

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

4 VAC 25-90-10. ~~General requirements. Definitions.~~

~~A.— Diesel powered equipment will not be permitted underground without the written approval of the Chief of the Virginia Division of Mines. The approval of use shall incorporate all the requirements of this chapter~~

~~B.— If at any time the chief determines that any condition or practice permitted under this approval may threaten the health or safety of the employees, he may impose additional requirements for the purpose of eliminating the condition or practice.~~

~~C.— The operator shall submit to the Virginia Division of Mines a plan which shall contain the ventilation plans as to the quantities of air in the area where the diesel units are to be operating, and the number of diesel units which the operator plans to operate (If in the future the operator exceeds the projected number of units, another amendment must be submitted.) Also, this plan must contain the projected quantities of diesel fuel to be used in a 24 hour period. (Adjustments to the quantities of fuel may be amended by the chief of the division.)~~

~~D.— No diesel powered equipment shall be placed in initial operation underground without a check for approval by the state mine inspector. The mine inspector shall report to the chief in~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~writing as to the permissibility, ventilation, air quality of toxic gases, the mine operator's name,  
type of equipment, serial number, and MSHA certification number, where applicable.~~

~~E. All nonface diesel powered equipment used underground shall meet the requirements  
and be maintained and operated in accordance with the requirements of the Code of Federal  
Regulations, Title 30, Chapter I, Part 32, Revised as of July 1, 1983.~~

~~F. All mobile diesel powered equipment operated in by the last open crosscut and in return  
air courses shall be permissible and shall be maintained and operated in a permissible condition  
as defined by the Code of Federal Regulations, Title 30, Chapter I, Part 36, Revised as of July  
1, 1983.~~

~~G. Engine adjustments shall be verified by a statement by the engine manufacturer or by the  
manufacturer's stamped nameplate as being correct before each diesel powered machine is  
initially operated in a coal mine.~~

~~H. Alteration in design, substitution of components or assemblies, or changes in conditions  
of operating diesel powered machines, shall not be made without prior concurrence of the  
Virginia Division of Mines. When such changes are permitted, additional engine tests and  
adjustments shall be required as necessary to ensure the safe operation of the particular machine~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~in a coal mine.~~

The following words and terms when used in this chapter shall have the following meanings

unless the context clearly indicates otherwise:

“Chief” means the Chief of the Division of Mines of the Department of Mines, Minerals and  
Energy.

“Division” means the Division of Mines of the Department of Mines, Minerals and Energy.

“MSHA” means the Mine Safety and Health Administration.

“TLV” (Threshold Limit Value) - the airborne concentration of a substance that represents  
conditions under which it is believed that nearly all workers may be repeatedly exposed day after  
day without adverse effect as recommended by the American Conference of Government  
Industrial Hygienists.

4 VAC 25-90-20. Diesel equipment approval.

A. Diesel-powered equipment shall not be permitted underground without receiving

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

approval from the Chief or his designated representative. Approval will be based on:

1. Meeting the requirements of this regulation.

2. Compliance with 30 CFR Part 7 Subpart E, design and performance requirements for non-permissible diesel-powered equipment.

Compliance with 30 CFR Part 7 Subparts E and F, and 30 CFR Part 36, requirements for permissible diesel-powered equipment.

3. An evaluation by the Division of Mines of the equipment, undiluted exhaust emissions, the adequacy of ventilation, fire protection, and air quality for the type of equipment.

4. If an oxidation catalytic converter, a diesel particulate filter, or both are installed on underground diesel-powered equipment they shall be installed and maintained in accordance with manufacturer's specifications.

B. If at any time the Chief determines that any condition or practice permitted under this approval may threaten the health or safety of employees, additional requirements may be imposed for the purpose of eliminating the condition or practice.

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

C. Stationary diesel-powered equipment and portable diesel generators shall not be permitted underground without an approved plan. The plan shall address ventilation, fire protection, fuel handling, storage, and any other requirements the Chief determines as necessary to protect the health and safety of miners.

D. The Division of Mines shall be notified after completion of any alterations in design, substitution of components, and any other changes in the condition of operating diesel-powered equipment that affects emissions. Additional engine testing and adjustments shall be required as necessary should any resulting changes be made that may increase diesel emissions.

4 VAC 25-90-30. Operation of diesel equipment.

I.A. The engine of diesel powered equipment shall not be left idling unattended.

