Rules of
Department of Natural Resources
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution Control Rules Specific to the Kansas City Metropolitan Area

Title 10—DEPARTMENT OF NATURAL RESOURCES

Division 10—Air Conservation Commission

Chapter 2—Air Quality Standards and Air Pollution Control Rules Specific to the Kansas City Metropolitan Area

10 CSR 10-2.010 Ambient Air Quality Standards
(Rescinded February 11, 1978)

AUTHORITY: section 203.050, RSMo 1969. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 26, 1970, effective April 5, 1970. Rescinded: Filed Sept. 1, 1977, effective Feb. 11, 1978.

10 CSR 10-2.020 Definitions
(Rescinded February 11, 1978)

AUTHORITY: section 203.050, RSMo 1969. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 26, 1970, effective April 5, 1970. Rescinded: Filed Sept. 1, 1977, effective Feb. 11, 1978.

10 CSR 10-2.030 Restriction of Emission of Particulate Matter From Industrial Processes
(Rescinded March 30, 2001)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed June 30, 1975, effective July 9, 1975. Amended: Filed March 15, 1979, effective Nov. 11, 1979. Amended: Filed July 16, 1979 effective Feb. 11, 1980. Amended: Filed Oct. 13, 1983, effective March 12, 1984. Rescinded: Filed Aug. 4, 2000, effective March 30, 2001.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The Missouri Air Conservation Commission has the authority under Chapter 203, RSMo 1969 and the **Constitution of Missouri** to enforce without delay the provisions of Chapter 203, RSMo 1969 and standards and regulations, through administrative procedures and injunctive relief.*

10 CSR 10-2.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating
(Rescinded October 30, 2011)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 2, 1972, effective March 12, 1972. Rescinded and readopted: Filed Aug. 11, 1978, effective Feb. 11, 1979. Amended: Filed March 14, 1984, effective Sept. 14, 1984. Rescinded: Filed Feb. 25, 2011, effective Oct. 30, 2011.

10 CSR 10-2.050 Preventing Particulate Matter From Becoming Airborne
(Rescinded September 28, 1990)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed Dec. 27, 1971, effective Jan. 6, 1972. Amended: Filed June 30, 1975, effective July 9, 1975. Amended: Filed May 11, 1984, effective Oct. 11, 1984. Rescinded: Filed March 5, 1990, effective Sept. 28, 1990.

10 CSR 10-2.060 Restriction of Emission of Visible Air Contaminants
(Rescinded May 30, 2000)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed April 5, 1972, effective April 15, 1972. Amended: Filed Jan. 15, 1977, effective July 11, 1977. Amended: Filed July 16, 1979, effective Feb. 11, 1980. Rescinded: Filed Sept. 15, 1999, effective May 30, 2000.

10 CSR 10-2.070 Restriction of Emission of Odors
(Rescinded November 30, 2010)

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 26, 1970, effective April 5, 1970. Amended: Filed Aug. 15, 1983, effective Jan. 13, 1984. Amended: Filed Nov. 2, 1998, effective July 30, 1999. Amended: Filed Feb. 14, 2003, effective Sept. 30, 2003. Amended: Filed Dec. 4, 2006, effective July 30, 2007. Rescinded: Filed April 14, 2010, effective Nov. 30, 2010.

10 CSR 10-2.080 Emission of Visible Air Contaminants From Internal Combustion Engines
(Rescinded November 30, 2002)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Rescinded: Filed Feb. 28, 2002, effective Nov. 30, 2002.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The state of Missouri has the authority to inspect for "air pollution control devices" which may be installed on motor vehicles as a requirement to comply with applicable emission regulations but whether regulations and inspections would accomplish the purpose of "enforcing compliance with applicable emission standards" which are federal standards and whether the preemption provision of 42 USCA, Section 1857f-6a has been complied with are questions that only the appropriate federal officials can answer. The Missouri Air Conservation Commission has the authority under Chapter 203, RSMo (1969) to adopt emission control regulations, including limitations on the content of fuels, which will attain and maintain national air quality standards, if the state standards are the same or more stringent.*

10 CSR 10-2.090 Incinerators
(Rescinded December 9, 1991)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1964. Amended: Filed Dec. 15, 1982, effective May 12, 1983. Amended: Filed Oct. 13, 1983, effective March 12, 1984. Rescinded: Filed May 20, 1991, effective Dec. 9, 1991.

10 CSR 10-2.100 Open Burning Restrictions
(Rescinded January 30, 2008)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 2, 1972, effective March 12, 1972. Amended: Filed Feb. 13, 1979, effective July 12, 1979. Amended: Filed Aug. 13, 1982, effective Jan. 13, 1983. Amended: Filed Nov. 9, 1983, effective April 12, 1984. Rescinded: Filed June 7, 2007, effective Jan. 30, 2008.

10 CSR 10-2.110 Approval of Planned Installations Required
(Rescinded April 11, 1980)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed Dec. 27, 1971, effective Jan. 6, 1972. Amended: Filed Aug. 25, 1972, effective Sept. 4, 1972. Amended: Filed Aug. 16, 1977, effective Feb. 11, 1978. Rescinded: Filed Dec. 10, 1979, effective April 11, 1980.

