

WEST VIRGINIA LEGISLATURE  
*Legislative Rule-Making Review Committee*

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September 26, 1979

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Hon. A. James Manchin  
Secretary of State  
W-151 State Capitol  
Charleston, West Virginia 25305

Dear Mr. Manchin:

This is notification of approval or disapproval of rules and regulations in accordance with Section 11, Article 3, Chapter 29A of the West Virginia Code.

On September 24, 1979, the Legislative Rule-Making Review Committee approved regulations submitted by the Medical Licensing Board relating to Physicians Assistants.

The Committee approved the following regulations of the Air Pollution Control Commission:

Regulation III - "To Prevent and Control Air Pollution From The Operation of Hot Mix Asphalt Plants";

Regulation VIII - "Ambient Air Quality Standards for Sulfur Oxides and Particulate Matter";

Regulation XXI - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From the Storage of Petroleum Liquids in Fixed Roof Tanks";

Regulation XXIII - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Bulk Gasoline Terminals"; and

Regulation XXIV - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Petroleum Refinery Sources."

Regulations XXIII and XXIV were approved with the nonsubstantive amendments attached.

The Committee disapproved the following regulations of the Air Pollution Control Commission:

Regulation VI - "To Prevent and Control Air Pollution From Combustion of Refuse";

September 26, 1979  
Page 2

Regulation VII - "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations";

Regulation XVII - "To Prevent and Control Particulate Air Pollution From Materials Handling, Preparation, Storage and Sources of Fugitive Particulate Matter"; and

Regulation XVIII - "To Prevent and Control Particulate Air Pollution From Direct Meat-Firing Devices."

A copy of the approved and disapproved regulations is enclosed.

Very truly yours,

*Robert M. Steptoe*

Robert M. Steptoe

*William E. Shingleton*

William E. Shingleton

Enclosures

WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
Air Pollution Control Commission

Chapter 16-20  
Series XXI  
(1979)

FILED IN THE OFFICE OF  
SECRETARY OF STATE OF  
WEST VIRGINIA

THIS DATE 9/27/79

Subject: Regulation XXI - To Prevent and Control Air Pollution  
From the Emission of Volatile Organic Compounds From  
the Storage of Petroleum Liquids in Fixed Roof Tanks.

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Section 1. Intent and Purpose.

It is the intent of the Commission that all persons engaged in the storage of petroleum liquids control the emission of volatile organic compounds from fixed roof storage tanks through the application of reasonably available control technology.

Section 2. Area Affected.

This regulation applies to sources located in West Virginia Air Quality Control Region IV (Putnam County, Kanawha County and Valley Magisterial District of Fayette County).

Section 3. Definitions.

3.01. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Chapter Sixteen, Article Twenty of the Code of West Virginia, as amended.

- 3.02. "Approved" shall mean approved by the designated official of the West Virginia Air Pollution Control Commission.
- 3.03. "Commission" shall mean the West Virginia Air Pollution Control Commission.
- 3.04. "Condensate" shall mean hydrocarbon liquid separated from natural gas which condenses due to changes in temperature and/or pressure and remains liquid at standard conditions.
- 3.05. "Construction" shall mean commencement of onsite fabrication, erection, or installation of an emission source, air pollution control equipment, or a facility.
- 3.06. "Control device" shall mean equipment (incinerator, adsorber, or the like) used to destroy or remove air pollutant(s) prior to discharge to the ambient air.
- 3.07. "Crude oil" shall mean a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions.
- 3.08. "Custody transfer" shall mean the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
- 3.09. "Day" shall mean a 24-hour period beginning at midnight.
- 3.10. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.

- 3.11. "Emission shall mean the release or discharge, whether directly or indirectly, of any air pollutant into the ambient air from any source.
- 3.12. "External floating roof" shall mean a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- 3.12. "Facility" shall mean any building, structure, installation, or combination thereof which contains a stationary source of air pollutant(s).
- 3.14. "Fixed roof tank" shall mean a cylindrical tank with a permanently affixed roof and designed to operate at or near atmospheric pressure.
- 3.15. "Hydrocarbon" shall mean any organic compound of carbon and hydrogen only.
- 3.16. "Internal floating roof" shall mean a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- 3.17. "Organic material" shall mean a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

- 3.18. "Owner or operator" shall mean any person who owns, leases, controls, operates or supervises a facility, an emission source, or air pollution control equipment.
- 3.19. "Person" shall mean any and all persons, natural or artificial, including any municipal, public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership, or association of whatever nature.
- 3.20. "Petroleum liquids" shall mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
- 3.21. "Petroleum refinery" shall mean any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oils, or through redistillation, cracking, extraction, or reforming of unfinished petroleum derivatives.
- 3.22. "Reasonably available control technology" (also denoted as RACT) shall mean the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories.
- 3.23. "Standard conditions" shall mean a temperature of 20°C (68°F) and pressure of 760 millimeters of mercury (29.92 inches of mercury).