All mobile underground diesel-powered equipment shall be operated safely and shall meet the following requirements:

- 1.) Be free of excess accumulation of coal dust, oil, grease, fuel and other combustible materials; and
- 2.) Be operated with;

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

- a. An audible warning device;
- b. An engine start and stop mechanism;
- c. Guards over moving components;
- d. A rerailling device and sanding devices (self-propelled rail equipment only);
- e. Headlights on each end;
- f. Park and service brakes;
- g. A fire suppression system;
- h. Intake and exhaust couplings in good condition; and
- i. A self closing filler cap on the fuel tank.

**RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES**

3. To avoid contact with energized trolley wires or trolley feeder wires a six inch minimum clearance shall be maintained or the equipment shall be adequately insulated.

J.B. ~~All employees working in mines where diesel powered equipment is used shall be furnished with a filter type self rescuer or equivalent which they shall carry at all times while on duty in the mine.~~ All mobile diesel-powered equipment operated in or inby the last open crosscut or in return air courses shall be permissible. Such diesel powered equipment shall be maintained and operated in accordance with 4 VAC 25-90-20 and as follows:

1. Electrical component permissibility shall be maintained;
2. Emergency engine shutdown shall be operable;
3. Flame arresters (intake and exhaust) shall be provided; and
4. Low-level shutdown (water bath/scrubber) shall be operable.

C. The engine of mobile diesel powered equipment shall not be left idling unattended.

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

D. ~~The engine of any mobile diesel-powered equipment shall not be capable of starting unless the transmission controls are in the neutral position.~~

~~K~~ E. The operation of any ~~diesel-powered machine~~ diesel-powered equipment in any manner or under any condition that does not comply with the requirements of this chapter ~~may~~ shall result in ~~the machine being taken a notice of violation,~~ and if not corrected within a reasonable time, a closure order shall be issued that requires the machine be taken out of service until such condition or practice is corrected. Upon review of the history of violations, the Chief ~~of the Division of Mines~~ may void the approval for use of underground diesel-powered equipment at that mine.

~~L.~~ ~~The engine of any diesel-powered machine shall not be capable of starting unless the transmission controls are in the neutral position.~~

~~M.~~ ~~Stationary diesel-powered equipment or installations shall not be permitted underground without a plan submitted by the operator and the written approval of the Chief of the Division of Mines. The plan shall address ventilation, fire protection, and fuel storage and handling.~~

4 VAC 25-90-40. Maintenance of diesel equipment.

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

- A. Engine intake and exhaust systems shall be inspected visually by an authorized person at least once each day that the equipment is operated.
- B. Permissible and emission components of diesel-powered equipment shall be inspected weekly by a certified diesel engine mechanic in accordance with the instructions of the manufacturer and all applicable federal and state requirements.
- C. Fuel filters on diesel engines shall be maintained or replaced as recommended by the manufacturer or more often if necessary.
- D. Maintenance and repair work on emission components shall be done by a certified diesel engine mechanic in accordance with the instructions of the manufacturer and all applicable federal and state requirements.
- E. All diesel-powered equipment shall be equipped with an hour meter to accurately display engine run time.
- F. Maintenance manuals shall be made available for review by interested persons.
- G. Records shall be kept of inspections, maintenance, and repair work for at least one

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

year and shall be made available for inspection by interested persons.

4 VAC 25-90-50. Ventilation of diesel equipment.

A. The ventilating air in all active areas where diesel-powered equipment is operated shall not have combustible or other contaminating gases in such concentration that may affect combustion in the diesel engine by materially increasing toxic, poisonous or other objectionable constituents in the engine exhaust.

B The air supplied for ventilation where diesel-powered equipment is used shall contain less than 1.0% by volume of methane.

C. The minimum ventilating air quantity maintained in the last open crosscut of each working section where units of diesel-powered equipment are operated must be at least the sum of that specified on the approval plates of all the diesel-powered equipment to be operated in these areas.

D. The minimum ventilating air quantity maintained in the intake reaching the working face of each longwall and at the intake end of any pillar line where units of diesel-powered equipment are operated on the working section must be at least the sum of that

**RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES**

specified on the approval plates of all the diesel-powered equipment to be operated in these areas.