***Op. Atty. Gen. No. 218, Shell, 8-21-73**. The Missouri Air Conservation Commission does*

not have the authority under Chapter 203, RSMo to prevent the construction of "complex sources" when it is determined that such sources may indirectly cause ambient air quality standards to be violated.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The Missouri Air Conservation Commission has the authority under Chapter 203, RSMo (1969) to provide for the equivalent of a construction permit system by promulgating regulations to require the submission of plans and specifications for approval before any person may construct any facility which will cause air pollution, but that the commission has no such authority regarding an equivalent permit system for the operation of existing facilities which are the source of air pollution.*

10 CSR 10-2.120 Measurement of Emissions of Air Contaminants
(Rescinded April 9, 1992)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Rescinded: Filed Oct. 15, 1991, effective April 9, 1992.

10 CSR 10-2.130 Submission of Emission Information
(Rescinded November 12, 1984)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed Aug. 25, 1972, effective Sept. 4, 1972. Rescinded: Filed June 13, 1984, effective Nov. 12, 1984.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The Missouri Air Conservation Commission does not have any specific authority to require the installation of emission monitoring devices, but does have the authority to require reports from sources of air pollution relating to rate, period of emission and composition of effluent and to make such information available to the public, unless any such information is "confidential" as defined by section 203.050.4, RSMo (1969).*

10 CSR 10-2.140 Circumvention
(Rescinded September 28, 1990)

AUTHORITY: section 203.050, RSMO 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Rescinded: Filed April 18, 1990, Sept. 28, 1990.

10 CSR 10-2.150 Time Schedule for Compliance
(Rescinded December 30, 2008)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 26, 1970, effective April 5, 1970. Rescinded: Filed April 17, 2008, effective Dec. 30, 2008.

10 CSR 10-2.160 Restriction of Emission of Sulfur Compounds
(Rescinded July 30, 1997)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed March 24, 1971, effective April 3, 1971. Amended: Filed Oct. 14, 1977, effective March 11, 1978. Rescinded: Filed Dec. 13, 1996, effective July 30, 1997.

10 CSR 10-2.170 Rules for Controlling Emissions During Periods of High Air Pollution Potential
(Rescinded October 11, 1984)

AUTHORITY; section 203.050, RSMo 1978. Original rule filed March 24, 1971, effective April 3, 1971. Amended: Filed Dec. 27, 1971, effective Jan. 6, 1972. Rescinded: Filed May 11, 1984, effective Oct. 11, 1984.

10 CSR 10-2.180 Public Availability of Emission Data
(Rescinded November 12, 1984)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Aug. 25, 1972, effective Sept. 4, 1972. Rescinded: Filed June 13, 1984, effective Nov. 12, 1984.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The Missouri Air Conservation Commission does not have any specific authority to require the installation of emission monitoring devices, but does have the authority to require reports from sources of air pollution relating to rate, period of emission and composition of effluent and to make such information available to the public, unless any such information is "confidential" as defined in section 203.050.4, RSMo 1969.*

10 CSR 10-2.190 New Source Performance Regulations
(Rescinded April 11, 1980)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Dec. 19, 1975, effective Dec. 29, 1975. Rescinded: Filed Dec. 10, 1979, effective April 11, 1980.

***Op. Atty. Gen. No. 331, Shell, 11-15-71**. The Missouri Air Conservation Commission has the authority under Chapter 203, RSMo 1969 to adopt emission control regulations, including limitations on the content of fuels, which will attain and maintain national air quality standards, if the state standards are the same or more stringent.*

10 CSR 10-2.200 Restriction of Emission of Sulfur Compounds From Indirect Heating Sources
(Rescinded July 30, 1997)

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Oct. 14, 1977, effective March 11, 1978. Rescinded: Filed Dec. 13, 1996, effective July 30, 1997.

10 CSR 10-2.205 Control of Emissions From Aerospace Manufacture and Rework Facilities

PURPOSE: This rule will reduce volatile organic compound emissions from aerospace manufacture and/or rework facilities located in the Kansas City ozone maintenance area. This rule is required to comply with the Clean Air Act Amendments of 1990.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(A) This rule applies throughout Platte, Clay, and Jackson Counties.

(B) The requirements of this rule apply to all aerospace manufacture and/or rework facilities with potential emissions of volatile organic compounds (VOC) exceeding twenty-five (25) tons per year.

(2) Definitions.

(A) Specialty coating definitions in 40 CFR 63 Subpart GG, Appendix A, promulgated as of July 1, 2018, with the exception of "mold release" and "caulking and smoothing

compound," apply and are hereby incorporated by reference in this rule, as published by the Office of 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. The following two (2) definitions, as defined below, shall be used for this rule:

1. Mold release—A coating applied to a mold surface to prevent the mold piece from sticking to the mold as it is removed, or to an aerospace component for purposes of creating a form-in-place seal; and

2. Caulking and smoothing compound—A semi-solid material that is used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses, excluding materials that can be classified as a sealant.

(B) Aerospace manufacture and/or rework facility—Any installation that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

(C) Aerospace vehicle or component—Any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles.

(D) Antique aerospace vehicle or component—An aircraft or component thereof that was built at least thirty (30) years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which it was designed.

(E) Aqueous solvent—A cleaning solution in which water is the primary ingredient (greater than eighty percent (80%) by weight of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g. high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than ninety-three degrees Celsius (93 °C) (two hundred degrees Fahrenheit (200 °F)) (as reported by the manufacturer) and the solution must be miscible with water.