- 3.24. "Stationary source" shall mean any article, machine, process equipment, or other contrivance from which air pollutants emanate or are emitted, either directly or indirectly, from a fixed location.
- 3.25. "Storage tank" shall mean and include all fixed roof storage vessels with capacities greater than 150,000 liters (39,000 gallons) containing volatile petroleum liquids whose true vapor pressure is greater than 10.5 kilo Pascals (1.52 psia).
- 3.26. "True vapor pressure" shall mean the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating Roof Tanks", 1962.
- 3.27. "Volatile organic compound" (also denoted as VOC) shall mean any compound of carbon that has a vapor pressure greater than 0.1 millimeters of mercury at standard conditions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.
- 3.28. "Vapor recovery system" shall mean a device or method that collects VOC emissions from the storage vessel (fixed roof tank) and converts them to liquid product. This includes, but is not limited to, vapor/liquid absorption, vapor compression, vapor cooling, and vapor/solid adsorption.

Section 4. Control and Prohibition of Emissions.

4.01. No owner or operator of a storage tank subject to the requirements of this regulation shall permit the use of such source unless:

(a) The source has been equipped with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall; or,

(b) The source has been equipped with a vapor recovery system, approved by the Commission; or,

(c) The source has been equipped with an equally effective alternative control system, approved by the Commission.

4.02. Storage tanks subject to this regulation that are equipped with a floating roof shall be maintained such that:

(a) There are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and,

(b) All openings, except stub drains, are equipped with covers, lids, or seals such that:

(1) the cover, lid, or seal is in the closed position at all times except when in actual use; and,

(2) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg; and,

(3) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

4.03. Storage tanks subject to this regulation that are equipped with a floating roof, a vapor recovery system, or an alternative control system shall be operated and maintained in accordance with good engineering practices.

4.04. (a) Realizing that compliance with the provisions of this Section may, in some cases, be technologically infeasible, the Commission may, upon specific application by the owner or operator of a storage tank, grant exemptions from these provisions. However, the petition must be submitted in writing in a manner approved by the Director and must contain:

- (1) a detailed description of the proposed alternative operational and/or equipment controls, the magnitude of volatile organic compound emission reduction which will be achieved, and the quantity and composition of volatile organic compounds which will be emitted if the alternative operational and/or equipment controls are instituted; and,
- (2) a plan, which will be instituted in addition to the proposed alternative operational and/or equipment control to reduce

volatile organic compound emissions from other source operations, not required under this regulation, such that aggregate volatile compound emissions from the facility will in no case be greater through application of the alternative control than would be permitted through conformance with Sub-Section 4.01; and, (3) a schedule for the installation and/or institution of the alternative operational and/or equipment controls.

(b) From time to time the Commission shall review such exemptions to determine if they are still warranted. If the Commission revises or terminates an exemption, the owner or operator of the affected storage tank shall be notified by certified mail. Such revision or terminations shall not become effective for at least ninety (90) days after the receipt of notification by the owner or operator.

Section 5. Registration.

5.01. Within thirty (30) days after the effective date of this regulation, all persons owning and/or operating a storage tank subject to this regulation and not previously registered shall have registered such source(s) with the Commission. The information required for registration shall be determined and provided in the manner specified by the Director. Registration forms should be requested from the Director by the owner or operator of such source(s).

5.02. The owner or operator of a storage tank that is under construction or on which construction is initiated within thirty (30) days after the effective date of this regulation shall register such source(s) within this thirty (30) day period.

Section 6. Permits.

After the effective date of this regulation, no person shall construct or modify any storage tank subject to this regulation without first obtaining a permit for such construction or modification. Applications for permits shall be made upon forms available from the Director and shall be filed no less than ninety (90) days prior to the construction or modification. These forms shall include such information as in the judgment of the Director will enable him to determine whether such source will be so designed as to operate in conformance with the provisions of this regulation and the Code of West Virginia, and will not cause or contribute to the violation of air quality standards. Within ninety (90) days of the receipt of an application the Director shall issue or deny such permit in accordance with the provisions of Chapter Sixteen, Article Twenty, Section 11b of the Code of West Virginia, as amended, and Regulation XIII of this agency.

Section 7. Inspection, Reports, and Testing.

