Ropes shall not be used for hoisting when they have:

1. More than six broken wires in any lay; and
2. Crown wires worn to less than 65% of the original diameter.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.220, eff. July 19, 1989.

4VAC25-40-4970. Testing on each shift.

Hoist persons shall examine their hoists and shall test overtravel, dead man controls, position indicators, and braking mechanisms at the beginning of each shift.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.221, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4980. Testing with empty conveyances.

Empty conveyances shall be operated up and down shafts at least one round trip before hoisting persons after any shaft or equipment repairs and before regular mantrips are hoisted or lowered.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.222, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-4990. Inspection of ropes and connections.

Rope and conveyance connections to conveyances shall be inspected daily.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.223, eff. July 19, 1989.

4VAC25-40-5000. Inspection of safety catches.

Safety catches shall be inspected daily; drop tests shall be made at the time of installation. Every two months the cage shall be rested on chairs or proper blocking to check the operation or activation of the safety catches by allowing the rope to slacken suddenly.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.224, eff. July 19, 1989.

4VAC25-40-5010. Inspection of shafts.

Shafts shall be inspected at least weekly.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.225, eff. July 19, 1989.

4VAC25-40-5020. Inspection of sheaves.

Sheaves shall be inspected daily and kept properly lubricated.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.226, eff. July 19, 1989.

4VAC25-40-5030. Lubrication of rollers.

Rollers used in inclined shafts shall be lubricated properly and kept in good repair.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.227, eff. July 19, 1989.

4VAC25-40-5040 to 4VAC25-40-5050. [Repealed]

Historical Notes

Derived from VR480-05-1.2 §§ 15.228, 15.229, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Article 11

Gassy Mines

4VAC25-40-5060. Gassy mines.

A mine shall be deemed gassy and thereafter operated as a gassy mine if:

1. Flammable gas emanating from the ore body or the strata surrounding the ore body has been ignited in the mine;

2. A concentration of 0.25% or more, by air analysis, of flammable gas emanating only from the ore body or the strata surrounding the ore body has been detected not less than 12 inches from the back, face, or ribs in any open workings; or

3. The mine is connected to a gassy mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.230, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5070. Effect of detection of flammable gases.

Flammable gases detected only while draining mines or flooded sections of mines, or during other mine reclamation operations, shall not be used to permanently classify a mine gassy. During such periods that any flammable gas is present in the mine, the gassy area of the mine shall be operated in accordance with appropriate standards in this article.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.231, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5080. Smoking materials prohibited.

Persons shall not smoke or carry smoking materials, matches, or lighters underground. The operator shall institute a reasonable program to ensure that persons entering the mine do not carry smoking materials, matches, or lighters.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.232, eff. July 19, 1989.

4VAC25-40-5090. Use of open flames.

Except when necessary for welding or cutting, open flames shall not be used in other than fresh air or in places where flammable gases are present or may enter the air current.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.233, eff. July 19, 1989.

4VAC25-40-5100. Supervision of use of open flames.

Welding or cutting with arc or flame underground in other than fresh air, or in places where flammable gases are present or may enter the air current, shall be under the direct supervision of a qualified person who shall test for flammable gases before and frequently during such operations.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.234, eff. July 19, 1989.

4VAC25-40-5110. Limit on percentage of gases.

Welding or cutting shall not be performed in atmospheres containing more than 1.0% of flammable gases.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.235, eff. July 19, 1989.

4VAC25-40-5120. Installation of main fans.

Main fans shall be:

1. Installed on the surface;

2. Powered electrically from a circuit independent of the mine power circuit. Internal combustion engines shall be used only for standby power or where electrical power is not available;

3. Installed in fireproof housing provided with fireproof air ducts;

4. Offset not less than 15 feet from the nearest side of the mine opening and equipped with ample means of pressure relief unless:

a. The opening is not in direct line with forces which would come out of the mine should an explosion occur; and

b. Another opening not less than 15 feet nor more than 100 feet from the fan opening is equipped with a weak wall stopping or explosion doors in direct line with the forces which would come out of the mine should an explosion occur;

5. Installed to permit prompt reversal of airflow; and

6. Attended constantly or provided with automatic devices to give alarm when the fans slow down to stop. Such devices shall be placed so they will be seen or heard by responsible persons.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.236, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5130. Operation of main fans.