(F) Chemical milling maskants—A coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Maskants that must be used with a combination of Type I or Type II etchants and any of the above types of maskants (i.e., bonding, critical use and line sealer, and seal coat) are also not included in this definition.

(G) Energized electrical systems—Any alternating current (AC) or direct current (DC) electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells, and tail sections.

(H) Flush cleaning—The removal of contaminants such as dirt, grease, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item cleaned and then drained, or be assisted by air, compressed gas, hydraulic pressure, or by pumping. Spray gun cleaning or hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand actions are used are not included in this definition.

(I) General aviation—Segment of civil aviation that encompasses all facets of aviation except air carriers, commuters, and military. General aviation includes charter and corporate-executive transportation, instruction, rental, aerial application, aerial observation, business, pleasure, and other special uses.

(J) General aviation rework facility—Any aerospace installation with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion, or alteration of general aviation aerospace vehicles or components.

(K) High volume low pressure (HVLP) spray equipment—Spray equipment used to apply coating by means of spray gun that operates at ten pounds per square inch gauge (10 psig) of atomizing air pressure or less at the air cap.

(L) Low vapor pressure hydrocarbon-based cleaning solvent—A cleaning solvent that is composed of a mixture of photochemically reactive hydrocarbons and oxygenated hydrocarbons and has a maximum vapor pressure of seven millimeters of mercury (7 mmHg) at twenty degrees Celsius (20 °C). These cleaners must not contain hazardous air pollutants.

(M) Primer—The first layer and any subsequent layers of identically formulated coating applied to the article to provide corrosion resistance, surface etching, surface leveling, adhesion promotion, or other property depending on the end use or exposure of the final product. Primers that are defined as specialty coatings are not included under this definition.

(N) Self-priming topcoat—A topcoat that is applied directly to a vehicle or component for purposes of corrosion prevention, environmental protection, and function fluid resistance. More than one (1) layer of identical coating formulation may be applied to the vehicle or component.

(O) Semi-aqueous cleaning solvent—A solution in which water is a primary ingredient (greater than sixty percent (60%) by weight of the solvent solution as applied must be water).

(P) Specialty coating—A coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

(Q) Topcoat—A coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Topcoats that are defined as specialty coatings are not included under this definition.

(R) Touch-up and repair operation—That portion of the coating operation that is the incidental application of finishing materials used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

(S) Type I etchant—A chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

(T) Type II etchant—A chemical milling etchant that is a strong sodium hydroxide solution containing amines.

(U) Waterborne (water-reducible) coating—Any coating that contains more than five percent (5%) water by weight as applied in its volatile fraction.

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

(3) General Provisions.

(A) No person shall cause, permit, or allow the emissions of VOC from the coating of aerospace vehicles or components to exceed—

1. 2.9 pounds per gallon (350 grams per liter) of coating, excluding water and exempt solvents delivered to a coating applicator that applies primers. For general aviation rework facilities, the VOC limitation shall be 4.5 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies primers;

2. 3.5 pounds per gallon (420 grams per liter) of coating, excluding water and exempt solvents, delivered to a coating applicator that applies topcoats (including self-priming topcoats). For general aviation rework facilities, the VOC limit shall be 4.5 pounds per gallon (540 grams per liter) of coating, excluding water and exempt solvents, delivered to a coating applicator that applies topcoats (including self-priming topcoats);

3. The VOC content limits listed in Table I expressed in pounds per gallon of coating, excluding water and exempt solvents delivered to a coating applicator that applies specialty coatings;

Table I: Specialty Coating VOC Limitations	Pounds per gallon	Grams per liter
Ablative Coating	5.0	600
Adhesion Promoter	7.4	890
Adhesive Bonding Primers:		
Cured at 250 °F or below	7.1	850
Cured above 250 °F	8.6	1030
Adhesives:		
Commercial Interior Adhesive	6.3	760
Cyanoacrylate Adhesive	8.5	1020
Fuel Tank Adhesive	5.2	620
Nonstructural Adhesive	3.0	360
Rocket Motor Bonding Adhesive	7.4	890
Rubber-Based Adhesive	7.1	850
Structural Autoclavable Adhesive	0.5	60
Structural Nonautoclavable Adhesive	7.1	850
Antichafe Coating	5.5	660
Bearing Coating	5.2	620
Caulking and Smoothing Compounds	7.1	850
Chemical Agent-Resistant Coating	4.6	550
Clear Coating	6.0	720
Commercial Exterior Aerodynamic Structure Primer	5.4	650
Compatible Substrate Primer	6.5	780
Corrosion Prevention Compound	5.9	710
Cryogenic Flexible Primer	5.4	645
Cryoprotective Coating	5.0	600
Dry Lubricative Material	7.3	880
Electric or Radiation-Effect Coating	6.7	800
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	6.7	800
Elevated Temperature Skydrol Resistant Commercial Primer	6.2	740
Epoxy Polyamide Topcoat	5.5	660
Fire-Resistant (interior) Coating	6.7	800
Flexible Primer	5.3	640
Flight-Test Coatings:		
Missile or Single Use Aircraft	3.5	420
All Others	7.0	840
Fuel-Tank Coating	6.0	720
High-Temperature Coating	7.1	850
Insulation Covering	6.2	740
Intermediate Release Coating	6.3	750
Lacquer	6.9	830
Maskant:		
Bonding Maskant	10.3	1230
Critical Use and Line Sealer Maskant	8.5	1020
Seal Coat Maskant	10.3	1230
Metallized Epoxy Coating	6.2	740
Mold Release	6.5	780
Optical Anti-Reflective Coating	6.3	750
Part Marking Coating	7.1	850
Pretreatment Coating	6.5	780
Rain Erosion-Resistant Coating	7.1	850
Rocket Motor Nozzle Coating	5.5	660
Scale Inhibitor	7.3	880
Screen Print Ink	7.0	840
Sealants:		
Extrudable/Rollable/Brushable Sealant	2.3	280
Sprayable Sealant	5.0	600
Silicone Insulation Material	7.1	850
Solid Film Lubricant	7.3	880
Specialized Function Coating	7.4	890
Temporary Protective Coating	2.7	320
Thermal Control Coating	6.7	800
Wet Fastener Installation Coating	5.6	675
Wing Coating	7.1	850

