

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

PART I.
GENERAL REQUIREMENTS.

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 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~~

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

~~required as necessary to ensure the safe operation of the particular machine in a coal mine.~~

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

~~J. — 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.~~

~~K. — The operation of any diesel powered machine in any manner or under any condition that does not comply with the requirements of this chapter may result in the machine being taken out of service until such condition or practice is corrected. Upon review of the violations, the Chief of the Division of Mines may void the approval for use of diesel powered equipment for underground use.~~

~~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.~~

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.

“Division” means the Division of Mines.

“Equipment data plate” means a data plate stating that the complete assembly has met the requirements of this chapter and the MSHA regulations noted in 4 VAC 25-90-20 for mobile diesel-powered equipment, and permanently affixed within the operator’s compartment.

“Heavy-duty diesel-powered equipment” means equipment that cuts or moves rock or coal; performs the drilling or bolting functions; moves longwall components; self-propelled diesel fuel transportation units and lube units; or machines used to transport portable diesel fuel transportation units or portable lube units.

“MSHA” means the Mine Safety and Health Administration.

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

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

A. Diesel-powered equipment shall not be permitted underground without receiving 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 7 E and F, design and performance requirements, and 30 CFR 36, requirements for permissible mobile diesel-powered equipment.
3. An evaluation of the equipment, the adequacy of ventilation, fire protection, and air quality for the type of equipment by inspectors.
4. Installation of an oxidation catalytic converter, installed as close as possible to the exhaust manifold, on all new underground diesel-powered equipment delivered to mines after July 1, 1999, and all underground diesel-powered equipment by January 1, 2003.
5. Provision of a diesel particulate matter filter capable of removing an average of 75% of diesel particulate by mass, or a filter meeting the requirements adopted in CFR Title 30, whichever is greater, on permissible and heavy-duty diesel-powered equipment delivered to mines after July 1, 1999, and all permissible and heavy-duty underground diesel-powered equipment by January 1, 2003.

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; he may impose additional requirements for the purpose of eliminating the condition or practice.

C. The operator shall submit to the division the ventilation plan specifying the quantities of air in the area of the mine where the diesel units are to be operating, the number of diesel units which the operator plans to operate, and the projected quantities of diesel fuel to be used in a 24-hour period. The diesel ventilation plan shall be updated annually.

D. Stationary diesel-powered equipment shall not be permitted underground without an approved plan. The plan shall address ventilation, fire protection, and fuel handling and storage.

E. Alterations in design which affect emission control or engine design, substitution of components or assemblies, and changes in the condition of operating diesel-powered equipment, shall not be made without prior approval. When such changes are approved, additional engine tests and adjustments shall be required as necessary to ensure the safe operation of the equipment for that coal mine.

F. The diesel equipment manufacturer shall certify that the equipment meets the

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

requirements of these regulations by a permanently affixed equipment data plate located in the operator's compartment.

PART II.
OPERATION AND MAINTENANCE.

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

A. All mobile diesel-powered equipment used underground shall meet the following requirements:

1. Be free of excess accumulation of coal dust, oil, grease, or fuel.
2. Be operated with:
 - a. An audible warning device;
 - b. An engine start and stop mechanism;
 - c. Guards over moving components;
 - d. A rerailing 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. Fuel adjustment/injector pump seals;
 - i. Intake and exhaust couplings in good condition; and
 - j. Metal fuel tank with closure secured to tank.

B. 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 in accordance with 4 VAC 25-90-20 and as follows:

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

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

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

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

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

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

A. Engine intake and exhaust systems shall be inspected visually by an authorized person at least once each working shift.

B. Permissible and emission components of diesel-powered equipment shall be inspected by a certified diesel engine mechanic in accordance with the instructions of the manufacturer or applicable requirements of the law.

C. Fuel filters on diesel engines shall be cleaned regularly, replaced or repaired promptly as required by the manufacturer or when problems arise.

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 or applicable requirements of the law.

E. Compliance with requirements for engine adjustments as shown on a statement from the engine manufacturer or on the manufacturer's stamped name plate, shall be verified by the operator

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

before diesel-powered equipment is operated in a coal mine.

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

PART III.
VENTILATION.

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

A. The use of diesel-powered equipment 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 equipment is operated shall be free of combustible or other contaminating gases in such concentration that may affect combustion in the diesel engine by materially increasing production of toxic, poisonous or other objectionable constituents in the engine exhaust.