E. The minimum ventilating air quantity for an individual unit of diesel powered equipment being operated outby the working section shall be at least that specified on the approval plate for that equipment. Such air quantity shall be maintained:

- 1.) In any entry where the equipment is being operated in areas of the mine developed on or after the effective date of these regulations;
- 2.) In any air course with single or multiple entries where the equipment is being operated in areas of the mine developed prior to the effective date of these regulations; and
- 3.) At any other location as the Chief may require.

F. The quantity of ventilating air supplied to the active areas where diesel powered equipment is operated must be adequate to dilute and carry away constituents of the engine exhaust so that the composition of the air meets the air quality standards set forth in 4 VAC 25-90-70 of these regulations.

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

4 VAC 25-90-60. Emission testing and evaluation.

Undiluted exhaust emissions of diesel engines in diesel-powered equipment used in underground coal mines shall be tested and evaluated weekly by an authorized person. The mine operator shall develop and implement effective written procedures for such testing and evaluation and shall include the following:

- A. The method for which a repeatable load test is conducted that must include an engine RPM reading;
  - B. Sampling and analytical methods used to measure diesel engine emission concentrations;
  - C. Instrumentation calibrated and used to accurately detect, measure and monitor the air emission concentrations in § 4 VAC 25-90-70;
  - D. The evaluation and interpretation of air quality testing and sampling results.
  - E. The concentration or changes in concentration of carbon monoxide that will indicate a change in engine performance and an action plan to address changes in performance.
- The operator will compare the MSHA engine approval data with the first four emission

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

tests at the mine and establish an acceptable level of carbon monoxide emissions,  
subject to approval by the Chief. Carbon Monoxide emissions shall not exceed two  
times the established level and at no time exceed 2500 parts per million.

F. The maintenance of records necessary to track engine performance. These records  
shall be:

- 1.) Recorded in a secure book that is not susceptible to alteration, or recorded  
electronically in a computer system that is secure and not susceptible to  
alteration; and
- 2.) Retained at a surface location at the mine for at least one year and made  
available for inspection by interested persons.

4 VAC 25-90-70. Air quality.

During on-shift examinations required by Section 45.1-161.209, a mine foreman authorized by the  
operator shall determine the concentration of carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>):

A. In the return of each working section where diesel equipment is used in by the loading  
point at a location which represents the contribution of all diesel equipment on such section.

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

B. At a point inby the last piece of diesel equipment on a ~~the~~ longwall or shortwall face when mining equipment is being installed or removed. This examination shall be made at a time which represents the contribution of all diesel equipment used for this activity including the diesel equipment used to transport longwall or shortwall equipment to and from the section

C. In any other area designated by the Chief where diesel equipment is operated in a manner which can result in significant concentrations of diesel exhaust emissions.

D. The concentrations of carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>) shall not exceed the following threshold limit values:

Threshold Limit Values (TLV)

<u>Carbon Monoxide (CO)</u>	<u>25 ppm</u>
<u>Nitrogen Dioxide (NO<sub>2</sub>)</u>	<u>3 ppm</u>

E. Samples of CO and NO<sub>2</sub> shall be collected and analyzed:

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

- 1.) By appropriate instrumentation which has been maintained and calibrated in accordance with the manufacturer's recommendations;
- 2.) In a manner that makes the results available immediately to the person collecting the samples; and
- 3.) During periods that are representative of conditions during normal operations.

F. The results of these tests shall be:

- 1.) Recorded in a secure book that is not susceptible to alteration, or recorded electronically in a computer system that is secure and not subject to alteration; and
- 2.) Retained at a surface location at the mine for at least one year and made available for inspection by interested persons.

4 VAC 25-90-80. Fire protection for diesel-powered equipment.

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

A. Mobile, diesel-powered equipment shall have a multipurpose dry chemical type (ABC) fire suppression system or equivalent approved system.

B. Nozzles and reservoirs shall be placed in accordance with the manufacturer's specifications to provide maximum protection to the fuel tank compartment, motor compartment, battery compartment and hydraulic tanks.

C. Stationary diesel-powered equipment must be equipped with an automatic multipurpose dry chemical type (ABC) or equivalent approved fire suppression system.

4 VAC 25-90-90. Fuel specifications.

A. The fuel for diesel-powered equipment approved for service in underground mines shall be low volatile hydrocarbon fuel with a flash point of 100° F or greater at standard temperature and pressure, and shall contain sulfur in a concentration of .05 % or less by weight.