4. 5.2 pounds per gallon (620 grams per liter) of coating, excluding water and exempt solvents, delivered to a coating applicator that applies Type I chemical milling maskant; and

5. 1.3 pounds per gallon (150 grams per liter) of coating, excluding water and exempt solvents, delivered to a coating applicator that applies Type II chemical milling maskants.

(B) The emission limitations in subsection (3)(A) of this rule shall be achieved by—

1. The application of low solvent coating technology where each and every coating meets the specified applicable limitation expressed in pounds of VOC per gallon of coating, excluding water and exempt solvents, stated in subsection (3)(A) of this rule;

2. The application of low solvent coating technology where the monthly volume-weighted average VOC content of each specified coating type meets the specified applicable limitation expressed in pounds of VOC per gallon of coating, excluding water and exempt solvents, stated in subsection (3)(A) of this rule; averaging is not allowed for specialty coatings, and averaging is not allowed between primers, topcoats (including self-priming topcoats), Type I milling maskants, and Type II milling maskants or any combination of the above coating categories; or

3. Control equipment, including but not limited to incineration, carbon adsorption and condensation, with a capture system approved by the director, provided that the owner or operator demonstrates, in accordance with subsection (5)(C), that the control system has a VOC reduction efficiency of eighty-one percent (81%) or greater.

(C) Each owner or operator of an aerospace manufacturing and/or rework operation shall apply all non-exempt primers and topcoats using one (1) or more of the application techniques specified below—

1. Flow/curtain application;
2. Dip coat application;
3. Roll coating;
4. Brush coating;
5. Cotton-tipped swab application;
6. Electrodeposition (dip) coating;
7. HVLP spraying;
8. Electrostatic spray application; or
9. Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined by the director.

(D) Each owner or operator of an aerospace manufacturing and/or rework operation shall ensure that all application devices used to apply primers and topcoats (including self-priming topcoats) are operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at all times. Equipment modified by the owner or operator shall maintain a transfer efficiency equivalent to HVLP or electrostatic spray application techniques.

(E) Each owner or operator of an aerospace manufacturing and/or rework operation shall comply with the following housekeeping requirements for any affected cleaning operation, unless the cleaning solvent used is an aqueous solvent, low vapor pressure hydrocarbon-based cleaning solvent, or contains less than one percent (1%) VOC by weight. Hazardous waste under regulation 10 CSR 25-4.261 that is subject to the hazardous waste generators standards of 10 CSR 25-5.262 or the solvent wipe conditional exclusion requirements of 40 CFR 261.4(a)(26) or (b)(18), as incorporated in 10 CSR 25-4.261, is exempt from the requirements of paragraphs (3)(E)1. through (3)(E)3. below:

1. Solvent-laden cloth, paper, or any other absorbent applicators used for cleaning shall be placed in bags or other closed containers upon completing their use. These bags and containers must be kept closed at all times except when depositing or removing these materials from the container. The bags and containers used must be of such a design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement;

2. All fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations shall be stored in closed containers; and

3. The handling and transfer of cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents shall be conducted in such a manner that spills are minimized.

(F) Each owner or operator of an aerospace manufacturing and/or rework operation utilizing hand-wipe cleaning operations excluding the cleaning of spray gun equipment performed in accordance with subsection (3)(G) shall comply with one (1) of the following:

1. Utilize cleaning solvent solutions that are classified as an aqueous solvent and/or a low vapor pressure hydrocarbon-based cleaning solvent; or

2. Utilize cleaning solvent solutions that have a composite vapor pressure of forty-five (45) mmHg or less at twenty degrees Celsius (20 °C).

(G) Each owner or operator of an aerospace manufacturing and/or rework operation shall clean all spray guns used in the application of primers, topcoats (including self-priming topcoats), and specialty coatings utilizing one (1) or more of the following techniques:

1. Enclosed system. Clean spray guns within an enclosed system that is closed at all times except when inserting or removing the spray gun. If leaks in the system are found, repairs shall be made as soon as practicable, but no later than fifteen (15) days after the leak was found. If the leak is not repaired by the fifteenth day after detection, the cleaning solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;

2. Nonatomized cleaning. Clean spray guns by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. The cleaning solvent from the spray gun shall be directed into a vat, drum, or other waste container that is closed when not in use;

3. Disassembled spray gun cleaning. Clean spray guns by disassembling and cleaning the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, the components may be soaked in a vat, which shall remain closed during the soaking period and when not inserting or removing components; and

4. Atomizing cleaning. Clean spray guns by forcing the cleaning solvent through the gun and directing the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(H) Each owner or operator of an aerospace manufacturing and/or rework operation that includes a flush cleaning operation shall empty the used cleaning solvents each time aerospace parts or assemblies, or components of a coating unit with the exception of spray guns are flush-cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control approved by the director. Aqueous, semi-aqueous, low vapor pressure hydrocarbon-based solvent materials, and all wastes that are determined to be hazardous waste under regulation 10 CSR 25-4.261 and that are subject to the hazardous waste generators standards of 10 CSR 25-5.262 are exempt from the requirements of this subsection.

