WEST VIRGINIA
SECRETARY OF STATE
JOE MANCHIN, III
ADMINISTRATIVE LAW DIVISION

Form #5

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OFFICE WEST VIRGINIA
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NOTICE OF AGENCY ADOPTION OF A PROCEDURAL OR INTERPRETIVE RULE OR A LEGISLATIVE RULE EXEMPT FROM LEGISLATIVE REVIEW

AGENCY: West Virginia Diesel Equipment Commission TITLE NUMBER: 196

CITE AUTHORITY: §22A-2A-308(b)

RULE TYPE: PROCEDURAL _____ INTERPRETIVE _____

EXEMPT LEGISLATIVE RULE XXX

CITE STATUTE(s) GRANTING EXEMPTION FROM LEGISLATIVE REVIEW

22A-2A-308(b)

AMENDMENT TO AN EXISTING RULE: YES ___ NO XX

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: 1

TITLE OF RULE BEING PROPOSED:

Rules for Operating Diesel Equipment in Underground Mines in West Virginia

THE ABOVE RULE IS HEREBY ADOPTED AND FILED WITH THE SECRETARY OF STATE. THE EFFECTIVE DATE OF THIS RULE IS 3/30/04

Kenneth N Dickens

Authorized Signature

TITLE 196
SERIES 1
RULES FOR OPERATING DIESEL EQUIPMENT IN UNDERGROUND MINES IN WEST VIRGINIA

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§196-1-1. General.

1.1. Scope. – This legislative rule establishes the standards, procedural and interpretative guidelines under which diesel powered equipment may be used in an underground coal mine in the state of West Virginia.

1.2. Authority. – WV Code §29A-3-8

1.3. Filing Date --

1.4 Effective Date –

§196-1-2. Definitions.

2.1. For the purposes of this article, the words or phrases defined in this part 2 have the meanings ascribed to them. These definitions are applicable unless a different meaning clearly appears from the context.

2.2. When used in this article, the words and phrases defined in section two, article one of this chapter have the meaning ascribed to them in that section. Those definitions are applicable to this article unless a different meaning clearly appears from the context in which the word or phrase is used in this article.

2.3 "Board" means the board of coal mine health and safety continued by section three, article six of this chapter.

2.4. "Certificate of approval" means a formal document issued by MSHA stating that a complete assembly has met the requirements of part 36, title thirty of the code of federal regulations, 30 C.F.R. §36.1, et seq., for mobile diesel-powered transportation equipment and authorizing the use and attachment of an official approval plate so indicating.

2.5. "Commission" means the West Virginia diesel equipment commission created under the provisions of section three hundred one of this article.

2.6. "Diesel fuel tank" means a closed metal vessel specifically designed for the storage or transport of diesel fuel.

2.7. Diesel fuel transportation unit" means a self-propelled or portable wheeled vehicle used to transport a diesel fuel tank.

2.8. "Diesel engine" means any compression ignition internal combustion engine using the basic diesel cycle where combustion results from the spraying of fuel into air heated by compression.

2.9. "Diesel power package" means a diesel engine with an intake system, exhaust system, and a safety shutdown system installed that meets the specific requirements for MSHA approval of diesel power packages intended for use in approved equipment in areas of underground coal mines where electric equipment is required to be permissible.

2.10. "Exhaust emission" means any substance emitted to the atmosphere from the exhaust port of the combustion chamber of a diesel engine.

2.11. "Exhaust emissions control and conditioning system" means a device or combination of devices that will collect and treat diesel exhaust emissions at the exhaust port of the engine, and will reduce the volume of, or eliminate emissions of, diesel particulate matter, carbon monoxide and oxides of nitrogen in accordance with the requirements and standards of the commission established in accordance with the provisions of section four hundred three of this article.

2.12. "MSHA" means the mine safety and health administration of the United States department of labor.

2.13. "Permanent underground diesel fuel storage facility" means a facility designed and constructed to remain at one location for the storage or dispensing of diesel fuel, which does not move as mining progresses.

2.14. "Safety can" means a metal container intended for storage, transport or dispensing of diesel fuel, with a nominal capacity of five gallons, listed or approved by a nationally recognized independent testing laboratory.

2.15. "Temporary underground diesel fuel storage area" means an area of a mine provided for the short-term storage of diesel fuel in a fuel transportation unit, which moves as mining progresses.

§196-1-3. Underground Use.

3.1. Underground use of inby and outby diesel-powered equipment, including mobile equipment, stationary equipment and equipment of all horsepower ratings, may only be approved, operated and maintained as provided in this article, except for emergency fire-fighting equipment to be used specifically for that purpose.

3.2. All diesel-powered equipment shall be attended while in operation with the engine running in underground mines. For purposes of this subsection, "attended" shall mean a diesel equipment operator is within sight or sound of the diesel-powered equipment.

3.3. Inby and outby diesel-powered equipment may be used in underground mines if the inby or outby diesel-powered equipment uses an engine approved or certified by MSHA, as applicable, for inby or outby use that, when tested at the maximum fuel-air ratio, does not require an MSHA Part 7 approval plate ventilation rate exceeding 75 c.f.m. per rated horsepower. Should MSHA promulgate new regulations that change the MSHA part 7 approval plate ventilation rate, the cfm requirement per rated horsepower will be revised either up or down on a direct ratio basis upon recommendation of the Diesel Commission.

§196-1-4. Diesel-powered equipment package.

4.1. All diesel-powered equipment shall be approved by the commission as a complete diesel-powered equipment package, which shall be subject to all of the requirements, standards and procedures set forth in this article.

4.2. Diesel engines shall be certified or approved, as applicable, by MSHA and maintained in accordance with MSHA certification or approval and commission approval.

4.3. All approved diesel powered equipment packages shall be listed on an inventory sheet submitted to the diesel commission with a copy maintained at the mine. The following information shall be provided on the inventory list:

4.3.a. Name, Address and Permit Number of the Mine

4.3.b. The phone number and name of the contact person responsible for maintenance and testing of the diesel equipment.

4.3.c. The following specific information for each engine:

4.3.c.i. Manufacturer, serial number and model of the equipment using the power-package

4.3.c.ii. Manufacturer, Model number and serial number of the engine

4.3.c.iii. MSHA 7E Approval Number

4.3.c.iv. Rated HP and RPM

4.3.c.v. DPM gr/hr rating and mg over m to the third power

4.3.c.vi. Ventilation Rate

4.3.d. The following specific information for each Filter System:

4.3.d.i. Manufacturer and model of the filter system

4.3.d.ii. MSHA Efficiency Rating of the specific filter system(s) or an accepted third party rating

4.3.d.iii. System type and composition (i.e., Passively Regenerated Cordirite, etc.)

4.3.d.iv. The Manufacturer/Model of Regeneration system (if applicable)

§196-1-5. Exhaust emissions control.

5.1. Underground diesel-powered equipment shall include an exhaust emissions control and conditioning system that has been laboratory tested with the diesel engine, except as provided in paragraph (3), using the ISO 8178-1 test and has resulted in diesel particulate matter emissions that do not exceed an average concentration of 0.12 mg over m to the third power when diluted by one hundred percent of the MSHA part 7 approval plate ventilation rate for that diesel engine. Should MSHA promulgate new regulations that change the MSHA Part 7 approval plate ventilation rate, the dilution percentage relative to the approval plate ventilation rate will be adjusted either up or down on a direct ratio basis upon recommendation of the West Virginia Diesel Commission.

5.2. The exhaust emissions control and conditioning system shall be required to successfully complete a single series of laboratory tests conducted at a laboratory accepted by the WV Diesel Commission for each diesel engine, except as provided in subsection 5.3.

5.3. An exhaust emissions control and conditioning system may be approved for multiple diesel engine applications through a single series of laboratory tests, known as the ISO 8178-1 test, only if data is provided to the WV Diesel Commission that reliably verifies that the exhaust emissions control and conditioning system will meet, for each diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. Data provided to satisfy this provision shall include diesel particulate matter production rates for the specified engine as measured during the ISO 8178-1 test, if available. If ISO 8178-1 test data for diesel particulate matter production is not available for a specified engine, comparable data may be provided to the WV Diesel Commission that reliably verifies that the exhaust emissions control and conditioning system will meet, for the specified diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. This standard shall only be used for in-laboratory testing for approval of diesel-powered equipment for use underground.

5.4. The exhaust emissions control and conditioning system shall include the following:

5.4.a. A diesel particulate matter (DPM) filter that has proven capable of at least a seventy-five percent reduction of diesel particulate matter,

5.4.b. An oxidation catalyst or other gaseous emissions control device capable of reducing undiluted carbon monoxide emissions to 100 ppm or less under all conditions of operation at normal engine operating temperature range.

5.4.c. An engine surface temperature control capable of maintaining significant external surface temperatures below three hundred two degrees Fahrenheit.

5.4.d. A system capable of reducing the exhaust gas temperature below three hundred two degrees Fahrenheit.

5.4.e. An automatic engine shutdown system that will shut off the engine before the exhaust gas temperature reaches three hundred two degrees Fahrenheit and, if waterjacketed components are used, before the engine coolant temperature reaches two hundred twelve degrees Fahrenheit. A warning shall be provided to alert the equipment operator prior to engine shutdown.

5.4.f. A spark arrestor system.

5.4.g. A flame arrestor system.

5.4.h. A sampling port for measurement of undiluted and untreated exhaust gases as they leave the engine.

5.4.i. A sampling port for measurement of treated undiluted exhaust gases before they enter the mine atmosphere.