C. Each working section where diesel-powered equipment is used shall be placed on a separate split of air.

D. The air supplied for ventilation where diesel-powered equipment is used shall contain (i) not less than 19.5% by volume of oxygen and (ii) less than 1.0% by volume of methane.

E. The quantity of ventilating air 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 so that the composition of the air meets the air quality standards set forth in Part IV of these regulations.

G. The quantity of ventilating air to be maintained along haulageways for outby diesel-

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

powered equipment must be adequate to dilute all toxic and objectionable constituents of the engine exhaust so that the composition of the air meets the air quality standards set forth in Part IV of these regulations.

PART IV.
AIR QUALITY.

4 VAC 25-90-60. Threshold limit values ceilings (TLVC).

A. The air quality where diesel-powered equipment is operated shall be sampled to determine that the composition of the air is equal to or less than the following threshold limit values ceilings:

TLVC

| | |
|--|---------------|
| <u>Carbon Monoxide (CO)</u> | <u>50 ppm</u> |
| <u>Nitrogen Dioxide (NO₂)</u> | <u>3 ppm</u> |
| <u>Nitric Oxide (NO)</u> | <u>25 ppm</u> |

B. Air quality measurements specified in subsection A of this section shall be taken at least once a day and at additional times as may be required by the chief for each area where diesel-powered equipment is in operation. The measurements must be taken downwind of the equipment, 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. Equipment exceeding the TLVC shall be repaired, removed from service or the quantity of air coursed over the equipment be increased to reduce gas concentrations to levels at or below the TLVC.

C. Air quality measurements shall also be taken in the immediate return for each working section at least once per shift during the on-shift examination when any diesel-powered equipment is being operated on the working section. Where test results show levels above the established TLVC, the diesel-powered equipment shall be removed from service until the problem is corrected. When the diesel-powered equipment is returned to service, air quality tests shall be made to ensure that the equipment is in compliance.

D. 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 removed from service until the problem is corrected. When the equipment is returned to service, air quality tests shall be made again to ensure that the equipment is in compliance.

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

E. Frequency of air quality or quantity measurements may be increased by written notice from the chief when he determines that the performance and compliance records of the operator warrant such action.

F. Air quality measurements may be taken by gas concentration indicator tubes, approved direct read-out instruments, or other such methods developed for taking such measurements. Testing instruments shall be provided and maintained by the operator.

G. All tests required in Part IV of this chapter shall be taken by an authorized person 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 indicate levels above the TLVC, the corrective measures taken to attain compliance must also be recorded. Records shall be maintained when diesel units are removed from mine property and when units are returned to mine property for operation. These records will be made available for inspection by interested persons during normal working hours.

PART V.
FIRE PROTECTION.

4 VAC 25-90-70. Fire protection for diesel-powered equipment.

A. Mobile, diesel-powered equipment shall have a self-contained dry chemical 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 automatically activated dry chemical or carbon dioxide system or an equivalent approved system.

PART VI.
DIESEL FUEL.

4 VAC 25-90-80. 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 125° F or greater at standard temperature and pressure, and shall contain sulfur in a concentration of .05 % or less by weight.

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

B. However, the use of winter blends of diesel fuel with the a flashpoint of not less than 100° will be permitted when needed to depress the cloud point of the fuel and reduce the temperature at which the fuel begins to jell.

C. 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 used underground. Where diesel fuel with a sulfur content of .05% or less by weight is not readily available, the chief may grant a variance to use diesel fuels greater than .05% by weight for approved diesel equipment.

4 VAC 25-90-90. Fuel usage; storage and handling.

A. Unless otherwise approved, fuel taken underground shall be transported in metal containers that have 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. However, this does 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. 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.

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

I. In fuel handling operations, precautions shall be observed 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.

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 for all normally operating diesel units in the mine.

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.

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.~~

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

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.

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 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 ₂) | 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

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

~~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. 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 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 (CO₂), Sulfur Dioxide (SO₂) and Formaldehyde. These safe limits are currently defined as being equal to or less than the following Threshold Limit Values (TLV):~~

~~TLV~~

~~Carbon Dioxide (CO₂) 5000 ppm
Sulfur Dioxide (SO₂) ————— 2 ppm
Formaldehyde ————— 1 ppm~~

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

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 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 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~~

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

~~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 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.~~

~~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~~

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

~~powered machines.~~

~~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;~~
- ~~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.~~