Main fans shall be:

1. Operated continuously except when the mine is shut down for an extended period;

2. Provided with pressure-recording gauges; and

3. Inspected daily and records kept of such inspections and of fan maintenance.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.237, eff. July 19, 1989.

4VAC25-40-5140. Intakes and returns.

The main intake and return air currents in mines shall be in separate shafts, slopes, or drifts.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.238, eff. July 19, 1989.

4VAC25-40-5150. Single shaft intakes and returns.

When single shafts are used for intake and return, the curtain wall or partition shall be constructed of reinforced concrete or equivalent and provided with pressure relief devices.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.239, eff. July 19, 1989.

4VAC25-40-5160. Failure of fans.

When a main fan fails or stops and ventilation is not restored in a reasonable time, action shall be taken to cut off the power to the areas affected and to withdraw all persons from such areas.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.240, eff. July 19, 1989.

4VAC25-40-5170. Failure of ventilation.

When there has been a failure of mine ventilation other than a failure of a main fan as described in 4VAC25-40-5160, the operator shall:

1. Withdraw all persons from the unventilated active areas; and

2. De-energize the power in unvented active areas. The power shall not be restored or persons permitted to reenter the affected active areas until a certified foreman has determined that the flammable gas concentration in such active areas is less than 1.0%.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.241, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5180. Inspection after ventilation failure.

When ventilation is not restored in a reasonable time, all persons shall be removed from the affected areas; after ventilation has been restored, the areas affected shall be examined by a certified foreman for gas and other hazards and made safe before power is restored and before persons, other than the examiners and other authorized persons, return to the areas affected.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.242, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5190. Access of personnel after fan shutdown.

When the main fan or fans have been shut down with all persons out of the mine, no person, other than the certified foreman, shall go underground until the fans have been started and the mine examined for gas and other hazards and declared safe.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.243, eff. July 19, 1989.

4VAC25-40-5200. Operation of booster fans.

Booster fans shall be:

1. Operated by permissible drive units maintained in permissible condition;

2. Operated only in air containing less than 1.0% flammable gas; and

3. Kept in continuous operation when persons are in active areas of the mine affected by such fans.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.244, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5210. Equipping booster fans.

Booster fans shall be:

1. Provided with an automatic signal device to give warning or alarm should the fan system malfunction. The signal device shall be so located that it can be seen or heard by a responsible person at all times when persons are underground;

2. Equipped with a device that automatically de-energizes the power in unventilated active areas should the fan system malfunction; and

3. Equipped with two sets of controls capable of starting, stopping, and reversing the fans. One set of controls shall be located at the fans. A second set of controls shall be at another location remote from the fans.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.245, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5220. Installation and operation of auxiliary fans.

Auxiliary fans shall be:

1. Installed and operated in permissible condition; and

2. Operated only in air containing not more than 1.0% flammable gas.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.246, eff. July 19, 1989.

4VAC25-40-5230. Inspection of auxiliary fans.

Auxiliary fans shall be inspected by persons approved by the director at least twice each shift.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.247, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5240. Failure of auxiliary fans.

Persons shall be withdrawn from areas affected by auxiliary or booster fans when such fans slow down or stop.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.248, eff. July 19, 1989.

4VAC25-40-5250. Volume and velocity of air current.

The volume and velocity of the current of air coursed through all active areas shall be sufficient to dilute and carry away flammable gases, smoke and fumes.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.249, eff. July 19, 1989.

4VAC25-40-5260. Quantity of air standards.

The quantity of air coursed through the last open crosscut in pairs or sets of entries, or through other

ventilation openings nearest the face, shall be at least 6,000 cubic feet a minute.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.250, eff. July 19, 1989.

4VAC25-40-5270. Measurement of air quantities.

At least once each week, a certified foreman shall measure the volume of air entering the main intakes and leaving the main returns, the volume of the intake and return of each split, and the volume through the last open crosscuts or other ventilation openings nearest the active faces. Records of such measurements shall be kept in a book on the surface.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.251, eff. July 19, 1989.