5.4.j. For inby diesel equipment, any additional requirements of MSHA regulations at 30 CFR Part 36 (relating to mobile diesel-powered transportation equipment for gassy noncoal mines and tunnels).

5.5. On-board engine performance and maintenance diagnostics systems shall be capable of continuously monitoring and giving readouts for paragraphs (a), (b), (c), (d), (e), (f), (g), and (h) of this subsection. The diagnostics system shall identify levels that exceed the engine and/or component manufacturer's recommendation or the applicable MSHA or WV Diesel Commission requirements as to the following:

5.5.a. Engine speed;

5.5.b. Operating hour meter;

5.5.c. Total intake restriction;

5.5.d. Total exhaust backpressure;

5.5.e. Cooled exhaust gas temperature;

5.5.f. Coolant temperature;

5.5.g. Engine oil pressure;

5.5.h. Engine oil temperature;

§196-1-6. Ventilation.

6.1. Minimum quantities of air where diesel-powered equipment is operated shall be maintained pursuant to this section.

6.2. Each specific model of diesel-powered equipment shall be approved by the commission before it is taken underground. The commission shall require an approval plate that must be attached to each piece of the diesel-powered equipment. The approval plate shall specify the minimum ventilating air quantity for the specific piece of diesel-powered equipment. The minimum ventilating air quantity shall be determined by the WV Diesel Commission based on the amount of air necessary at all times to maintain the exhaust emissions at levels not exceeding the exposure limits established in §196-1-7.

6.3. The minimum quantities of air in any split where any individual unit of diesel-powered equipment is being operated shall be at least that specified on the approval plate for that equipment. Air quantity measurements to determine compliance with this requirement shall be made at the individual unit of diesel-powered equipment.

6.4. Where multiple units are operated, the minimum quantity shall be at least one hundred percent of MSHA's Part 7 approval plate quantities for each unit operating in that split. Air quantity measurements to determine compliance with this requirement shall be made at the most downwind unit of diesel-powered equipment that is being operated in that air split. Should MSHA promulgate new regulations that change the MSHA Part 7 approval plate ventilation rate, the minimum quantity where multiple units are operated shall be revised on a direct ratio basis upon recommendation of the WV Diesel Commission.

6.5. The minimum quantities of air on any split where any diesel-powered equipment is operated shall be in accordance with the minimum air quantities required in subsections (6.1) and (6.2) and shall be specified in the mine diesel ventilation plan.

§196-1-7. Exhaust gas monitoring and control.

7.1. In monitoring and controlling exhaust gases, the ambient concentration of exhaust gases in the mine atmosphere shall not exceed 35 ppm ceiling for carbon monoxide (CO), 25 ppm ceiling for nitric oxide (NO) and 3 ppm ceiling for nitrogen dioxide (NO2). The concentration of these exhaust gases shall be measured at the equipment operator's or equipment attendant's position and inby the last piece of diesel-powered equipment operating in the same split of air. Measurements shall be made weekly or more often if necessary by a qualified person and shall be conducted pursuant to the requirements of this section.

7.2. Measurement of exhaust gases shall be made with a sampling instrument no less precise than detector tubes.

7.3. If the concentration of any of the gases listed in subsection 7.1 is seventy-five percent or more of its exposure limit, changes to the use of the diesel equipment, the mine ventilation or other modifications to the mining process shall be made.

7.4. If the concentration of any of the gases listed in subsection 7.1 exceeds the exposure limit, the diesel equipment operating in that split shall be removed from service immediately and corrective action taken. After corrective action has been taken by the mine operator, the diesel equipment may be returned to service in its regular operating mode for emissions testing purposes only, and emissions testing shall be conducted immediately to assure that the concentration does not exceed seventy-five per cent of the exposure limit. Corrective action must be taken until the concentration does not exceed seventy-five percent of the exposure limit before the diesel equipment can be returned to full operation.

7.5. In addition to the other maintenance requirements set forth in this article, the mine operator shall comply with the following requirements:

7.5.a. Repair or adjustment of the fuel injection system shall only be performed by qualified mechanics authorized by the engine manufacturer.

7.5.b. Complete testing of the emissions system in accordance with §196-1-20 shall be conducted prior to any piece of diesel-powered equipment being put into service, after any repair or adjustment to the fuel delivery system, engine timing or exhaust emissions control and conditioning system.

7.5.c. Service and maintenance of the intake air filter exhaust particulate filter and the exhaust system shall be performed at specific time intervals based on the component manufacturer's recommendation, compliance with the engine or emissions control operation specifications and, as needed, based on the on-board diagnostics and/or emissions test results. Accurate records shall be maintained of all such service and maintenance.

§196-1-8. Fuel storage facilities.

8.1. An underground diesel fuel storage facility shall be any facility designed and constructed to provide for the storage of any mobile diesel fuel transportation unit(s) or the dispensing of diesel fuel.

8.2. Diesel-powered equipment shall be used underground only with fuel that meets the standards of the most recently approved EPA guidelines for over-the-road-fuel: Additionally, the fuel shall also meet the ASTM D975 fuel

standards with a flash point of one hundred degrees Fahrenheit or greater at standard temperature and pressure. The operator shall maintain a copy of the most recent delivery receipt from the supplier that will prove that the fuel used underground meets the standard listed above.

8.3. Underground diesel fuel storage facilities shall meet the following general requirements:

8.3.a. Fixed underground diesel fuel storage tanks are prohibited.

8.3.b. No more than five hundred gallons of diesel fuel shall be stored in each underground diesel fuel storage facility.

8.4. Underground diesel fuel storage facilities shall be located as follows:

8.4.a. at least one hundred feet from shafts, slopes, shops and explosives magazines;

8.4.b. at least twenty-five feet from trolley wires, haulage ways, power cables and electric equipment not necessary for the operation of the storage facilities; and

8.4.c. in an area that is as dry as practicable.

8.5. Underground diesel fuel storage facilities shall meet the construction requirements and safety precautions enumerated in this subsection.

8.5.a Underground diesel fuel storage facilities shall meet all of the following:

8.5.a.(i). Be constructed of noncombustible materials and provided with either self-closing or automatic closing doors.

8.5.a.(ii). Be ventilated directly into the return air course using noncombustible materials.

8.5.a (iii). Be equipped with an automatic fire suppression system complying with §196-1-12. The WV Diesel Commission may approve an alternate method of complying with this section on a mine by mine basis.

8.5.a. (iv). Be equipped with at least two portable twenty-pound multipurpose dry-chemical type fire extinguishers.

8.5.a. (v). Be marked with conspicuous signs designating combustible liquid storage.

8.5.a. (vi). Be included in the pre-shift examination.

8.5.b. Welding or cutting other than that performed in accordance with 8.5.b(i)(ii)(iii) shall not be done within fifty feet of a diesel fuel storage facility.

8.5.b (i) When it is necessary to weld, cut or solder pipelines, cylinders, tanks or containers that may have contained diesel fuel, the following requirements shall apply:

8.5.b. (ii) Cutting or welding shall not be performed on or within containers or tanks that have contained combustible or flammable materials until such containers or tanks have been thoroughly purged and cleaned or inerted and a vent or opening is provided to allow for sufficient release of any buildup pressure before heat is applied.

8.5.b. (iii) Diesel fuel shall not be allowed to enter pipelines or containers that have been welded, soldered, brazed or cut until the metal has cooled to ambient temperature.

§196-1-9. Transfer of diesel fuel.

9.1. Diesel fuel shall be transferred as provided in this section.

9.2. When diesel fuel is transferred by means of a pump and a hose equipped with a nozzle containing a self-closing valve, a powered pump may be used only if:

9.2.a. the hose is equipped with a nozzle containing a self-closing valve without a latch-open device; and

9.2.b. the pump is equipped with an accessible emergency shutoff switch.

9.3. Diesel fuel shall not be transferred using compressed gas.

9.4. Diesel fuel shall not be transferred to the fuel tank of diesel-powered equipment while the equipment's engine is running.

9.5. Diesel fuel piping systems shall be designed and operated as dry systems.

9.6. All piping, valves and fittings shall meet the following:

9.6.a. Be capable of withstanding working pressures and stresses.

9.6.b. Be capable of withstanding four times the static pressures.

9.6.c. Be compatible with diesel fuel.

9.6.d. Be maintained in a manner that prevents leakage.

9.7. Vertical pipelines shall have manual shutoff valves installed at the surface filling point and at the underground discharge point.

9.8. Unburied diesel fuel pipelines shall not exceed three hundred feet in length and shall have shutoff valves located at each end of the unburied pipeline.

9.9. Horizontal pipelines shall not be used to distribute fuel throughout the mine.

9.10. Diesel fuel piping systems shall be used only to transport fuel from the surface directly to a single underground diesel fuel transfer point.

9.11. When boreholes are used, the diesel fuel piping system shall not be located in a borehole with electric power cables.

9.12. Diesel fuel pipelines located in any shaft shall be included as part of the required examination of the shaft.

9.13. Diesel fuel piping systems located in entries shall not be located on the same side of the entry as electric cables or power lines.

9.14. Diesel fuel pipelines shall not be located in any trolley-haulage entry, except that they may cross the entry perpendicular if buried or otherwise protected in steel conduit or an equivalent from damage and sealed.

9.15. Diesel fuel piping systems shall be protected to prevent physical damage.

§196-1-10. Containers.

10.1. Containers for the transport of diesel fuel shall meet the requirements of this section.

10.2. Diesel fuel shall be transported only in containers specifically designed for the transport of diesel fuel.

10.3. No more than one safety can, conspicuously marked, shall be transported on a vehicle at any time.

10.4. Containers other than safety cans used to transport diesel fuel shall be provided with the following:

10.4.a. Devices for venting.

