

WEST VIRGINIA
SECRETARY OF STATE
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Form #6

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OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED
BY THE WEST VIRGINIA LEGISLATURE.**

AGENCY: AIR POLLUTION CONTROL COMMISSION TITLE NUMBER: 45CSR21

AMENDMENT TO AN EXISTING RULE: YES X, NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 21

TITLE OF RULE BEING AMENDED: "To Prevent and Control Air Pollution from
the Emission of Volatile Organic Compounds from the Storage of
Petroleum Liquids in Fixed Roof Tanks"

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED:

TITLE OF RULE BEING PROPOSED:

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) SB 637

SECTION 64-3-1 (r), PASSED ON March 9, 1991

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON

THE FOLLOWING DATE: May 6, 1991


G. DALE FARLEY
SECRETARY

[PROPOSED]
45CSR21
TITLE 45
LEGISLATIVE RULES
WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION

SERIES 21
REGULATIONS TO PREVENT AND CONTROL AIR POLLUTION FROM
THE EMISSION OF VOLATILE ORGANIC COMPOUNDS FROM THE STORAGE
OF PETROLEUM LIQUIDS IN FIXED ROOF TANKS

§45-21-1. General.

1.1. Scope. — 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. The affected facilities are fixed roof storage tanks with capacities greater than 150,000 liters (39,000 gallons) containing volatile petroleum liquids having a true vapor pressure greater than 10.5 kilo Pascals (1.52 psia).

1.2. Authority. — W.V. Code §16-20-5.

1.3. Filing Date. —

1.4. Effective Date. —

§45-21-2. 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)~~, Wood County, Cabell County, Wayne County, and Greenbrier County.

§45-21-3. Definitions.

3.1. "Air Pollution", 'statutory air pollution' ~~shall have~~ has the meaning ascribed to it in ~~Chapter sixteen, Article twenty~~ article twenty, chapter sixteen of the ~~Code of West-Virginia~~ W.V. Code as amended.

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

3.3. "Commission" shall means the West Virginia Air Pollution Control Commission.

3.4. "Condensate" shall means hydrocarbon liquid separated from natural gas which condenses due to changes in temperature and/or pressure and remains liquid at standard conditions.

3.5. "Construction" shall means commencement of onsite fabrication, erection, or installation of an emission source, air pollution control equipment, or a facility.

3.6. "Control Device" shall means equipment (incinerator, adsorber, or the like) used to destroy or remove air pollutant(s) prior to discharge to the ambient air.

3.7. "Crude Oil" shall means 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.

3.8. "Custody Transfer" shall means 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.

3.9. "Day" shall means a twenty-four (24) hour period beginning at midnight.

3.10. "Director" shall means the director of the West Virginia Air Pollution Control Commission.

3.11. "Emission" shall means 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 means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is

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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.

3.13. "Facility" ~~shall~~ means any building, structure, installation, or combination thereof which contains a stationary source of air pollutant(s).

3.14. "Fixed Roof Tank" ~~shall~~ means 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.~~ 3.15. "Internal Floating Roof" ~~Shall~~ means 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.~~ 3.16. "Owner or Operator" ~~Shall~~ means any person who owns, leases, controls, operates or supervises a facility, an emission source, or air pollution control equipment.

~~3.19.~~ 3.17. "Person" ~~Shall~~ means 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.~~ 3.18. "Petroleum Liquids" ~~Shall~~ means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

~~3.21.~~ 3.19. "Petroleum Refinery" ~~Shall~~ means 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~~-3.20. "Reasonably Available Control Technology" (Also denoted as RACT) shall means 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~~-3.21. "Standard Conditions" shall means a temperature of twenty (20) degrees C (sixty-eight (68) degrees F) and pressure of seven hundred sixty (760) millimeters of mercury (twenty-nine and ninety-two hundredths (29.92) inches of mercury).

~~3.24~~-3.22. "Stationary Source" shall means 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~~-3.23. "Storage Tank" shall means and includes 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~~-3.24. "True Vapor Pressure" shall means 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~~-3.25. "Volatile Organic Compound" (also denoted as VOC) ~~shall mean any compound of carbon that has a vapor pressure greater than one-tenth (0.1) millimeters of mercury at standard conditions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.~~ means any organic compound which participates in atmospheric photochemical reactions. This includes any organic compound other than the following compounds: methane, ethane, methyl

chloroform (1,1,1-trichloroethane), CFC-113 (trichlorotrifluoroethane), methylene chloride, CFC-11 (trichlorofluoromethane), CFC-12 (dichlorodifluoromethane), CFC-22 (chlorodifluoromethane), FC-23 (trifluoromethane), CFC-114 (dichlorotetrafluoroethane), CFC-115 (chloropentafluoroethane), HCFC-123 (dichlorotrifluoroethane), HFC-134a (tetrafluoroethane), HCFC-141b (dichlorofluoroethane), HCFC-142b (chlorodifluoroethane), and any other organic compounds that U.S. EPA lists in Federal Register notices as being photochemically nonreactive. For purposes of determining compliance with emission limits, VOC will be measured by the approved test methods. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

~~3.28-3.26. "Vapor Recovery Control 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.~~ means a device or method that collects volatile organic compound emissions from any transfer, storage or process equipment and limits their release to the atmosphere. This includes, but is not limited to, vapor/liquid absorption, vapor compression, vapor cooling, vapor/solid adsorption, and thermal oxidation.

