

**WEST VIRGINIA**  
**SECRETARY OF STATE**  
**KEN HECHLER**  
**ADMINISTRATIVE LAW DIVISION**

Form #6

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1991 MAY -6 PM 4:19

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: 45CSR24

AMENDMENT TO AN EXISTING RULE: YES X, NO     

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 24

TITLE OF RULE BEING AMENDED: "Regulations to Prevent and Control Air  
Pollution from the Emission of Volatile Organic Compounds from  
Petroleum Refinery Sources"

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 (s), 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]  
45CSR24

TITLE 45  
LEGISLATIVE RULES  
WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION

SERIES 24  
REGULATIONS TO PREVENT AND CONTROL  
AIR POLLUTION FROM THE EMISSION OF VOLATILE ORGANIC COMPOUNDS  
FROM PETROLEUM REFINERY SOURCES

**§45-24-1. General.**

1.1. Scope. — 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.

1.2. Authority. — W.V. Code §16-20-5.

1.3. Filing Date. —

1.4. Effective Date. —

**§45-24-2. 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.

**§45-24-3. Definitions.**

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

3.2. "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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3.3. "Approved" ~~shall~~ means approved by the designated official of the West Virginia Air Pollution Control Commission.

3.4. "Commission" ~~shall~~ means the West Virginia Air Pollution Control Commission.

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

3.6. "Condenser" ~~shall~~ means 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.

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

3.8. "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.

3.9. "Day" ~~shall~~ means a 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. "Facility" ~~shall~~ means any building, structure, installation, or combination thereof which contains a stationary source of air pollutants.

3.13. "Firebox" ~~shall~~ means 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~~ means the primary sections of a wastewater separator.

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3.15. "Hot Well" ~~shall~~ means 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.~~ 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, cracking, extraction, or reforming of unfinished petroleum derivatives.

~~3.22.~~ 3.20. "Petroleum Refinery Source" ~~shall~~ means and includes vacuum producing systems, wastewater separators, and processing units at petroleum refineries.

~~3.23.~~ 3.21. "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

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technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories.

~~3.24.3.22.~~ "Refinery Fuel Gas" ~~shall~~ means 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.

~~3.25.3.23.~~ "Standard Conditions" ~~shall~~ means a temperature of twenty degrees C (20 degrees C) [sixty-eight degrees F (68 degrees F)] and pressure of seven hundred sixty millimeters (760 millimeters) of mercury, twenty-nine point ninety-two inches (29.92 inches) of mercury).

~~3.26.3.24.~~ "Turnaround" ~~shall~~ means 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.

~~3.27.3.25.~~ "Vacuum Producing System" ~~shall~~ means 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.

~~3.28.3.26.~~ "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.~~ 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.

~~3.29.3.27.~~ "Volatile Organic Compound" (also denoted as VOC) ~~shall mean any compound of carbon that has a vapor pressure greater than point one millimeters (0.1 millimeter) 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.

~~2.30-3.28.~~ "Wastewater (Oil/Water) Separator" ~~shall~~ means 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.

#### **§45-24-4. Control and Prevention of Emissions.**

4.1. (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:

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- (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.~~

4.2. The owner or operator of a petroleum refinery with any wastewater (oil/water) separators shall:

(a) Provide approved 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.~~ 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.

4.3. 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~~ until its internal pressure is one hundred thirty-six (136) kilo Pascals (nineteen and seven tenths (19.7) psia) or less; and,

(c) Record keeping of the following items:

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

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(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.

~~4.4.---(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 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.~~

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.

#### **§45-24-5. Registration.**

5.1. 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).

5.2. 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.

#### **§45-24-6. 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~~ W.V. Code, and will not cause or contribute to the violation of

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

#### **§45-24-7. Reports and Testing.**

7.1. 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 approved tests to determine the compliance of such source(s) with the limitations 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.

7.2. ~~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.~~ The owner or operator of a petroleum refinery source 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 refinery source(s) with the provisions of this regulation. Such records shall be kept for at least two years and include, but not be limited to the items listed in section 4.3. of this regulation.

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

**§45-24-8. Compliance Programs and Schedules.**

~~8.1.---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, and 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.~~

~~8.2.---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.~~

For sources previously not subject to the requirements of 45CSR24 (1979) or, for sources that previously complied with the requirements of 45CSR24 (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 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.]

**§45-24-9. 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 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.

**§45-23-10. 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.