7.01. Storage tanks subject to the provisions of Section 4 that are equipped with a floating roof shall be subject to:

(a) routine visual inspections conducted through roof hatches once per month; and,

(b) a complete inspection of floating roof and seal which is to be conducted whenever the tank is emptied for nonoperational reasons.

7.02. Records shall be maintained for storage tanks subject to this regulation that include:

(a) reports of the results of inspections conducted under paragraphs (a) and (b) of Sub-Section 7.01; and,

(b) a record of the average monthly storage temperatures and true vapor pressures of volatile petroleum liquids stored; and,

(c) records of the throughput quantities and types of volatile petroleum liquids for each storage vessel.

7.03. At such reasonable times as the Director may designate, the owner or operator of any storage tank may be required to conduct or have conducted tests to determine the compliance of such tank with the provisions of Section 4. The Director, or his duly authorized representative, may at his option witness or conduct such tests. Should the Director exercise his option to conduct such tests, the owner or operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment to comply with generally accepted good safety practices.

7.04. The owner or operator of a storage tank may be required to maintain and submit to the Commission such records which are determined by the Director to be necessary to document the compliance of such tank with the provisions of Section 4, including, but not limited to, the records required under Sub-Section 7.02.

7.05. The Director, or his duly authorized representative, may conduct such other tests as he may deem necessary to evaluate air pollution emissions other than those noted in Section 4.

7.06. The Commission may publish, and from time to time revise, detailed test procedures and reporting instructions implementing the provisions of this regulation.

Section 8. Compliance Programs and Schedules.

8.01. In the event that a storage tank subject to this regulation and in existence prior to the adoption of this regulation does not meet the limitations of Section 4, an acceptable program to fully comply with this regulation shall be developed and offered to the Commission by the owner or operator of the storage tank. This program shall be submitted upon the request of, and within such time as shall be fixed by the Commission. Once this program has been approved by the Commission, the owner and/or operator of such storage tank shall not be in violation of this regulation so long as the approved or amended program is observed.

8.02. In the event that an owner or operator of such a storage tank fails to submit a program or an acceptable program and schedule, the Commission shall, by order, determine the compliance program and schedule.

Section 9. Variance.

If the provisions of Section 4 cannot be satisfied due to unavoidable malfunction of equipment, the Director may permit the owner or operator of a storage tank subject to this regulation to continue to use said storage tank for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction. In cases of major equipment failure, additional time periods may be granted by the Commission provided a corrective program has been submitted by the owner or operator and approved by the Commission.

Section 10. Exemptions.

This regulation will not apply to storage tanks having capacities less than 1,600,000 liters (416,000 gallons) used to store produced crude oil and condensate prior to lease custody transfer.

Section 11. Effective Date.

Regulation XXI (1979) shall become effective July 9, 1979.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation XXI (1979) as adopted on the 8th day of May, 1979.

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Carl G. Beard, II  
Secretary  
West Virginia Air Pollution  
Control Commission

WEST VIRGINIA LEGISLATURE  
*Legislative Rule-Making Review Committee*

COCHAIRMAN  
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September 26, 1979

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Hon. A. James Manchin  
Secretary of State  
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The Committee approved the following regulations of the Air Pollution Control Commission:

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Regulation VIII - "Ambient Air Quality Standards for Sulfur Oxides and Particulate Matter";

Regulation XXI - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From the Storage of Petroleum Liquids in Fixed Roof Tanks";

Regulation XXIII - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Bulk Gasoline Terminals"; and

Regulation XXIV - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Petroleum Refinery Sources."

Regulations XXIII and XXIV were approved with the nonsubstantive amendments attached.

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Page 2

Regulation VII - "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations";

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Very truly yours,

*Robert M. Steptoe*

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Enclosures

WEST VIRGINIA  
AIR POLLUTION CONTROL COMMISSION

FILE IN THE OFFICE OF  
SECRETARY OF STATE OF  
WEST VIRGINIA

THIS DATE 9/27/79

Regulation XXIII

WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
Air Pollution Control Commission

Chapter 16-20  
Series XXIII  
(1979)

Subject: Regulation XXIII - To Prevent and Control Air Pollution  
From the Emission of Volatile Organic Compounds From  
Bulk Gasoline Terminals.

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Section 1. Intent and Purpose.

It is the intent of the Commission that all persons engaged in the operation of bulk gasoline terminals and the appurtenant equipment necessary to load tank trucks or trailer compartments control the emission of volatile organic compounds through the application of reasonably available control technology.

Section 2. Area Affected.

This regulation applies to sources located in West Virginia Air Quality Control Region IV (Putnam County, Kanawha County and Valley Magisterial District of Fayette County).