(I) The following activities are exempt from this section:

1. Research and development;
2. Quality control;
3. Laboratory testing activities;
4. Chemical milling;
5. Metal finishing;

6. Electrodeposition except for the electrodeposition of paints;

7. Composites processing except for cleaning and coating of composite parts or components that become part of an aerospace vehicle or component as well as composite tooling that comes in contact with such composite parts or components prior to cure;

8. Electronic parts and assemblies except for cleaning and topcoating of completed assemblies;

9. Manufacture of aircraft transparencies;

10. Wastewater treatment operations;

11. Manufacturing and rework of parts and assemblies not critical to the vehicle's structural integrity or flight performance;

12. Regulated activities associated with space vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the space shuttle;

13. Utilization of primers, topcoats, specialty coatings, cleaning solvents, chemical milling maskants, and strippers containing VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens;

14. Utilization of touch-up, aerosol can, and Department of Defense classified coatings;

15. Maintenance and rework of antique aerospace vehicles and components; and

16. Rework of aircraft or aircraft components if the holder of the Federal Aviation Administration design approval, or the holder's licensee, is not actively manufacturing the aircraft or aircraft components.

(J) The requirements for primers, topcoats, specialty coatings, and chemical milling maskants specified in subsection (3)(A) of this rule do not apply to the use of low-volume coatings in these categories for which the rolling twelve (12)-month total of each separate formulation used at an installation does not exceed fifty (50) gallons, and the combined rolling twelve (12)-month total of all such primers, topcoats, specialty coatings, and chemical milling maskants used does not exceed two hundred (200) gallons. Coatings exempted under subsection (3)(I) of this rule are not included in the fifty (50)- and two hundred (200)-gallon limits.

(K) The following situations are exempt from the requirements of subsections (3)(D) and (3)(E) of this rule:

1. Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

2. The application of any specialty coating;

3. The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that cannot be applied by any of the application methods specified in subsection (3)(C) of this rule;

4. The application of coatings that normally have dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that cannot be applied by any of the application methods specified in subsection (3)(C) of this rule;

5. The use of airbrush application methods for stenciling, lettering, and other identification markings;

6. The use of hand-held spray can application methods; and

7. Touch-up and repair operations.

(L) The following cleaning operations are exempt from the requirements of subsection (3)(F) of this rule:

1. Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

2. Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

3. Cleaning and surface activation prior to adhesive bonding;

4. Cleaning of electronic parts and assemblies containing electronic parts;

5. Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid including air-to-air heat exchangers and hydraulic fluid systems;

6. Cleaning of fuel cells, fuel tanks, and confined spaces;

7. Surface cleaning of solar cells, coating optics, and thermal control surfaces;

8. Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

9. Cleaning of metallic and non-metallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture or maintenance of aerospace vehicles or components;

10. Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

11. Cleaning and solvent usage associated with research and development, quality control, and laboratory testing;

12. Cleaning operations, using nonflammable liquids, conducted within five feet (5') of energized electrical systems; and

13. Cleaning operations identified as essential uses in 40 CFR 82.4 for which the U.S. Environmental Protection Agency has allocated essential use allowances or exemptions.

(4) Reporting and Record Keeping.

(A) Monitoring Requirements—Each owner or operator of an aerospace manufacturing and/or rework operation shall submit a monitoring plan to the director that specifies the applicable operating parameter value, or range of values, to ensure ongoing compliance with paragraph (3)(B)3. of this rule. Any monitoring device, required by the monitoring plan, shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications.

(B) Record Keeping Requirements.

1. Each owner or operator of an aerospace manufacture and/or rework operation that applies coatings listed in subsection (3)(A) of this rule shall—

A. Maintain a current list of coatings in use with category and VOC content as applied;

B. Record each coating volume usage on a monthly basis; and

C. Maintain records of monthly volume-weighted average VOC content for each coating type included in averaging for coating operations that achieve compliance through coating averaging under paragraph (3)(B)2. of this rule.

2. Each owner or operator of an aerospace manufacture and/or rework operation that uses cleaning solvents subject to this rule shall—

A. Maintain a list of materials with corresponding water contents for aqueous and semi-aqueous hand-wipe cleaning solvents;

B. Maintain a current list of cleaning solvents in use with their respective vapor pressure or, for blended solvents, VOC composite vapor pressure for all vapor pressure compliant hand-wipe cleaning solvents. This list shall include the monthly amount of each applicable solvent used; and

C. Maintain a current list of exempt hand-wipe cleaning processes for all cleaning solvents with a vapor pressure greater than forty-five (45) mmHg used in exempt hand-wipe cleaning operations. This list shall include the monthly amount of each applicable solvent used.

3. All records must be kept on-site for a period of five (5) years and made available to the department upon request.

(5) Test Methods.