4VAC25-40-5280. Ventilation of battery-charging and transformer stations.

Permanently installed battery-charging and transformer stations shall be ventilated by separate splits of air conducted directly to return air courses.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.252, eff. July 19, 1989.

4VAC25-40-5290. Intake air for pumps and compressors.

Electrically-operated pumps, compressors, and portable substations shall be in intake air.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.253, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5300. Changes in ventilation.

Changes in ventilation that materially affect the main air current or any split thereof and may affect the safety of persons in the mine shall be made only when the mine is idle. Only those persons engaged in making such changes shall be permitted in the mine during the change. Power shall be removed from the areas affected by the change before work starts and not restored until the effect of the change has been ascertained and the affected areas determined to be safe by a certified foreman.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.254, eff. July 19, 1989.

4VAC25-40-5310. Adjustments in ventilation.

If flammable gas in excess of 1.0% by volume is detected in the air not less than 12 inches from the back, face and rib of an underground active area, or in air returning from an area or areas, adjustments shall be made in the ventilation immediately so that the concentration of flammable gas in such air is reduced to 1.0% or less.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.255, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5320. Detection of flammable gas.

If 1.5% or higher concentration of flammable gas is detected in air returning from an underground area or areas, the persons shall be withdrawn and the power cut off to the portion of the mine endangered by such flammable gas until the concentration of such gas is reduced to 1.0% or less.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.256, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5330. Use of air passing by opening of unsealed abandoned area to ventilate.

Air that has passed by an opening of any unsealed abandoned area and contains 0.25% or more of flammable gas shall not be used to ventilate working areas. Examinations of such air shall be conducted during the preshift examinations required by 4VAC25-40-5510.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.257, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5340. Use of air passing through abandoned panels to ventilate.

Air that has passed through an abandoned panel or area which is inaccessible or unsafe for inspection shall not be used to ventilate any working area in such mine. No air which has been used to ventilate any area from which the pillars have been removed shall be used to ventilate any working area in such mine, except that such air, if it does not contain 0.25% by volume or more of methane, may be used to ventilate enough advancing working areas immediately adjacent to the line of retreat to maintain an orderly sequence of pillar recovery on a set of entries.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.258, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5350. Abandoned areas to be sealed.

Abandoned areas shall be sealed or ventilated; areas that are not sealed shall be barricaded and posted against unauthorized entry.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.259, eff. July 19, 1989.

4VAC25-40-5360. Construction of seals.

Seals shall be of substantial construction. Exposed surfaces shall be made of fire-resistant material, or, if the commodity mined is combustible, seals shall be made of incombustible material.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.260, eff. July 19, 1989.

4VAC25-40-5370. Fitting of seals for atmosphere sampling and pressure measurement.

One or more seals of every sealed area shall be fitted with a pipe and a valve or cap to permit sampling of the atmosphere and measurement of the pressure behind such seals.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.261, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5380. Crosscut intervals.

Crosscuts shall be made at intervals not in excess of 100 feet between entries and between rooms.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.262, eff. July 19, 1989.

4VAC25-40-5390. Closing crosscuts.

Crosscuts shall be closed when necessary to provide adequate face ventilation.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.263, eff. July 19, 1989.

4VAC25-40-5400. Line brattices.

Line brattices or other suitable devices shall be installed from the last open crosscut to a point near

the face to ensure positive air flow to the face of every active underground working area, unless the director or his authorized representative permits an exception to this requirement.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.264, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5410. Composition of brattices.

Brattice cloth shall be of flame-resistant material.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.265, eff. July 19, 1989.

4VAC25-40-5420. Damaged brattices.

Damaged brattices shall be repaired promptly.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.266, eff. July 19, 1989.

4VAC25-40-5430. Crosscuts at abandoned rooms.

Crosscuts shall be provided, where practicable, at or near the faces of entries and rooms before they are abandoned.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.267, eff. July 19, 1989.

4VAC25-40-5440. Where entries or rooms to be started.

Entries or rooms shall not be started off entries beyond the last open crosscuts, except that room

necks and entries not to exceed 18 feet in depth may be turned off entries beyond the last open crosscuts if such room necks or entries are kept free of accumulations of flammable gas by use of line brattice or other adequate means.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.268, eff. July 19, 1989.