Section 3. Definitions.

3.01. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Chapter Sixteen, Article Twenty of the Code of West Virginia, as amended.

3.02. "Approved" shall mean approved by the designated official of the West Virginia Air Pollution Control Commission.

- 3.03. "Bulk gasoline terminal" shall mean a gasoline storage facility which receives gasoline from refineries primarily by, but not limited to, pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck; and has a daily throughput of more than 76,000 liters (20,000 gallons) of gasoline.
- 3.04. "Commission" shall mean the West Virginia Air Pollution Control Commission.
- 3.05. "Condensate" shall mean hydrocarbon liquid which condenses due to change in temperature and/or pressure and remains liquid at standard conditions.
- 3.06. "Construction" shall mean commencement of onsite fabrication, erection, or installation of an emission source, air pollution control equipment, or a facility.
- 3.07. "Control device" shall mean equipment (incinerator, adsorber, or the like) used to destroy or remove air pollutant(s) prior to discharge of vapor to the ambient air.
- 3.08. "Day" shall mean a 24-hour period beginning at midnight.
- 3.09. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.
- 3.10. "Emission" shall mean the release or discharge, whether directly or indirectly, of any air pollutant into the ambient air from any source.
- 3.11. "Facility" shall mean any building, structure, installation, or combination thereof which contains a stationary source of air pollutants.

- 3.12. "Gasoline" shall mean a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 pounds/square inch) or greater.
- 3.13. "Hydrocarbon" shall mean any organic compound of carbon and hydrogen only.
- 3.14. "Organic material" means a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.
- 3.15. "Owner or operator" shall mean any person who owns, leases, controls, operates or supervises a facility, an emission source, or air pollution control equipment.
- 3.16. "Person" shall mean any and all persons, natural or artificial, including any municipal, public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership, or association of whatever nature.
- 3.17. "Reasonably available control technology" (also denoted as RACT) shall mean the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories.
- 3.18. "Reid vapor pressure" shall mean the absolute pressure of volatile crude oil and volatile nonviscous petroleum

Page 4

Sub-section 3.21.

Last line put a period after word tank and strike the words "during the transfer of gasoline."

Sub-section 3.21. then reads:

Sub-section 3.21. "Vapor control system" shall mean a system that prevents release to the atmosphere of organic material in the vapors displaced from a tank."

Page 4

Sub-section 4.01.

Last line has a typographical error. Strike "(4.7 grams per gallon)."

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WEST VIRGINIA

THIS DATE \_\_\_\_\_

liquids except liquified petroleum gases as determined by American Society for Testing and Materials, Part 17, 1973, D-323-72 (Re-approved 1977).

3.19. "Standard conditions" shall mean a temperature of 20°C (68°F) and pressure of 760 millimeters of mercury (29.92 inches of mercury).

3.20. "Vapor collection system" shall mean a vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system.

3.21. "Vapor control system" shall mean a system that prevents release to the atmosphere of organic material in the vapors displaced from a tank during the transfer of gasoline.

3.22. "Volatile organic compound" (also denoted as VOC) shall mean any compound of carbon that has a vapor pressure greater than 0.1 millimeters of mercury at standard conditions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. For the purpose of this regulation, methane shall not be considered a volatile organic compound.

Section 4. Control and Prohibition of Emissions.

4.01. No owner or operator of a bulk gasoline terminal subject to this regulation may cause, allow or permit mass emissions of volatile organic compounds from the loading of gasoline into any tank trucks or trailers to exceed 80 milligrams per liter (4.7 grams per gallon) of gasoline loaded.

4.02. The emission limit under Sub-Section 4.01 shall be achieved by:

(a) equipping the bulk gasoline terminal with a vapor control system, capable of complying with Sub-Section 4.01, properly installed, in good working order, in operation and consisting of one of the following:

(1) an adsorption, absorption, compression or condensation system which processes and recovers vapors and gases from the equipment being controlled; or,

(2) a vapor collection system which directs all vapors to a fuel gas system; or,

(3) an equally effective alternative control system approved by the Commission; and,

(b) venting all displaced vapors and gases only to the vapor control system; and,

(c) providing a means to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and,

(d) equipping all loading and vapor lines with fittings which make vapor-tight connections which close automatically when disconnected.

4.03. Sources subject to this regulation may not:

(a) allow gasoline to be discharged in sewers or stored in open containers or handled in any manner that would result in evaporation; nor,

(b) allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings.