10.4.b. Self-closing caps.

10.4.c. Vent pipes at least as large as the fill or withdrawal connection, whichever is larger, but not less than one and one-fourth inch nominal inside diameter.

10.4.d. Liquid-tight connections for all container openings that are identified by conspicuous markings and closed when not in use.

10.4.e. Shutoff valves located within one inch of the tank shell on each connection through which liquid can normally flow.

10.5. When tanks are provided with openings for manual gauging, liquid-tight caps or covers shall be provided and shall be kept closed when not open for gauging.

10.6. Containers used for the transport of diesel fuel shall not exceed a capacity of five hundred gallons.

10.7. Containers, other than safety cans, used for the transport of diesel fuel shall be permanently fixed to the transportation unit; provided, however, that the WV Diesel Commission may develop criteria on a mine by mine basis that allows for approved diesel fuel transportation units to be transported on (or by) a secondary transportation unit to their respective work areas.

10.8. Diesel fuel transportation units shall be transported individually and not with any other cars, except that two diesel fuel transportation units up to a maximum of five hundred gallons each may be transported together.

10.9. Diesel fuel shall not be transported on conveyor belts.

10.10. When transporting diesel fuel in containers other than safety cans, a fire extinguisher shall be provided on each end of the transportation unit. The fire extinguishers shall be multipurpose type dry-chemical fire extinguishers containing a nominal weight of twenty pounds.

10.11. Diesel fuel transportation units shall have a fire suppression system that meets the requirements of §196-1-11.

10.12. In mines where trolley wire is used, diesel fuel transportation units shall be provided with insulating material to protect the units from energized trolley wire, and the distance between the diesel fuel transportation unit and the trolley wire shall not be less than twelve inches, or the trolley wire shall be de-energized when diesel fuel transportation units are transported through the area.

10.13. Unattended diesel fuel transportation units shall be parked only in underground diesel fuel storage facilities.

10.14. Safety cans shall be used for emergency fueling only.

10.15. Safety cans shall be clearly marked, have a maximum capacity of five gallons and be constructed of metal and equipped with a nozzle and self-closing valves.

§196-1-11. Fire suppression for equipment and transportation.

11.1. Fire suppression systems for diesel-powered equipment and fuel transportation units shall meet the requirements of this section.

11.2. The system must be an automatic multipurpose dry-powder type fire suppression system suitable for the intended application and listed or approved by a nationally recognized independent testing laboratory. Installation requirements are as follows:

11.2.a. The system shall be installed in accordance with the manufacturer's specifications and the limitations of the listing or approval.

11.2.b. The system shall be installed in a protected location or guarded to minimize physical damage from routine operations.

11.2.c. Suppressant agent distribution tubing or piping of the system shall be secured and protected against damage, including pinching, crimping, stretching, abrasion and corrosion.

11.2.d. Discharge nozzles of the system shall be positioned and aimed for maximum fire suppression effectiveness in the protected areas. Nozzles shall also be protected against the entrance of foreign materials such as mud, coal dust or rock dust that could prevent proper discharge of suppressant agent.

11.3. The fire suppression system shall provide automatic fire detection and suppression for all of the following:

11.3.a. The engine, transmission, hydraulic pumps and tanks, fuel tanks, exposed brake units, air compressors and battery areas, as applicable, on all diesel-powered equipment.

11.3.b. Fuel containers and electric panels or controls used during fuel transfer operations on fuel transportation units.

11.4. The fire suppression system shall include a system fault and fire alarm annunciator that can be seen and heard by the equipment operator.

11.5. The fire suppression system shall provide for automatic engine shutdown. Engine shutdown and discharge of suppressant agent may be delayed for a maximum of fifteen seconds after the fire alarm annunciator alerts the operator.

11.6. At least two manual actuators shall be provided with at least one manual actuator at each end of the equipment. If the equipment is provided with an operator's compartment, one of the mechanical actuators shall be located in the compartment within easy reach of the operator. For

stationary equipment, the two manual actuators shall be located with at least one actuator on the stationary equipment and at least one actuator a safe distance away from the equipment and in intake air.

§196-1-12. Fire suppression for storage areas.

12.1. Fire suppression systems for diesel fuel storage areas shall meet the requirements of this section.

12.2. The system shall be an automatic multipurpose dry-powder type fire suppression system or other system of equal capability, suitable for the intended application and listed or approved by a nationally recognized independent testing laboratory. The system shall meet the following installation requirements:

12.2.a. The system shall be installed in accordance with the manufacturer's specifications and the limitations of the listing or approval.

12.2.b. The system shall be installed in a protected location or guarded to minimize physical damage from routine operation.

12.2.c. Suppressant agent distribution tubing or piping of the system shall be secured and protected against damage, including pinching, crimping, stretching, abrasion and corrosion.

12.2.d. Discharge nozzles of the system shall be positioned and aimed for maximum fire suppression effectiveness in the protected areas. Nozzles must also be protected against the entrance of foreign materials such as mud, coal dust and rock dust that could prevent proper discharge of suppressant agent.

12.3. The fire suppressant system shall provide automatic fire detection and suppression for the fuel storage tanks, containers, safety cans, pumps, electrical panels and control equipment in fuel storage areas.

12.4. Audible and visual alarms to warn of fire or system faults shall be provided at the protected area and at a surface location that is always staffed when persons are underground. A means shall also be provided for warning all endangered persons in the event of fire.

12.5. Fire suppression systems shall include two manual actuators with at least one located within the fuel storage facility and at least one located a safe distance away from the storage facility and in intake air.

12.6. The fire suppression system shall remain operative in the event of electrical system failure.

12.7. If electrically operated, the detection and actuation circuits shall be monitored and provided with status indicators showing power and circuit

continuity. If not electrically operated, a means shall be provided to indicate the functional readiness status of the system.

12.8. Fire suppression devices shall be visually inspected at least once each week by a person qualified to make such inspections..

12.9. Each fire suppression device shall be tested and maintained.

12.10. A record shall be maintained of the inspection required by this paragraph. The record of the weekly inspections shall be maintained at an appropriate location for each fire suppression device.

12.11. All miners normally assigned to the active workings of a mine shall be instructed about any hazards inherent to the operation of all fire suppression devices installed and, where appropriate, the safeguards available for each device.

§196-1-13. Use of certain starting aids prohibited.

13.1The use of volatile or chemical starting aids is prohibited.

§196-1-14. Fueling.

14.1. Fueling of diesel-powered equipment shall not be conducted in the intake escapeway unless the mine design and entry configuration make it necessary. In those cases where fueling in the intake escapeway is necessary, the mine operator shall submit a plan for approval to the Commission outlining the special safety precautions that will be taken to insure the protection of miners. Such plan shall specify a location, (such as end of the tail track or adjacent to the load out point), where fueling will be conducted in the intake escapeway and all other safety precautions that will be taken, which shall include an examination of the area for spillage or fire by a qualified person.

14.2. Diesel fuel and other combustible materials shall be cleaned up and not be permitted to accumulate anywhere in an underground mine or on diesel-powered or electric equipment located therein.

14.3. At least one person specially trained in the cleanup and disposal of diesel fuel spills shall be on duty at the mine when diesel-powered equipment or mobile fuel transportation equipment is being used or when any fueling of diesel-powered equipment is being conducted.

§196-1-15. Fire and safety training.

15.1. All underground employees at the mine shall receive special instruction related to fighting fires involving diesel fuel. This training may be included in annual refresher training under MSHA regulations at 30 CFR Part 48 (relating to training and retraining of miners) or included in the fire

drills required under MSHA regulations at 30 CFR 75.1101-23 (relating to program of instruction; location and use of fire fighting equipment; location of escapeways, exits and routes of travel; evacuation procedures; fire drills.)

15.2. All miners shall be trained in precautions for safe and healthful handling and disposal of diesel-powered equipment filters. All used intake air filters, exhaust diesel particulate matter filters and engine oil filters shall be placed in their original containers or other suitable enclosed containers and removed from the underground mine to the surface. Arrangements will be made for safe handling and disposal of these filters within a timely manner after they have reached the surface.

§196-1-16. Maintenance.

16.1. Diesel-powered equipment shall be maintained in an approved and safe condition as described in this article or shall be removed from service.

16.2. An operator choosing to use diesel equipment in an underground coal mine must develop a maintenance plan and submit his plan to the WV Diesel Commission for approval. Failure of the mine operator to comply with the maintenance requirements of this subsection may result in the revocation of the commission's approval of the complete diesel-powered equipment package, provided appropriate notification has been given to the mine operator and the procedures of this section have been taken. Upon receiving such notice, the mine operator shall have thirty days to submit a plan to achieve and maintain compliance. Such plan shall be evaluated by the commission, and, upon approval, the mine operator shall implement the plan. The commission shall monitor the mine operators' compliance. At any time the commission determines that the mine operator is unable or unwilling to comply, the commission shall revoke the mine operator's approval, which would in turn prohibit use of all diesel equipment at that mine.

16.3. To acquire and maintain approval of a complete diesel-powered equipment package, the mine operator shall comply with the following requirements:

16.3.a All service, maintenance and repairs of approved complete diesel-powered equipment packages shall be performed by mechanics that are trained and qualified in accordance with §196-1-24.

16.3.b. Service and maintenance of approved complete diesel-powered equipment packages shall be performed according to:

16.3.b. (i) the specified routine maintenance schedule;

16.3.b. (ii) on-board performance and maintenance diagnostics readings;

16.3.b. (iii) emissions test results; and

16.3.b. (iv) component manufacturer's recommendations.

