

10 CSR 10-5.390 Control of Emissions From the Manufacturing of Paints, Varnishes, Lacquers, Enamels and Other Allied Surface Coating Products

(1) Applicability.

(A) This rule applies throughout St. Louis City and Jefferson, St. Charles, Franklin and St. Louis Counties.

(B) This rule applies to all installations which have the uncontrolled potential to emit more than two hundred fifty kilograms (250 kg) per day or one hundred (100) tons per year of volatile organic compounds (VOCs) from the manufacturing of paints, varnishes, lacquers, enamels and other allied surface coating products.

(2) Definitions.

(A) Add-on control device—An air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

(B) Condenser—Any heat transfer device used to liquefy vapors by removing their latent heats of vaporization including, but not limited to, shell and tube, coil, surface, or contact condensers.

(C) Control device—Any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Includes, but is not limited to, incinerators, carbon adsorbers, and condensers.

(D) Director—Director of the Missouri Department of Natural Resources or a representative designated to carry out the duties as described in 643.060, RSMo.

(E) Installation—All source operations including activities that result in fugitive emissions, that belong to the same industrial grouping (that have the same two (2)-digit code as described in the Standard Industrial Classification Manual, 1987), and any marine vessels while docked at the installation, located on one (1) or more contiguous or adjacent properties and under the control of the same person (or persons under common control).

(F) Paints and allied products—Materials such as paints, inks, adhesives, stains, varnishes, shellacs, putties, sealers, caulks, and other coatings from raw materials that are intended to be applied to a substrate and consists of a mixture of resins, pigments, solvents, and/or other additives.

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(G) Paints, varnishes, lacquers, enamels, and other allied surface coating products manufacturing—The production of paints and allied products, the intended use of which is to leave a dried film of solid material on a substrate. Typically, the manufacturing processes that produce these materials are described by Standard Industry Classification (SIC) codes 285 or 289 and North American Industry Classification System (NAICS) codes 3255 and 3259 and are produced by physical means, such as blending and mixing, as opposed to chemical synthesis means, such as reactions and distillation. Paints, varnishes, lacquers, enamels, and other allied surface coating products manufacturing does not include:

1. The manufacture of products that do not leave a dried film of solid material on the substrate, such as thinners, paint removers, brush cleaners, and mold release agents;
2. The manufacture of electroplated and electroless metal films;
3. The manufacture of raw materials, such as resins, pigments, and solvents used in the production of paints and coatings; and
4. Activities by end users of paints or allied products to ready those materials for application.

(H) Potential to emit—The emission rates of any pollutant at maximum design capacity. Annual potential shall be based on the maximum annual-rated capacity of the facility assuming continuous year-round operation. Federally enforceable permit conditions on the type of materials combusted or processed, operating rates, hours of operation, and the application of air pollution control equipment shall be used in determining the annual potential. Secondary emissions do not count in determining annual potential.

(I) Volatile organic compound (VOC)—See definition in 10 CSR 10-6.020.

(J) Definitions of certain terms in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions. No owner or operator of a manufacturing installation subject to this rule and producing the products listed in section (1) shall cause or allow the manufacture of these products unless the operating equipment meets the requirements contained in this rule and without adhering to operating procedures specified in this rule and operating procedures recommended by the equipment manufacturer and approved by the director.

(A) Operating Equipment and Operating Procedure Requirements.

1. Tanks storing VOCs with a vapor pressure greater than or equal to ten kilopascals (10 kPa) or one and one-half pounds per square inch (1.5 psi) at twenty degrees Celsius (20° C), shall be equipped with pressure/vacuum conservation vents set at plus or minus two-tenths kilopascals (± 0.2 kPa) or twenty-nine-thousandths pounds per square inch (± 0.029 psi), except where more effective air pollution control is used and has been approved by the director. Stationary VOC storage containers with a capacity greater than two hundred fifty (250) gallons shall be equipped with a submerged-fill pipe or bottom fill, except where more effective air pollution control is used and has been approved by the director.

2. Covers shall be installed on all open-top tanks used for the production of non-water-based coating products and remain closed except when production, sampling, maintenance or inspection procedures require operator access.

3. Covers shall be installed on all tanks containing VOCs used for cleaning equipment and remain closed except when operator access is required.

4. All vapors from varnish cooking operations shall be collected and passed through a control device which removes at least eighty-five percent (85 %) on a daily basis of the VOCs from these vapors before they are discharged to the atmosphere.

5. All grinding mills shall be operated and maintained in accordance with manufacturers' specifications. The manufacturers' specifications shall be kept on file and made available to the director upon request.

6. The polymerization of synthetic varnish or resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of surface condensers or equivalent controls.

A. If surface condensers are used, they must be maintained to ensure a ninety-five percent (95 %) overall removal efficiency for total VOC emissions when condensing total VOC of a vapor pressure greater than twenty-six millimeters of Mercury (26 mmHg) (as measured at twenty degrees Celsius (20 °C)).