4.04. (a) Realizing that compliance with the provisions of this section may, in some cases, be technologically infeasible, the Commission may, upon specific application by the owner or operator of a bulk gasoline terminal, grant exemptions from these provisions. However, the petition must be submitted in writing in a manner approved by the Director and must contain:

(1) a detailed description of the proposed alternative operational and/or equipment controls, the magnitude of volatile organic compound emission reduction which will be achieved, and the quantity and composition of volatile organic compounds which will be emitted if the alternative operational and/or equipment controls are instituted; and,

(2) a plan, which will be instituted in addition to the proposed alternative operational and/or equipment controls, to reduce volatile organic compound emissions from other source operations, not required under this regulation, such that aggregate volatile organic compound emissions from the facility

will in no case be greater through application of the alternative control than would be permitted through conformance with Section 4;

and,

(3) a schedule for the installation and/or institution of the alternative operational and/or equipment controls.

(b) From time to time the Commission shall review such exemptions to determine if they are still warranted. If the Commission revises or terminates an exemption, the owner or operator of the affected bulk gasoline terminal shall be notified by certified mail. Such revision or terminations shall not become effective for at least ninety (90) days after the receipt of notification by the owner or operator.

Section 5. Registration.

- 5.01. Within thirty (30) days after the effective date of this regulation all persons owning and/or operating a bulk gasoline terminal subject to this regulation and not previously registered shall have registered such source(s) with the Commission. The information required for registration shall be determined and provided in the manner specified by the Director. Registration forms should be requested from the Director by the owner or operator of such source(s).
- 5.02. The owner or operator of a bulk gasoline office that is under construction or on which construction is initiated

within thirty (30) days after the effective date of this regulation shall register such source(s) with the Commission.

Section 6. Permits.

After the effective date of this regulation, no person shall construct or modify any bulk gasoline terminal subject to this regulation without first obtaining a permit for such construction or modification. Applications for permits shall be made upon forms available from the Director and shall be filed no less than ninety (90) days prior to the construction or modification. These forms shall include such information as in the judgment of the Director will enable him to determine whether such source will be so designed as to operate in conformance with the provisions of this regulation and the Code of West Virginia, and will not cause or contribute to the violation of air quality standards. Within ninety (90) days of the receipt of an application the Director shall issue or deny such permit in accordance with the provisions of Chapter 16, Article 20, Section 11b of the Code of West Virginia, as amended, and Regulation XIII of this agency.

Section 7. Reports and Testing.

7.01. At such reasonable times as the Director may designate, the owner or operator of any bulk gasoline terminal(s) may be required to conduct or have conducted tests to determine

the compliance of such terminal(s) with the limitations of Section 4. The Director, or his duly authorized representative, may at his option witness or conduct such tests. Should the Director exercise his option to conduct such tests, the owner or operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment to comply with generally accepted good safety practices.

7.02. For the purpose of determining the emissions from systems installed to control volatile organic compound vapors resulting from loading operations at bulk gasoline terminals, the following procedures shall be included:

(a) In a manner approved by the Director, direct measurements shall be made to determine the hydrocarbon mass exhausted from the vapor control system.

(b) In a manner approved by the Director, all possible sources of leaks shall be qualitatively checked to insure that no uncontrolled vapors are emitted to the atmosphere.

7.03. For the purpose of determining the efficiency of a volatile organic compound emission control system, the following procedure shall be included:

(a) The material containing volatile organic compounds shall be sampled and analyzed in a manner approved by the Director such that the quantity of emissions that could result from the use of the material can be quantified.

(b) The efficiency of any capture system used to transport the volatile organic compound emissions from their point of origination to the control equipment shall be computed using accepted engineering practices and in a manner approved by the Director.

(c) Samples of the volatile organic compound containing gas stream shall be taken simultaneously at the inlet and outlet of the emissions control device in a manner approved by the Director.

(d) The total combustible carbon content of the samples shall be determined by a method approved by the Director.

(e) The efficiency of the control device shall be expressed as a fraction of total combustible carbon content reduction achieved.

(f) The volatile organic compound mass emission rate shall be the sum of emissions from the control device, emissions not collected by the capture system and capture system losses.

7.04. The Director, or his duly authorized representative, may conduct such other tests as he may deem necessary to evaluate air pollution emissions other than those noted in Section 4.

7.05. The Commission may publish, and from time to time revise, detailed test procedures and reporting instructions implementing the provisions of this regulation.

Section 8. Compliance Programs and Schedules.