§196-1-17. Records.

17.1. A record shall be made of all emissions tests, preoperational examinations and maintenance and repairs of complete diesel-powered equipment packages. The records made pursuant to this section shall meet the requirements of the section.

17.2. The person performing the emissions test, examination, maintenance or repair shall certify by date, time, engine hour reading and signature that the emissions test, examination, maintenance or repair was made.

17.3. Records of emissions tests and examinations shall include the specific results of such tests and examination.

17.4. Records of maintenance and repairs shall include the work that was performed, any fluids or oil added, parts replaced or adjustments made and the results of any subsequently required emissions testing.

17.5. Records of preoperational examinations shall be retained for the previous one hundred-hour maintenance cycle.

17.6. Records of emissions tests, one hundred-hour maintenance tests and repairs shall be countersigned once each week by the certified mine electrician or mine foreman.

17.7. All records required by this section shall be retained for at least one year at a surface location at the mine and made available for inspection by the commission, district mine inspector and by miners and their representatives.

§196-1-18. Duties of operator.

18.1. Prior to using a piece of diesel-powered equipment during a shift, an equipment operator shall conduct an examination as follows:

18.1.a. Check the exhaust emissions control and conditioning system components to determine that the components are in place and not damaged or leaking.

18.1.b. Assure that the equipment is clean and free of accumulations of combustibles.

18.1.c. Assure that the machine is loaded safely.

18.1.d. Check for external physical damage.

18.1.e. Check for loose or missing connections.

18.1.f. Check engine oil level.

18.1.g. Check transmission oil level.

18.1.h. Check other fluid levels, if applicable.

18.1.i. Check for hydraulic, coolant and oil leaks.

18.1.j. Check fan, water pump and other belts.

18.1.k. Check the fan for damage.

18.1.l. Check guards.

18.1.m. Check the fuel level.

18.1.n. Check for fuel leaks.

18.1.o. Comply with record keeping requirements pursuant to §196-1-17.

18.2. After the engine is started and warmed up, the equipment operator shall conduct an examination as follows:

18.2.a. Check all on-board engine performance and maintenance diagnostics system gauges for proper operation and in-range readings. The equipment operator shall immediately shut down the engine and notify the operator if the on-board readings indicate any of the following:

18.2.a.i. Intake restriction at full engine speed is greater than the manufacturer's recommendation.

18.2.a.(ii) Exhaust restriction at full engine speed is greater than the manufacturer's recommendation.

18.2.a.(iii) Coolant temperature is at or near two hundred twelve degrees Fahrenheit.

18.2.a. (iv) Low engine oil pressure.

18.2.a. (v) High engine oil temperature.

18.2.b. Check safety features, including, but not limited to, the throttle, brakes, steering, lights and horn.

18.2.c. Comply with record keeping requirements pursuant to section §196-1-17.

§196-1-19. Scheduled maintenance.

19.1 At intervals not exceeding one hundred hours of engine operation, a qualified mechanic shall perform the following maintenance and make all necessary adjustments or repairs or remove the equipment from service:

19.1a. Wash or steam-clean the equipment.

19.1 b. Check for and remove any accumulations of coal, coal dust or other combustible materials.

19.1.c. Check the equipment for damaged or missing components or other visible defects.

19.1.d. Conduct electrical and safety component inspections.

191.e. Replace engine oil and filter. The WV Diesel Commission may approve a replacement interval greater than 100 hours.

19.1.f. Check the transmission oil level and add oil, if necessary.

19.1.g. Check hydraulic oil level and add oil, if necessary.

19.1. h. Check the engine coolant level and add coolant, if necessary.

19.1.i. Check all other fluid levels and add fluid, if necessary.

19.1.j. Check for oil, coolant and other fluid leaks.

19.1.k. Inspect the cooling fan, radiator and shroud. Remove any obstructions and make necessary repairs.

19.1.l. Check all belts. Tighten or replace, if necessary.

19.1.m Check the battery and service as necessary.

19.1.n. Check the automatic fire suppression system.

19.1.o. Check the portable fire extinguisher.

19.1.p. Check the lights.

19.1.q. Check the warning devices.

19.1.r. With the engine operating, check and replace or repair the following:

19.1.r. (i) Oil pressure.

19.1.r. (ii) Intake air restriction at full engine speed.

19.r. (iii) Exhaust gas restriction at full engine speed.

19.1.r. (iv) Exhaust flame arrestor.

19.1.r. (v) All gauges and controls.

19.1.s. Conduct repeatable loaded engine-operating test in accordance with section §196-1-20.

19.1.t. Evaluate and interpret the results of all of the above tests and examinations and make all necessary repairs or remove equipment from service.

19.1.u. Comply with recordkeeping requirements pursuant to section §196-1-17.

§196-1-20. Emissions monitoring and control.

20.1. Emissions for diesel-powered equipment shall be monitored and controlled as provided in this section.

20.2. When any diesel-powered machine first enters service at a mine, baseline emission values shall be determined by a qualified mechanic. Unless the WV Diesel Commission approves an alternate procedure, the qualified mechanic shall:

20.2.a. Verify that the seal on the engine fuel injector pump is in place and that the proper fuel pump is on the equipment.

20.2.b. Install a new clean intake air cleaner, measure and record the intake restriction pressure.

20.2.c. Check the level of engine oil.

20.2.d. Change the engine lubrication oil if not fresh.

20.2.e. Check the level of the transmission fluid.

20.2.f. Flush the exhaust system, if needed. Measure and record the exhaust back pressure. If exhaust gas backpressure is above that recommended by the Manufacturer, then steps must be taken to bring the exhaust gas back pressure within the Manufacturer's recommended limit prior to beginning the test described in this section.

20.2.g. Test the brakes.

20.2.h. Place the equipment into an intake entry.

20.2.i. Set the brakes and chock the wheels.

20.2.j. Install the portable carbon monoxide (CO) sampling device into the untreated exhaust gas coupling provided in the operator's cab.

20.2.k. Start the engine and allow it to warm up to operating temperature.

20.2.l. For mobile equipment, shift into the highest gear and put the engine at full throttle, or for stationary equipment, induce a load and put the engine at full throttle.

20.2.m. Start the CO sampler and measure and record CO levels every minute for five minutes.

20.2.n. Comply with recordkeeping requirements pursuant to section §196-1-17.

20.2.o. An alternative to the testing provided in the aforementioned subsections may be developed by the WV Diesel Commission,.

Note: CO baseline emissions must be representative of MSHA's approval data

§196-1-21. Diagnostic testing.

21.1.At intervals not exceeding once every one hundred hours of engine operation, a qualified mechanic shall perform equipment maintenance diagnostic testing of each piece of diesel-powered equipment in the mine. The qualified mechanic shall:

21.1.a. verify the identification numbers on the equipment;

21.1.b. check the level of the engine lubricating oil;

21.1.c. check the level of the transmission fluid;

21.1.d. set the brakes and chock the wheels;

21.1.e. install the portable CO sampling device into the untreated exhaust port coupling provided in the operator's cab;

21.1.f. start the engine and allow it to warm up to operating temperature;

21.1.g. check the intake restriction and the exhaust back pressure at high idle speed;

21.1.h. if the intake restriction is more than the manufacturer's maximum recommended intake restriction, replace the intake filter with a clean one;

21.1.i. if exhaust gas backpressure is above that recommended by the Manufacturer, then steps must be taken to bring the exhaust gas back pressure within the Manufacturer's recommended limit prior to beginning the test described in this section;

21.1.j. for mobile equipment, shift into the highest gear and put the engine at full throttle, or for stationary equipment, induce a load and put the engine at full throttle.

21.1.k. start the CO sampler and record CO levels every minute for five minutes;

21.1.l. install the portable CO sampling device into the treated exhaust port coupling provided in the operator's cab and repeat steps (21.l) and (21k);

21.1.m. if the average CO reading for untreated exhaust gas is greater than twice the baseline established under §196-1-20 or if the average CO reading for treated exhaust gas is greater than 100 ppm, the equipment has failed and must be serviced and retested before it is returned to regular service; and

21.1.n. comply with recordkeeping requirements pursuant to §196-1-17.

21.1.o. an alternative to the testing provided in subsections 21.1.a. thru 21.1.n. may be developed and/or approved by the WV Diesel Commission.

§196-1-22 Training and general requirements.

22.1. To use diesel equipment in an underground mine the mine operator shall submit a training plan to the WV Diesel Commission for approval.

22.2. All training course instructors and all training plans required by this section and §196-1-23 and §196-1-24 shall be approved by the commission. Operator training and qualification shall meet the requirements of this section.

22.3. Training shall be conducted in the basics of the operation of a diesel engine, Federal and State regulations governing their use, company rules for safe operations, specific features of each piece of equipment and the

ability to recognize problems and shall be provided to each equipment operator and the mine health and safety committee if one exists. This training shall be designed to bring every operator to a level of good understanding of diesel equipment operation. Each operator will be qualified by attending a minimum eight-hour course, including classroom training on diesel fundamentals and equipment-specific hands-on training on the job.

22.4. Upon successful completion of both training sessions, the operator shall be issued a Certificate of Qualification (MSHA 5000-23) that qualifies him or her to operate a specific type of diesel-powered equipment. An operator may be qualified to operate more than one type of equipment by completing additional equipment-specific training covering differences specific to each additional type of equipment.

22.5. Eight (8) hours of annual diesel equipment operator refresher training, separate from that required by MSHA regulations at 30 CFR Part 48 (relating to the training and retraining of miners), shall be required annually. The mine operator shall furnish all required training and refresher training. The employees will suffer no loss of pay for attending training and refresher training.