§45-21-4. Control and Prohibition of Emissions.

4.1. 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,

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(b) The source has been equipped with an approved vapor recovery control system, approved by the commission, or, capable of achieving 85 percent emissions reduction.

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

4.2. 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:~~ Each seal shall be intact and uniformly in place around the circumference of the cover between the cover and the tank wall; and,

(c) The cover shall be uniformly floating on or above the liquid and there shall be no visible defects in the surface of the cover or liquid accumulated on the cover; and,

(d) 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 supports; 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.

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

~~4.4.---(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 4.1.; 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.~~

4.4. If a source becomes subject to any requirement in this regulation because it exceeds an exemption level, the source shall continue to be subject to all applicable requirements, regardless of whether the source falls below the exemption level in the future.

§45-21-5. Registration.

5.1. 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).

5.2. 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.

§45-21-6. 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~~ W.V. Code, 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~~

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~~twenty, Section 11b~~ section eleven-b, article twenty, chapter sixteen of the Code of West Virginia W.V. Code, as amended, and Series 13 of this agency 45CSR13.

§45-21-7. Inspection, Reports, and Testing.

7.1. Storage tanks subject to the provisions of section 4 of this regulation that are equipped with a floating roof shall be subject to:

(a) a routine visual inspections of the floating cover conducted through the roof hatches at least once per every six (6) months; and,

(b) a complete visual inspection of the floating roof and seal conducted once per year, which will consist of an external evaluation and an internal check of seal integrity with the use of mirrors, or an equivalent, through the roof hatches; and,
~~whenever the tank is emptied for nonoperational reasons.~~

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

7.2. ~~Records shall be maintained for storage tanks subject to this regulation that include:~~ The owner or operator of a storage tank shall maintain and make available to the commission any records which are determined by the director to be necessary to document the compliance of such tank with the provisions of this regulation. Such records shall be kept for at least two years and include, but not be limited to:

(a) reports of the results of inspections conducted under paragraphs (a) and (b) of Sub-Section 7.1. of this regulation; 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.

7.3. 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 approved tests to determine the compliance of such tank with the provisions of section 4 of this regulation. 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.

~~7.4.---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 7.2.~~

~~7.5.---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.~~

~~7.6.---The commission may publish, and from time to time revise, detailed test procedures and reporting instructions implementing the provisions of this regulation.~~

§45-21-8. Compliance Programs and Schedules.

~~8.1.---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~~

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~~operator of such storage tank shall not be in violation of this regulation so long as the approved or amended program is observed.~~

~~8.2.--- 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.~~

For sources previously not subject to the requirements of 45CSR21 (1979) or, for sources that previously complied with the requirements of 45CSR21 (1979), but as a result of amendments to this regulation (1991) are required to make major process changes and/or major capital expenditures, as determined by the commission, an acceptable program to comply with this regulation shall be developed and submitted to the commission by the owner and/or operator of such source within sixty (60) days of the effective date of this regulation. The program shall include the dates for ordering, receiving, installation, and start-up of necessary equipment. All such programs shall be approved by the commission. No such compliance program shall exceed one (1) year from the effective date of this regulation unless the owner and/or operator can demonstrate to the commission that compliance within such time limit is technically or economically infeasible. If the owner and/or operator can make such a demonstration, the commission may issue an order for additional time for compliance up to three (3) years from the effective date of this regulation. All such orders shall be issued only after notice to the public. All such orders shall contain a schedule and timetable for compliance, including increments of progress which will require compliance with the applicable requirements as expeditiously as practicable. [NOTE: For federal purposes and for federal enforcement, in the case of any major stationary source, no such order issued by the commission shall be federally approved pursuant to the federal Clean Air Act until the Administrator of U.S. EPA determines that such order was issued in accordance with these requirements, or within the applicable provisions of the federal

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Clean Air Act, and in the case of any source other than a major stationary source, any such order issued by the commission shall cease to be federally approved upon a determination by the Administrator of U.S. EPA that it was not issued in accordance with these requirements or with the applicable provisions of the federal Clean Air Act.]

§45-21-9. Variance.

If the provisions of section 4 of this regulation 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.

§45-21-10. Exemptions.

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

§45-21-11. Enforceability

For the purpose of federal enforceability of the provisions of this regulation, references to the commission and/or director shall also mean the Administrator of the U.S. EPA.