8.01. In the event that a bulk gasoline terminal subject to this regulation and in existence prior to the adoption of this regulation does not meet the limitations set forth in Section 4, an acceptable program to fully comply with this regulation shall be developed and offered to the Commission by the person responsible for the source. This program shall be submitted upon the request of, and within such time as shall be fixed by the Commission. Once this program has been approved by the Commission, the owner and/or operator of such installation shall not be in violation of this regulation so long as the approved or amended program is observed.

8.02. In the event that an owner or operator of such a source(s) of volatile organic compounds fails to submit a program or an acceptable program and schedule, the Commission shall, by order, determine the compliance program and schedule.

Section 9. Variance.

If the provisions of Section 4 cannot be satisfied due to unavoidable malfunction of equipment, the Director may permit the owner or operator of a bulk gasoline terminal subject to this regulation to continue to operate for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction. In cases of major

equipment failure, additional time periods may be granted by the Commission provided a corrective program has been submitted by the owner or operator and approved by the Commission.

Section 10. Exemptions.

Sources subject to this regulation whose emissions of volatile organic compounds are not more than 6.8 kilograms (15 pounds) in any one (1) day, nor more than 1.4 kilograms (3 pounds) in any one (1) hour will be exempt from Sections 4 through 9, provided the emission rates are determined and certified six (6) months after the effective date of this regulation in a manner approved by the Director.

Section 11. Effective Date.

Regulation XXIII (1979) shall become effective July 9, 1979.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation XXIII (1979) as adopted on the 8th day of May, 1979.

---

Carl G. Beard, II  
Secretary  
West Virginia Air Pollution  
Control Commission

Sub-section 4.02.(a)

First line strike the word "and" insert the word "or".

Subsection 4.02.(a) then reads:

Sub-section 4:02.(a) Provide covers or seals approved by the Director on all separators and equip all openings in covers, separators, and forebays with lids or seals such that the lids or seals are in the closed position at all times except when in actual use; or,

WEST VIRGINIA LEGISLATURE  
*Legislative Rule-Making Review Committee*



September 26, 1979

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Hon. A. James Manchin  
Secretary of State  
W-151 State Capitol  
Charleston, West Virginia 25305

Dear Mr. Manchin:

This is notification of approval or disapproval of rules and regulations in accordance with Section 11, Article 3, Chapter 29A of the West Virginia Code.

On September 24, 1979, the Legislative Rule-Making Review Committee approved regulations submitted by the Medical Licensing Board relating to Physicians Assistants.

The Committee approved the following regulations of the Air Pollution Control Commission:

Regulation III - "To Prevent and Control Air Pollution From The Operation of Hot Mix Asphalt Plants";

Regulation VIII - "Ambient Air Quality Standards for Sulfur Oxides and Particulate Matter";

Regulation XXI - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From the Storage of Petroleum Liquids in Fixed Roof Tanks";

Regulation XXIII - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Bulk Gasoline Terminals"; and

Regulation XXIV - "To Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Petroleum Refinery Sources."

Regulations XXIII and XXIV were approved with the nonsubstantive amendments attached.

The Committee disapproved the following regulations of the Air Pollution Control Commission:

Regulation VI - "To Prevent and Control Air Pollution From Combustion of Refuse";

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Regulation VII - "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations";

Regulation XVII - "To Prevent and Control Particulate Air Pollution From Materials Handling, Preparation, Storage and Sources of Fugitive Particulate Matter"; and

Regulation XVIII - "To Prevent and Control Particulate Air Pollution From Direct Meat-Firing Devices."

A copy of the approved and disapproved regulations is enclosed.

Very truly yours,

*Robert M. Steptoe*

Robert M. Steptoe

*William E. Shingleton*

William E. Shingleton

Enclosures

Regulation XXIV

FILED IN THE OFFICE OF  
SECRETARY OF STATE OF  
WEST VIRGINIA

THIS DATE 9/27/79

WEST VIRGINIA ADMINISTRATIVE REGULATIONS  
Air Pollution Control Commission

Chapter 16-20  
Series XXIV  
(1979)

FILE IN THE OFFICE OF  
SECRETARY OF STATE OF  
WEST VIRGINIA

THIS DATE 9/27/79

Subject: Regulation XXIV - To Prevent and Control Air Pollution  
From the Emission of Volatile Organic Compounds From  
Petroleum Refinery Sources.

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Section 1. Intent and Purpose.

It is the intent of the Commission that all persons engaged in the operation of vacuum producing systems, wastewater separators, and process unit turnarounds at petroleum refining sources control the emission of volatile organic compounds through the application of reasonably available control technology.

Section 2. Area Affected.

This regulation applies to sources located in West Virginia Air Quality Control Region IV (Putnam County, Kanawha County and Valley Magisterial District of Fayette County).