B. The mine operator shall maintain on the mine site and make available for inspection a statement from the diesel fuel supplier certifying the sulfur content and flash point of the diesel fuel to be used underground. This statement shall be up-dated annually and whenever the fuel

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

distributor is changed.

4 VAC 25-90-100. Fuel use, storage, and handling.

A. Unless otherwise approved, fuel taken underground shall be transported in metal containers that have self closing devices.

B. Fuel taken underground and awaiting transfer to diesel-powered equipment fuel tanks shall be stored in a closed compartment or container constructed of incombustible material and shall be kept in a well-ventilated location until placed in the fuel tank.

C. Fuel shall be transferred from the storage compartment to a fuel tank through a flexible hose that is fitted with a self-closing valve. This does not apply to portable containers of five gallons or less.

D. The fuel handling system and the diesel-powered equipment shall be frame grounded when fuel is being transferred from the storage compartment to the fuel tank. This does not apply to portable containers of five gallons or less.

E. The air vents on fuel handling equipment shall be flameproof. This does not apply to

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

portable containers of five gallons or less.

F. When fuel is being transferred from a storage compartment to the diesel equipment fuel tank, the engine shall be stopped.

G. A supply of sand or other suitable incombustible material for absorbing spilled fuel shall be available during the transfer of fuel from a storage compartment to the diesel equipment fuel tank. Fuel spilled shall be cleaned up immediately.

H. In order to prevent unintentional opening all drain plugs in the fuel handling system shall be threaded, sealed, locked, and protected in the closed position.

I. During fuel handling operations, precautions shall be taken to keep the fuel clean and free from contamination by foreign material such as dirt, sediment and water.

J. Diesel fuel storage and handling in a working section shall comply with the following:

1. Underground storage areas that exceed 100 gallons shall be vented with intake air that is coursed into a return air course or to the surface and not used to ventilate working places;

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

2. At least one 20-pound approved ABC type fire extinguisher and no less than 200 pounds of rock dust per 100 gallons of fuel storage shall be maintained at the designated underground mine storage area;
  
3. Storage underground shall be limited to a typical 48-hour supply not to exceed 1,000 gallons;
  
4. Only one temporary underground diesel fuel storage area is permitted for each working section or in each area of the mine where equipment is being installed or removed. Temporary storage areas must be located within 500 feet of the current loading point, the projected loading point where equipment is being installed, or the last loading point where equipment is being removed.
  
5. Temporary and permanent underground diesel fuel storage facilities must be:
  - a. At least 100 feet from shafts, slopes, shops, or explosive magazines.
  
  - b. At least 25 feet from trolley wires, power cables, or electrical equipment not necessary for the operation of the storage facilities or areas; and

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

c. In a location protected from hazards of other mobile equipment.

4 VAC 25-90-120. ~~Proper ventilation.~~ (Repealed.)

~~A. The use of diesel powered machines underground shall be restricted to haulageways and working places where positive ventilation is maintained by mechanical means.~~

~~B. The ventilating air in all mine workings where diesel powered machines are operated shall not contain combustible or other contaminating gases in such concentration that will affect combustion in the diesel engine by materially increasing production of toxic, poisonous or other objectionable constituents in the engine exhaust.~~

~~C. Each set of producing entries in which diesel powered equipment is used shall be placed on a separate split of air.~~

~~D. The air supplied for ventilation where diesel powered machines are used shall contain not less than 19.5% by volume of oxygen (dry basic) and not more than 1.00% by volume of methane.~~

**RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES**

~~E.——The quantity of ventilating air to be maintained in the last open crosscut where multiple units are operating in a working section shall be at least 100% of the air quantity specified on the approval plate of the first diesel unit (the unit requiring the highest air quantity on its approval plate) plus 75% of the approval plate air quantity for the second diesel unit and 50% of the approval plate air quantity of each additional diesel unit operating in the split of air. The quantity of ventilating air maintained in the last open crosscut in working sections where diesel powered equipment is used, shall be measured and recorded daily.~~

~~F.——The quantity of ventilating air supplied to the working face must be adequate to dilute all toxic and objectionable constituents of the engine exhaust to such extent that the composition of the air meets the air quality standards stipulated in 4 VAC 25-90-120 subdivisions H and O.~~