22.6. The minimum eight-hour training required by subsection 22.5. shall include instruction in the following classroom subjects:

22.6.a. Engine fundamentals, which shall include an introduction to the function of a diesel engine and recognition of all major components and their functions.

22.6.b. Diesel regulations, which shall include an introduction to Federal and State regulations governing the use of diesel equipment.

22.6.c. Diesel emissions, which shall include an introduction to diesel emissions and their adverse health effects.

22.6.d. Factors that affect diesel emissions, which shall include a detailed presentation of engine faults and diesel fuel quality and their effect on emissions and the preventive actions that can be taken to minimize emissions levels.

22.6.e. Emissions control devices, which shall include a detailed presentation of the different emissions control devices employed to reduce emissions and details about actions the operator must take to keep the devices in working order.

22.6.f. Diagnostic techniques, which shall include a presentation of techniques that can be employed by the operator to assure the equipment is in safe operating condition and instruction about how

to recognize and diagnose certain engine faults that may cause increases in emissions.

22.6.g. The preoperational inspection, which shall include a presentation of the purpose, benefits and requirements of the preoperational inspection.

22.6.h. Ventilation, which shall include an introduction to special ventilation requirements for areas where diesel-powered equipment will operate.

22.6.i. Fire suppression system, which shall include an introduction to the fire suppression system and its function and when and how to activate the fire suppression manually.

22.6.j. Operating rules, which shall include a detailed presentation of the driving rules, safe driving speeds, traffic control devices and equipment limitations.

22.6.k. Emergency procedures, which shall include discussion of emergency situations, such as fire, diesel fuel spills, component failure, loss of ventilation air and emergency escape procedures and discussion of the potential use of the diesel-powered vehicle as an emergency escape vehicle in case of a mine emergency situation.

22.6.l. Record keeping and reporting procedures, which shall include a presentation on required record keeping and reporting procedures for problems or unsafe conditions, high emissions level and preoperational inspections made by the equipment operator.

22.7. A new Certificate of Qualification (MSHA 5000-23) shall be issued annually after the equipment operator has received the annual refresher training. A copy of the new certificate will be sent to the WV Diesel commission.

§196-1-23. Equipment-specific training.

23.1. Equipment-specific hands-on orientation training shall be given in an area of the mine where the equipment will be operated. This orientation shall be specific to the type and make of the diesel machine and shall be presented in small groups. The following subjects shall be included in the training:

23.1.a.Equipment layout, which shall include familiarization with the layout of the equipment, the operator's compartments and the controls.

23.1.b.Pre-operation inspection, which shall include familiarization with the pre-operation inspection procedure and review of specific details of the inspection and location of the components to be inspected.

23.1.c. Equipment limitations, which shall include instruction relating to equipment performance, speeds, capacities and blind areas.

23.1.d. Operating areas, which shall include instruction relating to areas in which the equipment may be operated.

23.1.e. Operation, which shall include familiarization with the controls, gauges and warning devices and safe operating limits of all indicating gauges.

23.1.f. Refueling procedure, which shall include familiarization with fuel handling, permissible refueling areas, spill prevention, cleanup and potential hazards from diesel fuel.

23.1.g) Emergency devices, which shall include instruction relating to the location and use of the fire extinguisher and fire suppression devices.

23.1.h. Driving practice, which shall include supervised operation of the equipment.

§196-1-24. Diesel mechanic training.

24.1. Diesel mechanic training and qualification shall meet the requirements of this section.

24.2. Diesel mechanics shall be trained and qualified to perform maintenance, repairs and testing of the features of diesel equipment certified by MSHA and the commission.

24.3. To be qualified, a diesel mechanic must successfully complete a minimum of sixteen hours of a training program approved by the commission regarding the general function, operation, maintenance and testing of emissions control and conditioning components. The diesel mechanic must be qualified to perform these tasks on the specific machines used at the mine or mines where they are employed. Additional engine-specific training shall be provided to diesel mechanics in accordance with a plan approved by the commission.

24.4. Annual retraining programs of eight (8) hours for diesel mechanics shall be required and approved by the commission. The annual retraining shall include refresher training as well as new procedure and new technology training as necessary. Such training shall be separate from

refresher training pursuant to MSHA regulations at 30 CFR Part 48 (relating to training and retraining of miners) and electrical training required by MSHA. The mine operator shall furnish all required training and refresher training. The employees will suffer no loss of pay for attending training and refresher training.

24.5. The minimum sixteen-hour diesel mechanic training programs shall be submitted for approval to the commission and shall include training in the following minimum subject requirements:

24.5.a. Federal and State requirements regulating the use of diesel equipment.

24.5.b. Company policies and rules related to the use of diesel equipment.

24.5.c. Emissions control system design and component technical training.

24.5.d. On-board engine performance and maintenance diagnostics system design and component technical training.

24.5.e. Service and maintenance procedures and requirements for the emissions control systems.

24.5.f. Emissions testing procedures and evaluation and interpretation of test results.

24.5.g. Troubleshooting procedures for the emissions control systems.

24.5.h. Fire protection systems test and maintenance.

24.5.i. Fire and ignition sources and their control and elimination.

24.5.j. Fuel system maintenance and safe fueling procedures.

24.5.k. Intake air system design and components technical training and maintenance procedures.

24.5.l. Engine shutdown device tests and maintenance.

24.5.m. Special instructions regarding components, such as the fuel injection system, that shall only be repaired and adjusted by a qualified mechanic who has received special training and is authorized to make such repairs or adjustments by the component manufacturer.

24.5.n. Instruction on record keeping requirements for maintenance procedures and emissions testing.

24.5.o. Other subjects determined by the commission to be necessary to address specific health and safety needs.

24.6. Individuals successfully completing the approved 16-hour diesel mechanic training will be considered to be a trained operator providing he has received the necessary task training on the specific piece of diesel equipment.

§196-1-25. Operation of diesel-powered equipment.

25.1. In addition to other requirements of this article, diesel-powered equipment shall be operated pursuant to the standards set forth in this section.

25.2. All diesel-powered equipment shall be attended while in operation with the engine running in underground mines.

25.3. Unnecessary idling of diesel-powered equipment shall be prohibited.

25.4. All roadways where diesel-powered equipment is operated shall be maintained as free as practicable from bottom irregularities, debris and wet or muddy conditions that will affect control of the equipment.

25.5. Operating speeds shall be consistent with conditions of roadways, grades, clearances, visibility and traffic and type of equipment used.

25.6. Equipment operators shall have full control of the mobile equipment while it is in motion.

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

25.8. All diesel-powered equipment shall be maintained in a safe and healthful operating condition. Equipment in an unsafe or unhealthful condition or not maintained in accordance with the engine or emissions control operating specifications shall be removed from service immediately and shall not be returned to service until all necessary corrective actions have been taken.

§196-1-26. Diesel Inspectors; Employment; Training.

26.1. Prior to the implementation of this Rule, the West Virginia Office of Miners' Health Safety and Training shall employ a diesel inspector in each of the State's four Regional offices.

26.2. The diesel inspector may be assigned other duties as prescribed by the Director.

26.3. The West Virginia Office of Miners' Health Safety and Training shall provide the diesel inspectors with specific training in the Rules for Operating Diesel Equipment in Underground Mines; also they shall train and equip the diesel inspectors with the proper equipment so that the inspectors may effectively test for diesel emissions and properly enforce the Rules for Operating Diesel Equipment in Underground Mines as prescribed by the WV Diesel Commission.

26.4. The diesel inspectors shall be trained in accordance with criteria as established and approved by the WV Diesel Commission.

26.5. After the implementation of the Rules for Operating Diesel Equipment in Underground Mines, the West Virginia Office of Miners' Health Safety and Training shall employ additional diesel inspectors as needed.

§196-1-27. Diesel Inspector – Training Course.

27.1. Training for diesel inspectors shall include, but is not limited to, the following:

27.1.a. Engine Fundamentals – Components and Operation of a Diesel Engine

27.1.b. Fuel Standards – Fuel Requirements and Effect of Various Fuels on DPM Emissions

27.1.c. Diesel Regulations – State and Federal

27.1.d. DPM – Health Effects

27.1.e. Factors that increase/decrease DPM emissions

27.1.f. Emission Control Techniques – Operation, Maintenance and Testing

27.1.g. Diagnostics – Instruments, Testing and Evaluation

27.1.h. Inspection Techniques – Enforcement

27.1.i. Ventilation

27.1.j. Fire Suppression Systems – Operation, Testing and Maintenance

27.1.k. Emergency Procedures – Firefighting, Spills/Containment

27.1.l. Fuel Handling/Storage

27.1.m. Manufacturer Training

Diesel Commission Public Hearing
March 30, 2004
Charleston, West Virginia

This is a list of changes to the attached rule made by the Diesel Commission:

First change—196-1-3.2 "shall mean a diesel equipment operator"

Second change—196-1-5 a dash was included in section heading

Third change—196-1-6.5 "subsections (6.1) and (6.2)"

Fourth change—196-1-8.5.b. "with 8.5.b(i)(ii)(iii)"

Fifth change—196-1-12.8 the word "to" was inserted

Sixth change—196-1-13 a dash was included in section heading

Seventh change—196-1-15.1 "CFR" was inserted for CPR

Eighth change—196-1-16.1 "shall be" was included

Ninth change—196-1-20.2 "baseline emission values shall be determined by a qualified mechanic."