Section 3. Definitions.

3.01. "Accumulator" shall mean the reservoir of a condensing unit receiving the condensate from the condenser.

- 3.02. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Chapter Sixteen, Article Twenty of the Code of West Virginia, as amended.
- 3.03. "Approved" shall mean approved by the designated official of the West Virginia Air Pollution Control Commission.
- 3.04. "Commission" shall mean the West Virginia Air Pollution Control Commission.
- 3.05. "Condensate" shall mean hydrocarbon liquid separated from natural gas which condenses due to changes in temperature and/or pressure and remains liquid at standard conditions.
- 3.06. "Condenser" shall mean any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers.
- 3.07. "Construction" shall mean commencement of onsite fabrication, erection, or installation of an emission source, air pollution control equipment, or a facility.
- 3.08. "Control device" shall mean equipment (incinerator, adsorber, or the like) used to destroy or remove air pollutant(s) prior to discharge to the ambient air.
- 3.09. "Day" shall mean a 24-hour period beginning at midnight.
- 3.10. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.
- 3.11. "Emission" shall mean the release or discharge, whether directly or indirectly, of any air pollutant into the ambient air from any source.

- 3.12. "Facility" shall mean any building, structure, installation, or combination thereof which contains a stationary source of air pollutants.
- 3.13. "Firebox" shall mean the chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion chamber of an incinerator.
- 3.14. "Forebays" shall mean the primary sections of a wastewater separator.
- 3.15. "Hot well" shall mean the reservoir of a condensing unit receiving the warm condensate from the condenser.
- 3.16. "Hydrocarbon" shall mean any organic compound of carbon and hydrogen only.
- 3.17. "Organic material" shall mean a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.
- 3.18. "Owner or operator" shall mean any person who owns, leases, controls, operates or supervises a facility, an emission source, or air pollution control equipment.
- 3.19. "Person" shall mean any and all persons, natural or artificial, including any municipal, public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership, or association of whatever nature.
- 3.20. "Petroleum liquids" shall mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

- 3.21. "Petroleum refinery" shall mean any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.
- 3.22. "Petroleum refinery source" shall mean and include vacuum producing systems, wastewater separators, and processing units at petroleum refineries.
- 3.23. "Reasonably available control technology" (also denoted as RACT) shall mean the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories.
- 3.24. "Refinery fuel gas" shall mean any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas.
- 3.25. "Standard conditions" shall mean a temperature of 20°C (68°F) and pressure of 760 millimeters of mercury (29.92 inches of mercury).
- 3.26. "Turnaround" shall mean the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back on stream.

3.27. "Vacuum producing system" shall mean any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

3.28. "Vapor control system" shall mean a system that prevents release to the atmosphere of organic material emitted during the operation of any transfer, storage, or process equipment.

3.29. "Volatile organic compound" (also denoted as VOC) shall mean any compound of carbon that has a vapor pressure greater than 0.1 millimeters of mercury at standard conditions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, or carbonates, and ammonium carbonate.

3.30. "Wastewater (oil/water) separator" shall mean any device or piece of equipment, other than a treatment lagoon, which utilizes the difference in density between oil and water to remove oil and associated chemicals from water, or any device, such as a flocculation tank, clarifier, etc., which removes petroleum derived compounds from waste water.

Section 4. Control and Prevention of Emissions.

4.01. (a) The owner or operator of a petroleum refinery with any vacuum producing systems may not permit the emission of any noncondensable volatile organic compounds from the condensers, hot wells or accumulators of the system.

(b) The emission limit under paragraph (a) of this Sub-Section shall be achieved by:

- (1) piping the noncondensable vapors to a firebox or incinerator; or,
- (2) compressing the vapors and adding them to the refinery fuel gas; or,
- (3) installing an equally effective alternative control system, approved by the Commission.

4.02. The owner or operator of a petroleum refinery with any waste-water (oil/water) separators shall:

(a) Provide covers and seals approved by the Director on all separators and forebays, and equip all openings in covers, separators, and forebays with lids or seals such that the lids or seals are in the closed position at all times except when in actual use; or,

(b) Install an equally effective alternative control system approved by the Commission.

4.03. The owner or operator of a petroleum refinery shall minimize and record VOC emissions during process unit turnarounds by:

(a) Depressurization venting of the process unit or vessel to a vapor control system, flare or firebox; and,

(b) Preventing emissions of volatile organic compounds from a process unit or vessel unless its internal pressure is 136 kilo Pascals (19.7 psia) or less; and

(c) Recordkeeping of the following items:

- (1) every date that each process unit or vessel is shut down; and,

(2) the approximate vessel volatile organic compound concentration when the volatile organic compounds were discharged to the atmosphere; and,

(3) the approximate total quantity of volatile organic compounds emitted to the atmosphere.