4VAC25-40-5450. Construction specifications for stoppings.

Stoppings in crosscuts between intake and return airways, other than room entries, shall be built of solid, substantial material; exposed surfaces shall be made of fire-resistant material, or if the material mined is combustible, stoppings shall be made of incombustible material.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.269, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5460. Airtight stoppings.

Stoppings shall be reasonably airtight.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.270, eff. July 19, 1989.

4VAC25-40-5470. Installation of air locks.

The main ventilation shall be so arranged by means of air locks, overcasts, or undercasts that the passage of trips or persons does not cause interruptions of air currents. Where air locks are impractical, single doors may be used if they are attended constantly while the areas of the mine affected by the doors are being worked, unless they are operated mechanically or are self-closing.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.271, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5480. Ventilation of air locks.

Air locks shall be ventilated sufficiently to prevent accumulations of flammable gas inside the locks.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.272, eff. July 19, 1989.

4VAC25-40-5490. Doors to be kept closed.

Doors shall be kept closed except when persons or equipment passing through the doorways.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.273, eff. July 19, 1989.

4VAC25-40-5500. Overcasts and undercasts.

Overcasts and undercasts shall be:

1. Constructed tightly of incombustible material;
2. Of sufficient strength to withstand possible falls from the back; and
3. Kept clear of obstructions.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.274, eff. July 19, 1989.

4VAC25-40-5510. Preshift examinations.

Preshift examinations shall be made of all working areas by certified foremen within three hours before any workers, other than the examiners, enter the mine.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.275, eff. July 19, 1989.

4VAC25-40-5520. Authorized personnel.

Only certified foremen and persons authorized to correct the dangerous conditions shall enter places or areas where danger signs are posted.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.276, eff. July 19, 1989.

4VAC25-40-5530. Removal of danger signs.

Danger signs shall not be removed until the dangerous conditions have been corrected.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.277, eff. July 19, 1989.

4VAC25-40-5540. Detection devices.

Each operator shall use permissible devices for detecting flammable gases, oxygen deficiency, carbon monoxide, and other air contaminants.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.278, eff. July 19, 1989.

4VAC25-40-5550. Frequency and method of examinations.

Examinations for dangerous conditions including tests for flammable gas with an acceptable device shall be made at least once each week, and at intervals of not more than seven days, by the certified foreman, except during weeks in which the mine is idle for the entire week.

The certified foreman shall:

1. Examine and make tests:

a. In the return of each split where it enters the main return;

b. On accessible pillar falls;

c. At seals;

d. In the main return;

e. In at least one entry of each intake and return airway in its entirety;

f. In idle workings; and

g. In abandoned workings, insofar as conditions permit;

2. Mark his initials and the date at the places examined;

3. Report dangerous conditions promptly to the operator or other designated person; and

4. Record the results of the examination with ink or indelible pencil in a book kept for that purpose at a designated place on the surface of the mine.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.279, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5560. Examination reports.

The certified foreman or other designated mine official shall read and countersign promptly the reports of daily and weekly examinations by competent persons and shall take prompt action to have dangerous conditions corrected.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.280, eff. July 19, 1989.

4VAC25-40-5570. Ventilation of gassy mines.

All gassy mines shall be ventilated mechanically.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.281, eff. July 19, 1989.

4VAC25-40-5580. Airflow to be maintained.

Airflow shall be maintained in all intake and return air courses of a mine. When multiple main fans are used, such ventilation systems shall not develop areas without perceptible air movement.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.282, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5590. Fan installation doors.

In mines ventilated by a combination of multiple blowing or multiple exhausting fans, each main fan installation shall be equipped with noncombustible doors designed and positioned so that, in the event of failure of a main fan, these doors will automatically close to prevent air reversal through the fan. The doors shall be located so that they are not in direct line with forces which would come out of the mine, should an explosion occur.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.283, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5600. Diesel-powered equipment.

Diesel-powered equipment shall not be taken into or operated in places where flammable gas exceeds 1.0% of any point not less than 12 inches from the back, face and rib.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.284, eff. July 19, 1989.