B. If equivalent controls are used, the VOC emissions must be reduced by an amount equivalent to the reduction which would be achieved under subparagraph (3) (A) 6.A. of this rule. Any owner or operator desiring to use equivalent controls to comply with this subsection shall submit proof of equivalency as part of the control plan required under paragraph (3) (B) 1. of this rule. Equivalent

controls may not be used until proof of equivalency has been submitted to the department and approved by the director.

(B) Compliance Dates.

1. The owner or operator of a paint, varnish, lacquer, enamel or other allied surface coating production manufacturing installation subject to this rule shall submit a final control plan to the director for his/her approval no later than six (6) months after the effective date of this rule (September 11, 1984). This plan shall include a time schedule for compliance containing an engineering design, increments of progress and a final compliance date.

2. Compliance with this rule shall be accomplished by any installation as expeditiously as practicable but in no case later than August 12, 1985.

(C) Compliance Determination.

1. The control efficiencies specified in paragraphs (3)(A)4. and (3)(A)6. of this rule shall be determined by a test method in section (5) of this rule.

2. Owners or operators utilizing add-on control devices shall monitor the following parameters continuously while the affected equipment is in operation:

A. Exit stream temperature on all condensers; and

B. Any other parameter which the director determines is necessary to quantify emissions or otherwise determine compliance with this rule.

(4) Reporting and Record Keeping.

(A) Records shall be kept on production rates sufficient to determine daily VOC emissions and any test results performed in accordance with this rule.

(B) Owners or operators shall record all information derived from monitoring required under paragraph (3)(C)2. of this rule.

(C) The records described under subsections (4)(A) and (4)(B) of this rule shall be kept for a period of two (2) years and made available to the director upon request.

(5) Test Methods. The following test methods may be used to demonstrate compliance with this rule as appropriate, based on gas stream composition:

(A) Method 18—Measurement of Gaseous Organic Compound Emissions By Gas Chromatography of 40 CFR 60, Appendix A-6, as specified in 10 CSR 10-6.030(22);

(B) Method 25—Determination of Total Gaseous Nonmethane Organic Emissions as Carbon of 40 CFR 60, Appendix A-7, as specified in 10 CSR 10-6.030(22);

(C) Method 25A—Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer as Carbon of 40 CFR 60, Appendix A-7, as specified in 10 CSR 10-6.030(22); or

(D) Test Method 320—Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy of 40 CFR 63, Appendix A, promulgated as of July 1, 2019 and hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

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EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)
FRM: 66 FR 42605 (04/04/22)
PRM: 66 FR 42620 (01/27/22)
State Submission: 06/10/21
State Final: 10 C.S.R. 10-5 (08/31/20)
APDB File: MO-442
Description: The revisions include adding incorporations by reference to other State rules, including definitions specific to the rule, removing unnecessary words, making other administrative wording changes, and adding alternative test methods.

CFR: 40 C.F.R. 52.1320(c)
FRM: 66 FR 42605 (08/14/01)
PRM: 66 FR 42620 (08/14/01)
State Submission: 10/16/00
State Final: 10 C.S.R. 10-5 (07/31/00)
APDB File: MO-176
Description: This revision clarifies the intent of the rule and defines the requirements of compliance. Paragraph (4)(F)(1) was revised to make the requirements clear for both batch and continuous processes and to state a 95 percent overall removal efficiency.

CFR: 40 C.F.R. 52.1320(c)(79)(i)(B)
FRM: 59 FR 43480 (8/24/94), Correction Notice 60 FR 16806 (4/3/95)
PRM: 57 FR 32191 (7/21/92)
State Submission: 11/20/91
State Proposal: 16 MR 989 (7/1/91)
State Final: 10 C.S.R. 10-5 (11/29/91)
APDB File: MO-100
Description: This revision updates this rule to include the correct reference method specified in 10 C.S.R. 10-6.030.

CFR: 40 C.F.R. 52.1320(c)(71)(i)(B)
FRM: 55 FR 7712 (3/5/90)
PRM: 54 FR 43183 (10/23/89)
State Submission: 3/30/89
State Proposal: 13 MR 1713 (10/17/88)
State Final: 14 MR 332 (3/1/89)
APDB File: MO-75
Description: The EPA approved revisions to the regulation which: (1) clarified applicability, and (2) made other miscellaneous changes.

CFR: 40 C.F.R. 52.1320(c)(50)
FRM: 50 FR 14925 (4/16/85)
PRM: 49 FR 42749 (10/24/84)
State Submission: 4/10/84
State Proposal: 8 MR 1302 (11/1/83)
State Final: 9 MR 445 (3/1/84)
APDB File: MO-57
Description: The EPA approved a new regulation to control VOC emissions from the paint manufacturing industry, including other allied surface coating products.

Difference Between the State and EPA-Approved Regulation

None.