Tenth change—196-1-20.2.a "pump" was included

Eleventh change—196-1-26.5 "additional" was included

Chris Hamilton made a motion that the Proposed Rule for Operating Diesel Equipment in Underground Mines in West Virginia be approved with the amendments included and the effective date be set for today's date , Gary Trout seconded the motion. The motion unanimously carried.

SIGN IN

1) Larry Thom
2) Eddy W Snodgrass
3) Robert Scott
4) Frank Foster
5) Jim Bunn II
6) Jeremy Fairchild
7) Brenda K Ellis
8) Barbara Dukes
9) Jim Clendenen
10) Rick Withers
11) Preston Davis
12) James Goff
13) Gene L Davis

SIGN IN IF YOU WISH TO SPEAK

ARNE GRENDER – JOHNSON INDUSTRIES

Diesel Commission Public Hearing
March 30, 2004
Charleston, West Virginia

The following is the responses made by the West Virginia Diesel Commission to the comments attached hereto:

Comment #1--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #2--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #3--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #4--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #5--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #6--- After review of these comments, the Diesel Commission concluded that this comment was in support of the West Virginia rule.

Comment #7--- 1) The exhaust manifold is a significant component and the surface temp. must be under 302 ° F.

2) After review of this comment, the Diesel Commission concluded to leave the West Virginia rule as it is written.

3) After review of this comment, the Diesel Commission concluded that the West Virginia rule already addresses this comment.

4) After review of this comment, the Diesel Commission concluded to leave the West Virginia rule as it is written.

COMMENT #1

Comments of the West Virginia Coal Association in response to the Proposed Rule for Operating Diesel Equipment in Underground Mines in West Virginia March 30, 2004

The West Virginia Coal Association (WVCA) is a trade association representing the interests of coal-related industries conducting business in West Virginia. WVCA's general membership currently accounts for 98% of the Mountain State's underground and surface coal production. In addition, WVCA has some 700 associate members that provide a variety of services to the coal industry and include engineering and environmental consulting firms, coal mining equipment manufactures, land and mineral holding companies, coal transportation firms and coal consumers. WVCA's primary goal is to assure the enhanced viability of the West Virginia coal industry through reasonable, equitable and achievable policy and regulation.

As a general comment WVCA supports the proposed rule allowing and governing the use of diesel powered equipment in underground coal mines. First and foremost, the introduction of diesel equipment in West Virginia coal mines will enhance the state's ability to improve upon its safety performance record by making available an energy source or power option which is time-tested, proven technology aimed squarely at reducing worker exposure to known electrical hazards. Particularly, in wet or damp mines and where methane gas exists!

Additionally, and under certain applications, diesel equipment can provide a more efficient means of transporting workers and supplies throughout the mine

workings, thus reducing worker exposure to transportation related hazards and general fatigue and discomfort.

Although, we generally support the proposed rule, we observe that the Commission's proposal extends considerably beyond federal requirements and corresponding regulations, and as such, potentially creates confusion and complexities in compliance and enforcement plans. There are also numerous instances where the proposed rule appears overly restrictive without providing a commensurate level of safety protection. Specific recommendations will be advanced by industry members serving on the Commission.

As new science and technologies emerge, we encourage the Commission to update and revise the rules as appropriate. We also encourage the Commission to utilize the variance procedure to address site-specific issues a timely and efficient productive manner and to respond to instances where individual companies purport to address technical or operational matters through alternative methods.

We believe these comments are consistent with the Commission's interest to see an expansion of diesel technologies in underground applications.

Thank you.

COMMENT # 2

West Virginia Diesel Rule

Section 196-1-3 Underground use

This section gives a general overview of the entire rule, in this overview it states that both inby and outby equipment shall be governed by this rule. It also states that both mobile and stationary equipment of all horsepower ratings may be approved. These statements will not allow the use of underground diesel powered equipment to be limited. It also will govern the use, operation and maintenance of all underground diesel powered equipment. Although this Section of the rule is fairly short on words it is very concise in its meaning.

Section 196-1-4 Diesel-Powered Equipment Package

This section has three main themes.

First it states that all diesel equipment will be treated or approved as a complete Diesel powered equipment package. By making this statement this section assures the diesel engine and after treatment system will match and compliment the equipment. In other words this section will not allow retro-fitting of diesel engines and after treatment systems to equipment unless the complete piece of equipment is considered for approval by the Commission. This statement is needed if West Virginia is to have mine worthy equipment.

Secondly this section insures that all engines consider for use in the State of West Virginia be MSHA approved. Since MSHA already approves all underground diesel engines and also require all underground coal mines use these approved engines, this section simply reiterates MSHA's on this matter.

The third requirement of this section is an inventory of all diesel powered equipment. This is simply good business as anyone using diesel equipment should know exactly what and how many of each piece of equipment they have at any time.

Jeffery Harris

Comment #3

West Virginia Diesel Rule

Section 196-1-3 Underground use

This section gives a general overview of the entire rule, in this overview it states that both inby and outby equipment shall be governed by this rule. It also states that both mobile and stationary equipment of all horsepower ratings may be approved. These statements will not allow the use of underground diesel powered equipment to be limited. It also will govern the use, operation and maintenance of all underground diesel powered equipment. Although this Section of the rule is fairly short on words it is very concise in its meaning.

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Barbara Dubael

COMMENT # 4

West Virginia Diesel Rule

Section 196-1-3 Underground use

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Brenda Ellis-

COMMENT # 5

Section 196-1-14 Fueling

This section defines the precautions needed for the mine operator to be allowed to fuel equipment in an intake escapeway. We realize how important these escapeways are to our miners but on the same hand we also realize how important it is for the coal operators to fuel equipment when and where needed. It is for this reason we are asking that the operators take extra precautions when fueling in our escapeways. However the added precautions are not spelled out in this rule because each mine has different situations. That is way each mine wanting to fuel in these areas will have to go the Diesel Commission for an approved plan. We feel this is the best way to protect our interest while allowing the mine operators the right to conduct fueling when and where needed.

This section also requires that some miners be trained to deal with diesel fuel spills that may occur in our mines. If we were not to at least give minimal training to some of the miners how then can we expect them to take care of a major fuel spill? We are not asking for complete hazmat training which by the way is required for the rest of the world, but we do believe it prudent to give some training to the miners who may have to deal with a spill.

Section 196-1-15 Fire and Safety Training

This section has two parts the first deals with the need for our miners to have some training on how to fight a diesel fire and the second part ask for training on the handling of all filters used in a piece of diesel equipment. You must remember that the use of diesel fuel and filters are new to our mines and must be approached cautiously. We can not assume that everyone already posses this knowledge. Therefore we are asking that this information be part of our regular underground training. This rule as good as it is can not assure a clean and healthful environment in and of itself it is ultimately the workers who have to create this environment and by offering this training we are taking the first step in this process.

3/30/04

Submitted by:

Preston E Davis

Larry Dean

Eddy A Snodgrass

Robert Santone

Section 196-1-16 Maintenance

196-1-17 Records

As we have stated before this proposed rule can not insure a clean and healthful environment by itself there must be checks and balances to insure this. This section simply states that if a mine operator can not or will not abide by the rule then he will not be allowed to have diesel equipment in his mine. You must remember we as coal miners are taking a giant leap in accepting this rule and allowing the use of diesel equipment in our mines. All we are asking is for a mechanism for insuring the proposed rule will be implemented and operated as it is written. The requirements of this section are simple and straight forward they require no more than what would be consider good maintenance practices. We are operating other types of equipment in our underground coal mines which require maintenance why would we not require the same for any diesel equipment which will be introduced into our mines.

The next section goes hand-in-hand with the maintenance requirements. If we are to insure a clean and healthful environment we must require that records be kept of such things as emissions test, maintenance and repairs of diesel equipment, etc. We must also allow these records to be reviewed by the workers as well as the State Inspectors. This will give our miners the ability to check these books and see for themselves that the proposed is working as intended.

Section 196-1-18 Duties of an Operator

This section is an extension of what is being done now for our non-diesel powered equipment the only difference is that with the new diesel equipment comes many new items that must be checked, prior to operation, to insure that the piece of equipment is operating properly. This check list has been added to aid the equipment operators while performing these checks. We must remember the diesel equipment that will be running in our mines will have exhaust after-treatment systems and other new technologies that will not be readily understood by our equipment operators.

Section 196-1-19 Scheduled Maintenance

We feel this section is one of the most important sections in this proposed rule. It sole purpose is to insure the diesel equipment is operating in a state of good repair. This section is much different than any maintenance required by MSHA's diesel rule. The differences are simple, while MSHA takes the approach of writing citations to insure that equipment is being maintained properly, this rule requires regular maintenance of diesel equipment. This approach has worked for seven years in the coal mines of Pennsylvania, as proof of this I will state that Pennsylvania has equipment with approximately 7000 hrs. of operating time on them and they are still operating in a state of good repair. We believe the requirements of this section are one of the major reasons Pennsylvania has been able to achieve this. We also believe the miners in West Virginia deserve nothing less.

Section 196-1-20 Emissions monitoring and Control

196-1-21 Diagnostic Testing

As you know by our previous statements we believe maintenance is the key to operating diesel powered equipment. We also feel these two sections are the heart of the maintenance requirements. Even if we are maintaining the equipment in a state of good repair and the diesel engine is not functioning properly we can not, even with our best efforts, insure a safe and healthful work environment for our miners that is why we feel these sections are the heart of this proposed rule. These two sections have been adopted to track the performance of the diesel engine itself.