4.04. (a) Realizing that compliance with the provisions of this Section may, in some cases, be technologically infeasible, the Commission may, upon specific application by the owner or operator of a petroleum refinery source, grant exemptions from these provisions. However, the petition must be submitted in writing in a manner approved by the Director and must contain:

(1) a detailed description of the proposed alternative operational and/or equipment controls, the magnitude of volatile organic compound emission reduction which will be achieved, and the quantity and composition of volatile organic compounds which will be emitted if the alternative operational and/or equipment controls are instituted; and,

(2) a plan, which will be instituted in addition to the proposed alternative operational and/or equipment controls, to reduce

volatile organic compound emissions from other source operations, not required under this regulation, such that aggregate volatile organic compound emissions from the facility will in no case be greater through application of the alternative control than would be permitted through conformance with this Section; and,

(3) a schedule for the installation and/or institution of the alternative operational and/or equipment controls.

(b) From time to time the Commission shall review such exemptions to determine if they are still warranted. If the Commission revises or terminates an exemption, the owner or operator of the affected petroleum refinery source shall be notified by certified mail. Such revision or terminations shall not become effective for at least ninety (90) days after the receipt of notification by the owner or operator.

Section 5. Registration.

5.01. Within thirty (30) days after the effective date of this regulation all persons owning and/or operating a petroleum refinery source(s) subject to this regulation and not previously registered shall have registered such source(s) with the Commission. The information required for registration shall be determined and provided in the manner specified by

the Director. Registration forms should be requested from the Director by the owner or operator of such source(s).

5.02. The owner or operator of such a petroleum refinery source that is under construction or on which construction is initiated within thirty (30) days after the effective date of this regulation shall register such source(s) within this thirty (30) day period.

Section 6. Permits.

After the effective date of this regulation, no person shall construct or modify any petroleum refinery source subject to this regulation without first obtaining a permit for such construction or modification. Applications for permits shall be made upon forms available from the Director and shall be filed no less than ninety (90) days prior to the construction or modification. These forms shall include such information as in the judgment of the Director will enable him to determine whether such source will be so designed as to operate in conformance with the provisions of this regulation and the Code of West Virginia, and will not cause or contribute to the violation of air quality standards. Within ninety (90) days of the receipt of an application the Director shall issue or deny such permit in accordance with the provisions of Chapter Sixteen, Article Twenty, Section 11b of the Code of West Virginia, as amended, and Regulation XIII of this agency.

Section 7. Reports and Testing.

7.01. At such reasonable times as the Director may designate, the owner or operator of any petroleum refinery source subject to this regulation may be required to conduct or have conducted tests to determine the compliance of such source(s) with the limitations of Section 4. The Director, or his duly authorized representative, may at his option witness or conduct such tests. Should the Director exercise his option to conduct such tests, the owner or operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment to comply with generally accepted good safety practices.

7.02. The Director, or his duly authorized representative may conduct such other tests as he may deem necessary to evaluate air pollution emissions other than those noted in Section 4.

7.03. The Commission may publish, and from time to time revise, detailed test procedures and reporting instructions implementing the provisions of this regulation.

Section 8. Compliance Programs and Schedules.

8.01. In the event that a petroleum refinery having a source(s) of volatile organic compounds subject to this regulation and in existence prior to the adoption of this regulation does not meet the limitations of Section 4, an acceptable program to fully comply with this regulation shall be developed and

offered to the Commission by the person responsible for said source. This program shall be submitted upon the request of, and within such time as shall be fixed by the Commission, the owner and/or operator of such source shall not be in violation of this regulation so long as the approved or amended program is observed.

8.02. In the event that an owner or operator of a petroleum refinery having such source(s) of volatile organic compounds fails to submit a program or an acceptable program and schedule, the Commission shall, by order, determine the compliance program and schedule.

Section 9. Variance.

If the provisions of Section 4 cannot be satisfied due to unavoidable malfunction of equipment, the Director may permit the owner or operator of a petroleum refinery source subject to this regulation to continue to operate said source for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction. In cases of major equipment failure, additional time periods may be granted by the Commission provided a corrective program has been submitted by the owner or operator and approved by the Commission.

Section 10. Effective Date.

Regulation XXIV shall become effective July 9, 1979.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation XXIV (1979) as adopted on the 8th day of May, 1979.

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Carl G. Beard, II  
Secretary  
West Virginia Air Pollution  
Control Commission