4VAC25-40-5610. Trolley wires.

Trolley wires and trolley feeder wires shall be on intake air and shall not exceed beyond the last open crosscut or other ventilation opening. Such wires shall be kept at least 150 feet from pillar workings.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.285, eff. July 19, 1989.

4VAC25-40-5620. Permissible equipment required.

Only permissible equipment maintained in permissible condition shall be used beyond the last open crosscut or in places where dangerous quantities of flammable gases are present or may enter the air current.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.286, eff. July 19, 1989.

4VAC25-40-5630. Permissible distribution boxes required.

Only permissible distribution boxes shall be used in working areas and other areas where dangerous quantities of flammable gas may be present or may enter the air current.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.287, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5640. Electric equipment.

No electric equipment shall be taken into or operated in places where flammable gas can be detected in the amount of 1.0% or more at any point not less than 12 inches from the back, face and rib.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.288, eff. July 19, 1989.

4VAC25-40-5650. Permissible electric lamps.

Only permissible electric lamps shall be used for portable illumination underground.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.289, eff. July 19, 1989.

4VAC25-40-5660. Permissible or approved explosives.

Only permissible or other types of explosives approved by the director shall be used in gassy mines.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.290, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5670. Written list of conditions.

The division, in granting approval referred to in 4VAC25-40-5660, shall provide the operator with a written list of conditions for using the specific explosives covered by the approval and adapted to the mining operation.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.291, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5680 to 4VAC25-40-5690. [Repealed]

Historical Notes

Derived from VR480-05-1.2 §§ 15.292, 15.293, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5700. Examinations for gas.

Examinations for gas shall be made immediately before and after each shot or round.

Statutory Authority

§§ 45.1-161.3 and 45.1-161.294 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.294, eff. July 19, 1989.

4VAC25-40-5710. Limitations on firing shots.

Shots or rounds shall not be fired in places where flammable gas can be detected with a permissible flame safety lamp, or where 1.0% or more of flammable gas can be detected by any other MSHA approved device or method, at a point not less than 12 inches from the back, face and rib. See Article 4 (4VAC25-40-3325 et seq.) of this part for blasting requirements.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from VR480-05-1.2 § 15.295, eff. July 19, 1989; amended, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5720. [Repealed]

Historical Notes

Derived from VR480-05-1.2 § 15.296, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5730 to 4VAC25-40-5740. [Repealed]

Historical Notes

Derived from VR480-05-1.2 §§ 16.1, 16.2, eff. July 19, 1989; repealed, Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

Part XVI

Mining Near Gas and Oil Wells

4VAC25-40-5750. Notice of intent to mine near gas or oil wells.

A. Before removing minerals, or extending any mine workings or mining operations within 500 feet of any permitted gas or oil well, or gas or oil well being drilled, the operator of such mine shall give notice by

certified mail to the well operator, the gas and oil inspector and the director, and shall forward with the notice an accurate map or maps on a scale of 400 feet to the inch showing its mine workings and projected mine workings beneath the tract of land or within 500 feet of the gas or oil well.

B. After giving notice and furnishing the map, the operator may proceed with mining operations as shown on the map, but shall not remove minerals or conduct any mining operations nearer than 200 feet to any permitted well or well that is being drilled without the consent of the director.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5760. Application for mining near gas or oil wells.

A. Application may be made at any time to the director by the operator for an approval to conduct mining operations within 200 feet of any permitted gas or oil well, or gas or oil well being drilled, on forms furnished by the director and containing such information as the director may require.

B. The application shall be accompanied by a map or maps as specified in Chapter 16 (§ 45.1-180 et seq.) of Title 45.1 of the Code of Virginia showing all mining operations or workings projected within 200 feet of the well.

C. Notice of the application shall be sent by certified mail to the well operator and the gas and oil inspector. The notice shall inform the well operator of the right to object to the proposed mining activity. Objections must be filed with the director within 15 days after notice is received by the objecting person.

D. The director may, prior to considering the application, make or cause to be made any inspections or surveys which he deems necessary, and may, if no objection is filed by the well operator or the gas and oil inspector within 15 days after the notice is received, grant the request of the operator to conduct the mining operations as projected, or with such modifications as he may deem necessary.