(A) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for coatings which are not waterborne (water-reducible) and determine the VOC content of each formulation less water and less exempt solvents as applied using manufacturer's supplied data or Method 24 of 40 CFR 60, Appendix A, as specified in 10 CSR 10-6.030(22). If there is a discrepancy between the manufacturer's

formulation data and the results of the Method 24 analysis, compliance is determined by the results from the Method 24 analysis. For waterborne (water-reducible) coatings, manufacturer's supplied data alone can be used to determine the VOC content of each formulation.

(B) An owner or operator of an aerospace manufacture and/or rework operation shall determine compliance for cleaning solvents using the following:

1. For aqueous and semi-aqueous solvents manufacturers' supplied data shall be used to determine the water content; or

2. For hand-wipe cleaning solvents required in subsection (3)(F) of this rule, manufacturers' supplied data or standard engineering reference texts or other equivalent methods shall be used to determine the vapor pressure or VOC composite vapor pressure for blended cleaning solvents.

(C) An owner or operator of an aerospace manufacture and/or rework operation electing to demonstrate compliance with this rule by use of control equipment meeting the requirements of paragraph (3)(B)3. of this rule, shall demonstrate the required capture efficiency in accordance with EPA methods 18, 25, and/or 25A in 40 CFR 60, Appendix A, as specified in 10 CSR 10-6.030(22).

AUTHORITY: section 643.050, RSMo 2016. Original rule filed Aug. 4, 2000, effective March 30, 2001. Amended: Filed June 21, 2018, effective March 30, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, 1992, 1993, 1995, 2011.*

10 CSR 10-2.210 Control of Emissions From Solvent Metal Cleaning

PURPOSE: This regulation specifies equipment, operating procedures and training requirements for the reduction of hydrocarbon emissions from solvent metal cleaning operations in the Kansas City metropolitan area.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(A) This rule shall apply throughout Clay, Jackson and Platte Counties.

(B) This rule shall apply to all installations which emit volatile organic compounds (VOC) from solvent metal cleaning or degreasing operations.

(C) This rule applies to any of the following processes that use nonaqueous solvents to clean and remove soils from metal parts:

1. Spray gun cleaners;

2. Cold cleaners with a solvent reservoir or tank;

3. Open-top vapor or conveyorized degreasers; or

4. Air-tight or airless cleaning systems.

(D) Exemptions.

1. The following shall be exempt from this rule:

A. Cold cleaners with liquid surface areas of one (1) square foot or less or maximum capacities of one (1) gallon or less;

B. Solvent cleaning operations that meet the emission control requirements 10 CSR 10-2.205, 10 CSR 10-2.230, 10 CSR 10-2.290 and 10 CSR 10-2.340;

C. Solvent cleaning operations regulated under 40 CFR 63 Subpart T, National Emission Standards for Halogenated Solvent Cleaning. The provisions of 40 CFR part 63 Subpart T promulgated as of December 19, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions;

D. The cleaning of electronic components, medical devices or optical devices;

E. Hand cleaning/wiping operations; and

F. Flush cleaning operations.

2. The following shall be exempt from the solvent vapor pressure requirements of subparagraphs (3)(A)1.A. and (3)(A)1.B. of this rule:

A. Sales of cold cleaning solvents in quantities of five (5) gallons or less;

B. Cold cleaners using solvents regulated under any federal National Emission Standards for Hazardous Air Pollutants; and

C. Janitorial and institutional cleaning.

3. All wastes that are subject to hazardous waste requirements at 10 CSR Division 25, Chapter 4 through 9 shall be exempt from the requirements of subparagraphs (3)(B)1.E., (3)(B)2.J., (3)(B)3.H., (3)(B)4.B., (3)(B)5.G. and subsection (4)(A) of this rule.

(2) Definitions.

(A) Airless cleaning system—A degreasing machine that is automatically operated and seals at a differential pressure of 25 torr (25.0 millimeters of Mercury (mmHg)) (0.475 pounds per square inch (psi)) or less, prior to the introduction of solvent vapor into the cleaning chamber and maintains differential pressure under vacuum during all cleaning and drying cycles.

(B) Air-tight cleaning system—A degreasing machine that is automatically operated and seals at a differential pressure no greater than 0.5 pounds per square inch gauge (psig) during all cleaning and drying cycles.

(C) Aqueous solvent—Any solvent consisting of sixty percent (60%) or more by volume water with a flashpoint greater than ninety-three degrees Celsius (93 °C) (one hundred ninety-nine point four degrees Fahrenheit (199.4 °F)) and is miscible with water.

(D) Electronic components—All portions of an electronic assembly, including, but not limited to, circuit board assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and associated electronic component manufacturing equipment such as screens and filters.

(E) Flush cleaning—The removal of contaminants such as dirt, grease and coatings from a component or coating equipment by passing solvent over, into or through the item being cleaned. The solvent drained from the item may be assisted by air, compressed gas, hydraulic pressure or by pumping. Flush cleaning does not include spray gun cleaning.

(F) Freeboard area—The air space in a batch-load cold cleaner that extends from the liquid surface to the top of the tank.

(G) Freeboard height—

1. The distance from the top of the solvent to the top of the tank for batch-loaded cold cleaners;

2. The distance from the air-vapor interface to the top of the tank for open-top vapor degreasers; or

3. The distance from either the air-solvent or air-vapor interface to the top of the tank for conveyorized degreasers.

(H) Freeboard ratio—The freeboard height divided by the smaller of either the inside length or inside width of the degreaser.

