

WEST VIRGINIA LEGISLATURE
Legislative Rule-Making Review Committee

COCHAIRMAN
ROBERT M. STEPTOE
STATE SENATE
126 EAST BURKE STREET
MARTINSBURG 25401

WILLIAM E. SHINGLETON
HOUSE OF DELEGATES
BOX 1548
FAIRMONT 26354



STAFF
LEGISLATIVE SERVICES
E-132 STATE CAPITOL
CHARLESTON 25305
PHONE (304) 346-2040

September 26, 1979

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

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.

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.

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