E. If the well operator or gas and oil inspector files objections, a hearing will be held under the same procedures as set forth in § 9-6.14:11 of the Code of Virginia.

F. If the applicant for an approval to mine within 200 feet of a gas or oil well submits proof in writing that none of the persons required to be notified under this section has any objection to the projected mining activity, then the director may waive the notice requirement under this section and grant the request of the operator to conduct the projected mining activity, provided all other conditions have been

met.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5770. Mining plan.

When mining within 200 feet of a gas or oil well, the mine operator shall submit a plan showing projected pillars of minerals to be left unmined around each well. The pillars shall be situated so that each well is centered within a pillar. The excavated areas adjacent to any pillar may not exceed 20 feet in width without prior approval from the director. In no circumstances may the narrowest pillar dimension be less than twice the width of the excavated area.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

4VAC25-40-5780. Approval to mine near plugged gas or oil well.

A. Applications may be made at any time to the director on forms furnished by the director and containing such information as the director may require by the operator for a permit to mine through a plugged gas or oil well. The application shall be accompanied by a map or maps as specified showing all mining operations or workings projected through the area of the well.

B. Notice of such application shall be sent by certified mail to the well operator and, in the case of mining through a well, to the gas and oil inspector. The notice shall inform the well operator and the gas and oil inspector of the right to object to the proposed mining activity. The objections must be filed with the director within 15 days after notice is received. The application also shall contain information necessary to establish that:

1. The well has been adequately plugged for the purpose of safely mining through, and

2. No oil, gas or fluids can migrate into the mine workings.

C. The director may, prior to considering the application, make or cause to be made any inspections or surveys which he deems necessary and may, if no objection is filed by the well operator or the gas and oil

inspector within 15 days after notice is received, grant the request of the operator to conduct the mining operations as projected or with such modifications as he may deem necessary.

D. If the well operator or gas and oil inspector files an objection, a hearing will be held under the same procedures as set forth in § 9-6.14:11 of the Code of Virginia.

E. If the applicant for a permit to mine through a gas or oil well submits proof in writing that none of the persons required to be notified under this section has any objection to the projected mining activity, then the director may waive the notice requirement under this section and grant the request of the operator to conduct the projected mining activity, provided all other conditions have been met.

Statutory Authority

§§ 45.1-161.3, 45.1-161.294 and 45.1-161.305 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 14, Issue 17, eff. July 1, 1998.

FORMS (4VAC25-40)

Permit/License Application, DMM-101 (rev. 2/06).

Notice of Application to Mine, DMM-103 (rev. 9/99).

Statement Listing the Names and Addresses of Adjoining Property Owners, DMM-103a (rev. 12/00; included in DMM-103).

Accident Report, DMM-104c (rev. 2/06).

Yearly Progress Report, DMM-105 (rev. 11/94).

Surety Bond, DMM-107 (rev. 9/99).

Legend, DMM-109 (rev. 9/99).

Relinquishment of Mining Permit, DMM-112 (rev. 9/99).

Request for Amendment, DMM-113 (rev. 7/99).

Consolidated Biennial Report of Waivered Counties, Cities and Towns, DMM-116 (rev. 6/90).

Biennial Waivered Counties, Cities and Towns Report of Individual Mining Companies, DMM-117 (rev. 6/90).

Consent for Right of Entry on Surface Mined Orphaned Land, DMM-120 (rev. 8/87).

Mineral Mining Annual Tonnage Report, DMM-146 (rev. 10/02).

Mineral Mining Annual Report for Contractors, DMM-146C (eff. 10/02).

Education and Training Service Evaluation, DMM-152 (rev. 2/06).

Request for Release of Mine Map, DMM-155/DM-MR-1 (rev. 9/99).

Notice of Operator Intent, DMM-156 (rev. 9/99).

License Renewal Application, DMM-157 (rev. 2/06).

Request for Training, DMM-158 (eff. 2/06).

Permit Transfer Acceptance, DMM-161 (eff. 9/99).

Notarized Statement Maps/Map Legends, DMM-164 (eff. 10/02).