Section 196-1-20 requires that an emissions test be preformed on any diesel engine prior to it entering our mines. This is to establish baseline emissions for that engine. It also states that this baseline must be representative of MSHA's approval baseline for that engine. This statement will insure the diesel engine is operating properly prior to allowing its use. Once this baseline is establish Section 196-1-21 will require regular emissions testing on intervals not to exceed 100 hrs. of engine operations. This section will require an engine to be taken out of service and internal maintenance preformed when the carbon monoxide (CO) emissions become twice the established baseline for that engine. This requirement is for all engines entering our coal mines. As stated earlier MSHA does require some emissions testing, but they do not require a baseline to be established which could allow a faulty engine in our coal mines with out our knowledge. Also MSHA only requires emissions test on heavy duty and permissible equipment and no target is given for when an engine should be taken out of service for internal maintenance. If we were to adopt MSHA's approach none of the light duty equipment would require and emissions test at all. We must also state that light duty equipment makes up about 75 to 80% of the total underground diesel fleet. It makes no sense to allow 75 to 80% of the diesel fleet to operate in our mines without any testing at all. How could we ever expect to have a healthful environment for our miners with this approach?

Section	196-1-22	Training and General Requirements
	196-1-23	Equipment Specific Training
	196-1-24	Diesel Mechanic Training

We believe training our miners on the proper use and maintenance of diesel powered equipment is paramount for the success of this rule. It simply makes no sense to require all of the after-treatment systems as well as all of the safety devices and not include the training our miners will need to insure these systems and devices are working properly. As for the equipment operators they will need to know that even though this piece of equipment may be similar to something they have operated in the past that there are major differences brought about as part of the requirements of this proposed rule. As for the mechanics, they will have to be able to recognize when the equipment is need of repair. The training for operators as well as mechanics must be comprehensive as well as ongoing. This rule lays out training that if followed will insure success for our miners. The proposed rule will also require yearly refresher training for both equipment operators and mechanics, this is being done because the field of diesel after-treatment technology is changing at a very fast rate and by next year you may have a whole new set of guidelines that will need to be learned and then applied. It is because this is an ever changing field that we believe these sections of the proposed rule dealing with training need to be adopted as written, this is the only we can insure our miners will be given the knowledge needed to successfully operate and repair this new equipment.

Comment # 6

Gene Davis
1146 Palmer Rd.
Adah Pa. 15410

March 29, 2004

Re: West Virginia Proposed Diesel Rule Comments

First I would like to introduce myself, my name is Gene Davis and I am a member of the Technical Advisory Committee on Diesel Powered Equipment in Pennsylvania. My purpose here is to make comment on the proposed underground diesel rule that is in front of us today. I would first like to say, after reading through the proposed rule I find it very similar to that which we live under in Pennsylvania. During these comments I will try to point out the differences between the proposed West Virginia rule and MSHA's underground diesel rule.

Section 196-1-4 Diesel-Powered Equipment Package

This section has one underlying theme and that is that all diesel powered equipment used in underground coal mines of West Virginia shall be approved as a complete package. While this may not seem like much of a requirement, it will disallow the haphazard retrofitting of diesel engines to any and all equipment. This will be accomplished by making the entire equipment package approvable by the West Virginia Diesel Commission. This section is a much needed tool in keeping the underground diesel fleet in West Virginia mine worthy.

Section 196-1-5 Exhaust Emissions Control

This section is very different than anything MSHA has to offer our miners and is the heart of the proposed West Virginia Diesel Rule. It is in this section that we find the Diesel Particulate Matter (DPM) standard of .12 mg/m^3, as well as the required testing that will insure the engine and after-treatment system meet this standard. While this section does not impose any new concepts it is over and above anything MSHA has to offer our miners. Let's take a moment and examine what the MSHA version has to offer our miners.

First MSHA does require some equipment such as heavy duty and permissible equipment to meet an engine based standard of 2.5 g/hr of DPM. This requirement effects about 25–30% of the underground equipment, which means that 70-75% of the equipment will require no exhaust after-treatment what so ever. One other item worth mentioning is MSHA's definition for heavy duty equipment. Without going into detail about MSHA's definition I will state that in Pennsylvania we have equipment that under MSHA's definition would be consider heavy duty for a portion of the working shift and then would move into light duty status for the remainder of the shift. This would allow the removal of any diesel particulate filter (DPF) during the time the equipment is not in the heavy duty category, this can be done even though the engine is still emitting the

same amount of exhaust emissions (both gaseous and particulate). I have to ask if any one in this room believes this is the best approach to take to insure a safe and healthful environment for our miners.

Secondly the MSHA standard of 2.5g/hr does not mean that the diesel particulate emissions will be kept under check. I make this statement knowing the 2.5g rule does not take into consideration the ventilation plate quantity for the particular engine as the West Virginia version does nor does it take into consideration the horsepower (hp) rating for any particular engine. This means that smaller hp engines will be allowed to emit more DPM (when measured in mg/m^3) than their higher hp counterparts. West Virginia recognized this flaw in the MSHA approach and decided to correct this situation by requiring all diesel powered equipment meet the .12 mg/m^3.

In summation the West Virginia requirement will insure that no piece of diesel equipment will emit more than .12 mg/m^3 while the MSHA version can not make any statement of that nature. I would also like to add that the .12 standard has proven both achievable and feasible. I for one applaud West Virginia on this requirement.

The rest of this section deals with the safety standards such as exhaust gas temperature control, surface temperature control, treated gaseous exhaust requirements, etc. While MSHA does require some of these items on equipment in the permissible and heavy duty category they do not require any of these controls on light duty equipment. It is my belief that if these controls are needed for some equipment then they are needed for all equipment. As proof of this I offer that duty cycle of a piece of equipment is not contingent on its application in the coal mine, what I mean is that a piece of light duty equipment can and will be worked just as hard as its heavy duty or permissible counterparts. Here again I would like to applaud the West Virginia Diesel Commission for studying this situation and ultimately requiring these safety features for all diesel powered equipment.

Section 196-1-7 Exhaust Gas Monitoring

This is the next section I would like to talk about. This section sets a ceiling for the control of the most prevalent exhaust gases, these include Carbon monoxide (CO) 35ppm, Nitric Oxide (NO) 25ppm, and Nitrogen Dioxide (NO_2) 3ppm. This section of the proposed rule also defines when and where these checks are to be taken. While this does seem to coincide with the MSHA requirements there are major differences in the two rules.

First MSHA does require testing for CO, and NO_2 however it does not require any testing for NO in the ambient mine atmosphere. This is troubling to me for the fact that MSHA does include NO as a gas for issuing a ventilation plate for diesel engines. After the ventilation plate as been set there is no required check of the ambient atmosphere for NO, if you remember that the ventilation plate quantity is the minimum quantity of air needed to insure the regulated gases are being kept under control how can we, under a rule that does not allow for testing of NO, insure this gas is not causing a problem to health of our miners? The proposed West Virginia rule goes one step further and does require the ambient testing of NO as well as CO and NO_2 .this is a major difference but not the only difference in this part of the two rules.

Secondly the proposed West Virginia rule lowers the ceiling for the regulated gases; this has been done by adopting a more recent set of guidelines set forth by the American Conference of Governmental and Industrial Hygienists (ACGIH). The adoption of these newer guidelines will insure the protection of our miners from the gaseous components of diesel exhaust. This rule also requires ambient testing be done wherever diesel equipment is being operated, while MSHA only requires test be preformed at the face areas and other selective testing points. I for one believe that if you have a diesel fleet operating in a coal mine you should know what the atmosphere is like in the entire mine not just in selective areas after all we do not have miners working in just those selective areas but through out the mine. Here again the proposed West Virginia rule is not only different but provides more protection for the miners.

Sections	196-1-8	Fuel storage Facilities
	196-1-9	Transfer of Diesel Fuel
	196-1-10	Containers

Storage and handling of diesel fuel is covered by the above listed sections of the proposed rule. The fuel storage facility requirements are similar to that of MSHA with one major difference, the proposed rule only allows for storage of diesel fuel in mobile transportation units where MSHA will allow permanent storage tanks. At first this gives the impression of the proposed rule being to restrictive in its requirement, however if you study the difference between the MSHA's requirement and the requirement of the proposed rule you will find the proposed rule is not more restrictive but is a better solution for storing diesel fuel in our coal mines..

The reason for the requirement of mobile storage units is two fold. First and foremost it is and an attempt to curtail the every day transfer of diesel fuel. Allow me to explain; if you were to have a 1000 gal storage tank underground and needed to fuel some equipment at the face area you would first have to fill a smaller unit which would be taken to the equipment that was in need of refueling, after refueling you would then take the smaller unit back to the storage tank and empty the remaining contents back into the storage tank. Here you have had three fuel transfers to refuel one piece of equipment. This same equipment refueling can be accomplished by simply taking the mobile unit out of the storage facility and refueling the equipment wherever it is located and then simply returning the mobile unit to the storage facility. This is only one transfer of fuel and as we all know there is more of a chance for spillage and other problems during the transfer of fuel than at any other time that is why the proposed rule only allows the storage of mobile transportation units. Please do not misread this section as these mobile units can be stored in a storage facility for as long as needed. The only requirement is that they be mobile. Secondly if permanent storage tanks are allowed and a mine emergency such as bad roof conditions or a fire occurred that would require the empting of the storage unit, you would have to accomplish this by bringing in many smaller units and transfer the diesel fuel into them in an attempt to remove the fuel from the area. Even if you were to succeed in removing all the fuel from the tank you would be left with a tank that is filled with fumes which may be a bigger problem than you started with. This same scenario with a mobile transportation unit and all you do is hook up to the mobile unit and remove it from the area. In studying this section of the proposed rule I can state that it is has been

well thought out by the West Virginia Diesel Commission and is clearly a better way to store diesel fuel in our underground mines.