~~G.——The quantity of ventilating air to be maintained along haulageways for outby diesel powered equipment must be adequate to dilute all toxic and objectionable constituents of the engine exhaust to such extent that the composition of the air meets the air quality standards stipulated in 4 VAC 25-90-120 subdivisions H and O. The quantity of ventilating air along haulageways where diesel powered equipment is used shall be measured and recorded daily.~~

~~H.——The air quality in which diesel powered equipment is operated shall be sampled to determine that the composition of the air is within safe limits with respect to CO, NO, and~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~NO2. These safe limits are currently defined as being equal to or less than the following~~

~~Threshold Limit Values (TLV).~~

~~TLV~~

~~Carbon Monoxide (CO) ————— 50 ppm~~

~~Nitrogen Dioxide (NO<sub>2</sub>) ————— 3 ppm~~

~~Nitric Oxide (NO) ————— 25 ppm~~

~~I. — Air quality measurements specified in 4 VAC 25-90-120 H shall be taken at least once per shift for each diesel powered machine when it is in operation. The measurements must be taken on the downwind side of the machine not closer than five feet and not greater than 10 feet from the exhaust in the middle of the entry midway between the mine roof and the mine floor. Machine(s) exceeding the TLV must be repaired, removed from service or the quantity of air coursed over the machine(s) be increased to reduce gas concentrations to levels at or below the TLV.~~

~~J. — Air quality measurements shall also be taken in the immediate return for each working section at least two times per shift (once during the first two hours of the shift and once in the last two hours of the shift) while the unit(s) of diesel powered equipment being employed in the section during the shift are in normal operation. Where test results show levels above the established TLV, the diesel powered equipment shall be shut until the problem is corrected.~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~When the diesel powered equipment is returned to service, air quality tests shall be made to determine that the equipment is in compliance.~~

~~K. — If the engine exhaust becomes more noticeable than normal, required air quality tests shall be made. If the results of the air quality tests are not in compliance, the equipment shall be shut down until the problem is corrected. When the equipment is returned to service, air quality tests shall be made to determine that the equipment is in compliance.~~

~~L. — Frequency of air quality or quantity measurements may be reduced or increased by written notice from the chief if he feels that the performance and compliance records of the operator warrant such action.~~

~~M. — Air quality measurements may be taken by several recognized methods such as gas concentration indicator tubes or direct read out instruments, approved for such use or other such methods as may be developed and subsequently approved in the future for taking such measurements. These testers shall be provided and maintained by the operator.~~

~~N. — All tests required in Part II of this chapter shall be taken by a competent person designated by the operator and the results of these tests shall be permanently recorded and kept in a designated place for at least one year. When the test results show excursions above~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~the TLV, the corrective measures taken to attain compliance must also be recorded. These records will be made available for inspection by interested persons during normal working hours.~~

~~O. The air quality in which diesel powered equipment operates may be affected by constituents other than those stipulated in 4 VAC 25-90-120 H. The operator shall at least once per month perform air quality measurements to ensure safe limits with respect to Carbon Dioxide (CO<sub>2</sub>), Sulfur Dioxide (SO<sub>2</sub>) and Formaldehyde. These safe limits are currently defined as being equal to or less than the following Threshold Limit Values (TLV):~~

~~TLV~~

~~Carbon Dioxide (CO<sub>2</sub>) 5000 ppm~~

~~Sulfur Dioxide (SO<sub>2</sub>) 2 ppm~~

~~Formaldehyde 1 ppm~~

~~4 VAC 25-90-270. Fire protection for diesel powered equipment. (Repealed.)~~

~~A. Each mobile, diesel powered machine shall be equipped with a self contained dry~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~chemical or liquid carbon system or no less effective system approved by the Virginia Division  
of Mines.~~

~~B.——Stationary diesel powered equipment must be equipped with an automatically activated  
dry chemical or carbon dioxide system or no less effective system approved by the Virginia  
Division of Mines.~~

~~C.——Nozzles and reservoirs shall be placed in accordance with the manufacturer's  
specifications to provide maximum protection to the fuel tank compartment, motor  
compartment, battery compartment and hydraulic tanks.~~

4 VAC 25-90-300. ~~Maintenance of diesel machines.~~ (Repealed.)

~~A.——Maintenance of diesel powered machines shall be performed by competent persons  
designated by the operator.~~

~~B.——Engine intake and exhaust systems shall be inspected visually at least once each working  
shift.~~