The above listed sections do have one other requirement that needs to be addressed, that is the refueling of diesel equipment with safety cans. MSHA will allow equipment to be refueled by the use of safety cans at anytime, however the proposed rule will only allow the refueling of equipment with a safety can in an emergency. This has been done for one reason. Coal miners have seen other combustibles such as oil brought into our mines in 5 gal. cans and we see how they are treated, many times they are smashed and run over by equipment, we would not want to see diesel fuel treated in this manner. Therefore I agree with the Commissions positions of refueling with a safety can in emergency situations only. I understand that refueling with a safety can, may be necessary in some situations however I do not believe this should be the normal way of refueling all equipment.

Section 196-1-14 Fueling

This section has a couple of unique features first it requires the mine operator to have a plan, approved by the West Virginia Diesel Commission, prior to refueling diesel equipment in the intake escapeway. Here again I would like to go on record in favor of this requirement. The intake escapeway is very important to our miners and must be treated with the utmost respect. You must remember this requirement does not preclude anyone from refueling in the intake escapeway it only states that a plan must be submitted and approved prior to any refueling. Knowing the importance of the escapeway to our miners I find it hard to believe anyone could have objection to this requirement. The second requirement of this section that I would like to address is the one that requires some miners be given special training for clean-up and disposal of diesel fuel spills. It only makes sense that if you are to handle and store diesel fuel you have the potential for a major spill. If a spill occurred who could be expected to know what to do without some type of specialized training. I for one do not believe the Diesel Commissions is speaking about complete Haz-mat Training, as the rest of the world is required to have, but we must give at least rudimentary training in the clean-up and disposal of diesel fuel to our miners or we risk a disaster.

Section	196-1-16	Maintenance
	196-1-17	Records
	196-1-18	Duties of an Operator

These sections while being different all have one underlying theme that is the success of the proposed rule. We know that no matter how well this diesel rule is written it can not achieve its mission without maintenance, record keeping and the equipment operator. These three items are essential to the success of this diesel rule.

First the maintenance requirement is an insurance policy for our miners in the event that a mine operator can not or will not maintain the diesel fleet to the specifications listed in this rule. This section can be summed up in this statement; the coal miners of West Virginia are willing to allow the use of diesel powered equipment in our mines if the coal mine operators agree to maintain the fleet to the specifications listed in

this proposed rule if they can not or will not maintain the fleet to these specifications then they will not have the luxury of using diesel powered equipment.

Secondly the record keeping requirement is one of the tools available to insure that the mine operator is complying with the proposed rule. After all any good maintenance program will have some record keeping built in to it, this section just takes the guess work out of what records need to be kept and for how long.

The third part of this equation is the equipment operator; this is the only link between proper maintenance and no maintenance. It is imperative that the equipment operator report all problems with his piece of equipment, problems that are unknown can not be repaired. That is why the equipment operators must perform proper checks and do a good job of recording all problems.

As mentioned earlier these three sections go hand-in-hand if anyone of these sections are ignored or not taken seriously then this proposed rule will not work as intended.

Section 196-1-19 Scheduled Maintenance

This section has been included in the proposed rule to insure that a good preventative maintenance program is instituted at all mines running diesel powered equipment. This approach to preventative maintenance is much different than MSHA's approach of waiting until a piece of equipment is out of compliance with their requirements, at which time they would write a citation to have the equipment brought back into compliance with their rule. This section gives the Coal Mine Inspectors of West Virginia another tool to see that the diesel equipment is being maintained in accordance with the proposed rule. This can be accomplished prior to any equipment actually being in a state of noncompliance. The Inspector could observe the maintenance requirements of this section while they are being performed, in this way the maintenance procedure can be cited for noncompliance prior to the equipment ever being in a state of disrepair.

Sections 196-1-20 Emissions Monitoring and Control
196-1-21 Diagnostic Testing

These two sections work together to insure the diesel engine is operating properly. MSHA also saw the need for diagnostic testing of a diesel engine and as a result did include emissions testing as part of their diesel rule, however there are some differences in the two rules. Following is a list of those differences:

1. MSHA's requirement for emissions testing is limited to heavy duty and permissible equipment while the West Virginia proposed rule requires this testing for all diesel powered equipment. MSHA's approach of requiring this testing for only heavy duty and permissible equipment will only cover about 25-30 % of all underground equipment. This would, and does, allow the rest of the diesel fleet to operate in a state of disrepair simply because emission testing is not preformed as needed. Under MSHA's rule the only time a piece of light duty equipment is being taken out of service for internal repair is when the emissions problems are so bad that they are noticeable to the naked eye this is long after

the condition could have be diagnosed with proper testing. The requirements of the proposed West Virginia rule will not allow this to happen.

2. MSHA's emissions testing is required on a weekly basis while the proposed rule would allow 100 hr intervals between testing, this 100 hr. interval works out to be about ten days for heavily used equipment and about 21 days for mantrips and other equipment that is being used more sporadically. The 100hr. interval has been instituted to allow more time for testing of the entire fleet, as mentioned early MSHA only requires about 25-30% of the diesel fleet to be tested. The MSHA requirement can be met for this limited number of equipment, however if you are to test the entire fleet it may not be feasible to require testing on a weekly basis but instead on the actual run time on the vehicle. That is why the proposed rule has adopted this requirement. I believe this approach would allow the coal operators more flexibility in performing the required testing, also I see no reason for concern with allowing the equipment to go to the 100 hr. interval prior to testing. Even though this approach is less restrictive that the MSHA version I believe it is a much better approach as it includes all diesel equipment.

3. The next difference I would like to talk about is two fold first the proposed rule requires baseline testing of carbon monoxide (CO) for each piece of diesel powered equipment. It then requires this equipment be taken out of service for maintenance when the CO number has doubled. MSHA's version does not require any baseline testing and is very ambiguous as to when a piece of equipment should be taken out of service for maintenance. The proposed rule does not leave anything to doubt, you simply take a CO baseline and then when the testing shows the CO number has doubled, the equipment must be serviced and the CO number must be brought back in line with the recorded baseline. The proposed rule is also different than MSHA's in that the proposed rule requires emission testing of the treated exhaust, this is being required to insure the oxidation catalyst is performing properly. This testing requirement is unique to the proposed rule because of the requirement that an oxidation catalyst be included on each piece of diesel powered equipment.

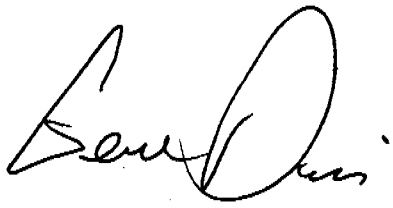
As we talk about the differences in the West Virginia proposed rule and the MSHA version it easy to see why the proposed rule will produce a more healthful environment for the miners of West Virginia.

Sections 196-1-22 Training and General Requirements
196-1-23 Equipment Specific Training
196-1-24 Diesel Mechanic Training

These three sections list all the training required by this proposed rule. As we all know training is an integral part of the success of any new mining plan or new mining procedure. How then could we expect to implement a rule as comprehensive as this without the proper training? I believe the West Virginia Diesel Commission should scrutinize each and every training plan that is sent in for full compliance of these training requirements. I say this for several reasons; first we must remember the operation of diesel powered equipment will be new to the underground mines of West Virginia add to

this the use of exhaust after-treatment systems and it is easy to see why comprehensive training is needed. Even the initial training will not be enough to keep the miners of West Virginia informed as to any new technological advances in exhaust after-treatment; this can only be accomplished by instituting comprehensive refresher training as this proposed rule does.

In closing I would like to state that we in Pennsylvania have operated diesel powered equipment for more than 100,000 hrs of operation under a rule that is very similar to this proposed rule. I can truly say that this has been accomplished with very few problems. I believe this shows that even though this rule is very comprehensive and to some very restrictive it does work. I would also like to state with certainty that this proposed rule is not perfect, as there are probably flaws in it that can not be seen even at this time, however I believe even with its flaws it is a rule that can benefit the coal operators while maintaining a high level of health and safety for the coal miners of this state.



Comment #7

Kenny Dickens

From: amemann grender <amemanng@yahoo.com>
To: <kdickens@mines.state.wv.us>
Cc: <jiinc@se-tel.com>
Sent: Friday, March 05, 2004 9:46 AM
Subject: Comments - Proposed Diesel Regs

Dear Sir:

Thank you for the opportunity to comment. We have only a few concerns for outby equipment:

1. (Page 5) Will the requirement for a maximum surface temp of 302 degrees F necessitate the use of water jacketed exhaust manifolds and exhaust systems?

As you know, the use of resistors for speed control on pre-solid-state electric mining equipment was common. These would glow red hot. Did they ever cause an outby explosion? If not, why is there a need to limit outby diesel surface temperatures to such a low value?

We request that this requirement be deleted.

2. (Page 12) MHSA has agreed that should a fire risk analysis show fire protection of automotive-type exposed disk brakes to be unnecessary, no such coverage is required.

We request that this exemption be included.

3. (Page 19-21) The (5) minute stall test of the diesel engine/transmission to permit emmission testing under load will quickly destroy a transmission. MSHA is allowing alternate "repeatable" tests.

We request that the possibility of alternate tests be written into the law.

4. (Page 17) Some modern engines can and do operate safely at temperatures above 212 degrees F.

We request instead, that the engine manufacture's maximum allowable temperature not be exceeded.

In general, we are concerned that diesel machinery will be so complex and expensive that only the largest and most well financed mining operations will be able to afford them.

Respectfully,

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