~~C.——Permissible and emission components of diesel powered machines shall be inspected in~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~accordance with the instructions of the manufacturer or applicable requirements of the law.~~

~~D.—— Records shall be kept of inspections for at least one year and shall be made available  
for inspection by interested persons.~~

~~E—— Maintenance and repair work on permissible and emission components shall be done in  
accordance with the instructions of the manufacturer or applicable requirements of the law.~~

~~Records of maintenance and repair work on permissible and emission components shall be  
recorded in a permanent notebook and shall be maintained for a minimum of one year in a  
designated location open for inspection by interested persons.~~

~~F.—— Maintenance manuals shall be made available for review by interested persons.~~

4 VAC 25-90-340. Fuel usage; specifications. (Repealed.)

~~A.—— The fuel for diesel engines of machines approved for service in underground mines shall  
be a low volatile hydrocarbon fuel classified as ASTM D975 No. 2D diesel fuel with a flash  
point of 125° F or greater at standard temperature and pressure, and shall contain sulfur in a  
concentration of 0.25% or less by weight. The mine operator shall maintain on the mine site, and  
make available for inspection, a statement certifying the sulfur content of the diesel fuel to be~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~used underground. Where diesel fuel with a sulfur content of 0.25% or less by weight is not readily available, the chief may grant a variance to use other fuels for approved diesel machinery.~~

~~B. — Fuel filters on diesel engines shall be cleaned regularly, replaced or repaired promptly as conditions require.~~

4 VAC 25-90-360. ~~Fuel usage; storage and handling.~~ (Repealed.)

~~A. — Fuel taken underground shall be transported only in strong metal type containers that are provided with efficient closing devices or other suitable methods approved by the chief.~~

~~B. — Fuel taken underground and awaiting transfer to diesel powered machine fuel tanks shall be stored in a closed compartment or container constructed of incombustible material and shall be kept in a well ventilated location.~~

~~C. — Fuel shall be transferred from the storage compartment to a machine fuel tank through a flexible hose that is fitted with a self closing valve. However, this does apply to portable containers of five gallons or less.~~

RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES

~~D. — The fuel handling system and the diesel powered machine shall be frame grounded when fuel is being transferred from the storage compartment to the machine fuel tank. However, this does not apply to portable containers of five gallons or less.~~

~~E. — The air vents on fuel handling equipment shall be flameproof. However, this does not apply to portable containers of five gallons or less.~~

~~F. — When fuel is being transferred from a storage compartment to the machine fuel tank, the diesel engine on the piece of equipment being fueled shall be stopped.~~

~~G. — A supply of sand or other suitable incombustible material shall be available during the transfer of fuel from a storage compartment to the machine fuel tank for absorbing spilled fuel. Fuel spilled shall be cleaned up immediately.~~

~~H. — In order to prevent unintentional opening, all drain plugs in the fuel handling system shall be threaded and sealed, locked in the “closed” position, or protected by location.~~

~~I. — Only persons designated by the operator shall be permitted to handle fuel for diesel powered machines.~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~J. In fuel handling operations precautions shall be observed to keep the fuel clean and free from contamination by foreign materials such as dirt, sediment and water.~~

~~K. Diesel fuel storage and handling in a working section shall comply with the following:~~

~~1. Only one diesel fuel center will be permitted to be in permanent residence;~~

~~2. Diesel fuel may be stored in combination with, or in the same area, or both, as hydraulic oil, lubricating oil, and greases;~~

~~3. One 20 pound approved ABC fire extinguisher and 200 pounds of rock dust per 100 gallons of diesel fuel stored shall be maintained at the storage area;~~

~~4. The storage area shall be vented directly to the return;~~

~~5. Storage shall be limited to a typical 24 hour supply not to exceed 500 gallons.~~

~~L. Diesel fuel storage for the mine shall comply with the following:~~

~~1. The underground storage area shall be vented directly to the return;~~

~~RULES AND REGULATIONS GOVERNING THE USE OF DIESEL-POWERED EQUIPMENT  
IN UNDERGROUND COAL MINES~~

~~2. One 20 pound approved ABC type fire extinguisher and no less than 200  
pounds of rock dust per 100 gallons of fuel storage shall be available at the  
underground mine storage area;~~

~~3. Storage underground shall be limited to a typical 48 hour supply for all normally  
operating diesel units in the mine.~~