(I) Hand cleaning/wiping operation—The removal of contaminants such as dirt, grease, oil and coatings from a surface by physically rubbing it with a material such as a rag, paper or cotton swab that has been moistened with a cleaning solvent.

(J) Institutional cleaning—Cleaning activities conducted at organizations, societies or corporations including, but not limited to schools, hospitals, sanitariums and prisons.

(K) Janitorial cleaning—The cleaning of building or facility components such as the floors, ceilings, walls, windows, doors, stairs, bathrooms, kitchens, etc.

(L) Medical device—An instrument, apparatus, implement, machine, contrivance, implant, *in vitro* reagent or other similar

article, including any component or accessory that meets one (1) of the following conditions:

1. It is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease;

2. It is intended to affect the structure or any function of the body; or

3. It is defined in the *National Formulary* or the *United States Pharmacopoeia*, or any supplement to them.

(M) Nonaqueous solvent—Any solvent not classifiable as an aqueous solvent as defined in subsection (2)(C) of this rule.

(N) Optical device—An optical element used in an electro-optical device and designed to sense, detect or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.

(O) Soils—Includes, but not limited to, unwanted grease, wax, grit, ash, dirt and oil. Spray gun soils, in addition, include unwanted primers, paint, specialty coatings, adhesives, sealers, resins or deadeners.

(P) Spray gun cleaner—Equipment used to clean spray guns used to apply, but not limited to, primers, paints, specialty coatings, adhesives, resins or deadeners incorporated into a product distributed in commerce.

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

(3) General Provisions.

(A) Equipment Specifications.

1. Cold cleaners.

A. No one shall use, sell or offer for sale for use within Clay, Jackson and Platte Counties a cold cleaning solvent with a vapor pressure greater than 1.0 mmHg (0.019 psi) at twenty degrees Celsius (20 °C) (sixty-eight degrees Fahrenheit (68 °F)) unless used for carburetor cleaning.

B. No one shall use, sell or offer for sale for use within Clay, Jackson and Platte Counties a cold cleaning solvent for the purpose of carburetor cleaning with a vapor pressure greater than 5.0 mmHg (0.097 psi) at twenty degrees Celsius (20 °C) (sixty-eight degrees Fahrenheit (68 °F)).

C. An owner or operator of a cold cleaner may use an alternate method for reducing cold cleaning emissions if the owner or operator shows the level of emission control is equivalent to or greater than the requirements of subparagraphs (3)(A)1.A. and (3)(A)1.B. of this rule. This alternate method must be approved by the director and the U.S. Environmental Protection Agency (EPA).

D. Each cold cleaner shall have a cover which prevents the escape of solvent vapors from the solvent bath while in the closed position or an enclosed reservoir which limits the escape of solvent vapors from the solvent bath whenever parts are not being processed in the cleaner.

E. When one (1) or more of the following conditions exist, the cover shall be designed to operate easily such that minimal disturbing of the solvent vapors in the tank occurs. (For covers larger than ten (10) square feet, this shall be accomplished by either mechanical assistance such as spring loading or counter weighing or by power systems):

(I) The solvent vapor pressure is greater than 0.3 psi measured at thirty-seven point eight degrees Celsius (37.8 °C) (one hundred degrees Fahrenheit (100 °F));

(II) The solvent is agitated; or

(III) The solvent is heated.

F. Each cold cleaner shall have an internal drainage facility so that parts are enclosed under the cover while draining.

G. If an internal drainage facility cannot fit into the cleaning system and the solvent vapor pressure is less than 0.6 psi measured at thirty-seven point eight degrees Celsius (37.8 °C) (one hundred degrees Fahrenheit (100 °F)), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath.

H. Solvent sprays, if used, shall be a solid fluid stream (not a fine, atomized or shower-type spray) and at a pressure which does not cause splashing above or beyond the freeboard.

I. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment or in a location readily visible during operation of the equipment.

J. Any cold cleaner which uses a solvent that has a solvent vapor pressure greater than 0.6 psi measured at thirty-seven point eight degrees Celsius (37.8 °C) (one hundred degrees Fahrenheit (100 °F)) or heated above forty-eight point nine degrees Celsius (48.9 °C) (one hundred twenty degrees Fahrenheit (120 °F)) must use one (1) of the following control devices:

(I) A freeboard ratio of at least 0.75;

(II) Water cover (solvent must be insoluble in and heavier than water); or

(III) Other control systems with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to sixty-five percent (65%). These control systems must receive approval from the director and EPA prior to their use.

2. Open-top vapor degreasers.

A. Each open-top vapor degreaser shall have a cover which will prevent the escape of solvent vapors from the degreaser while in the closed position and shall be designed to open and close easily such that minimal disturbing of the solvent vapors in the tank occurs. For covers larger than ten (10) square feet, easy cover use shall be accomplished by either mechanical assistance, such as spring loading or counter weighing or by power systems.

B. Each open-top vapor degreaser shall be equipped with a vapor level control device that shuts off the heating source when the vapor level rises above the cooling or condensing coil, or an equivalent safety device approved by the director and EPA.

C. Each open-top vapor degreaser with an air/vapor interface over ten and three-fourths (10 3/4) square feet shall be equipped with at least one (1) of the following control devices:

(I) A freeboard ratio of at least 0.75;

(II) A refrigerated chiller;

(III) An enclosed design (the cover or door opens only when the dry part actually is entering or exiting the degreaser);

(IV) A carbon adsorption system with ventilation of at least fifty (50) cubic feet per minute per square foot of air vapor area when the cover is open and exhausting less than twenty-five parts per million (25 ppm) of solvent by volume averaged over one (1) complete adsorption cycle as measured using the reference method specified at 10 CSR 10-6.030(14)(A); or

(V) A control system with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to sixty-five percent (65%) and prior approval by the director and EPA.

D. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment or in a location readily visible during operation of the equipment.

3. Conveyorized degreasers.

A. Each conveyorized degreaser shall have a drying tunnel or rotating (tumbling) basket or other means demonstrated to have equal to or better control which shall be used to prevent cleaned parts from carrying out solvent liquid or vapor.

B. Each conveyorized degreaser shall have the following safety devices which operate if the machine malfunctions:

(I) A vapor level control device that shuts off the heating source when the vapor level rises just above the cooling or condensing coil; and

(II) A spray safety switch, which shuts off the spray pump if the vapor level in the spray chamber drops four inches (4"), for conveyorized degreasers utilizing a spray chamber; or

(III) Equivalent safety devices approved by the director and EPA.

C. Entrances and exits shall silhouette workloads so that the average clearance between parts and the edge of the degreaser opening is less than four inches (4") or less than ten percent (10%) of the width of the opening.

D. Covers shall be provided for closing off the entrance and exit during hours when the degreaser is not being used.

E. A permanent, conspicuous label summarizing the operating procedures shall be affixed to the equipment or in a location readily visible during operation of the equipment.

F. If the air/vapor interface is larger than twenty-one and one-half (21 1/2) square feet, one (1) major control device shall be required. This device shall be one (1) of the following:

(I) A refrigerated chiller;

(II) Carbon adsorption system with ventilation of at least fifty (50) cubic feet per minute per square foot of the total entrance and exit areas (when downtime covers are open) and exhausting less than twenty-five (25) ppm of solvent by volume averaged over one (1) complete adsorption cycle as measured using the reference method specified at 10 CSR 10-6.030(14)(A); or

(III) A control system with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to sixty-five percent (65%) and prior approval by the director and EPA.

4. Air-tight or airless cleaning systems. Air-tight or airless cleaning systems shall:

A. Have a permanent conspicuous label summarizing the operating procedures affixed to the equipment or in a location readily visible during operation of equipment;

B. Be equipped with a differential pressure gauge to indicate the sealed chamber pressure under vacuum; and

C. Be equipped with a safety alarm to alert the operator of equipment malfunction.

(B) Operating Procedure Requirements.

1. Cold cleaners.

A. Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir except when performing maintenance or collecting solvent samples.

B. Cleaned parts shall be drained in the freeboard area for at least fifteen (15) seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back into the cold cleaner.

C. Whenever a cold cleaner fails to perform within the rule operating requirements, the unit shall be shutdown immediately and shall remain shutdown until operation is restored to meet rule operating requirements.

D. Solvent leaks shall be repaired immediately or the cold cleaner shall be shutdown until the leaks are repaired.

E. Any waste material removed from a cold cleaner shall be disposed of by one (1) of the following methods or an equivalent method approved by the director and EPA:

(I) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste; or

(II) Stored in closed containers for transfer to—

(a) A contract reclamation service; or

(b) A disposal facility approved by the director and EPA.

F. Waste solvent shall be stored in closed containers only.

2. Open-top vapor degreasers.

A. The cover shall be kept closed at all times except when processing workloads through the open-top vapor degreaser, performing maintenance or collecting solvent samples.

B. Solvent carry-out shall be minimized in the following ways:

(I) Parts shall be racked, if practical, to allow full drainage;

(II) Parts shall be moved in and out of the open-top vapor degreaser at less than eleven feet (11') per minute;

(III) Workload shall remain in the vapor zone at least thirty (30) seconds or until condensation ceases, whichever is longer;

(IV) Pools of solvent shall be removed from cleaned parts before removing parts from the open-top vapor degreaser freeboard area; and

(V) Cleaned parts shall be allowed to dry within the open-top vapor degreaser freeboard area for at least fifteen (15) seconds or until visually dry, whichever is longer.

C. Porous or absorbent materials such as cloth, leather, wood or rope shall not be degreased.

D. If workloads occupy more than half of the open-top vapor degreaser's open-top area, rate of entry and removal shall not exceed five feet (5') per minute.

E. Spray shall never extend above vapor level.

F. Whenever an open-top vapor degreaser fails to perform within the rule operating requirements, the unit shall be shutdown until operation is restored to meet the rule operating requirements.

G. Solvent leaks shall be repaired immediately or the open-top vapor degreaser shall be shutdown until the leaks are repaired.

H. Ventilation exhaust from the open-top vapor degreaser shall not exceed sixty-five (65) cubic feet per minute per square foot of open-top vapor degreaser open area unless proof is submitted that it is necessary to meet Occupational Safety and Health Administration (OSHA) requirements. Fans shall not be used near the open-top vapor degreaser opening.

I. Water shall not be visually detectable in solvent exiting the water separator, except for automatic water separators that by configuration do not allow visual inspection.

J. Any waste material removed from an open-top vapor degreaser shall be disposed of by one (1) of the following methods or an equivalent method approved by the director and EPA:

(I) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste; or

(II) Stored in closed containers for transfer to—

(a) A contract reclamation service; or

(b) A disposal facility approved by the director and EPA.

K. Waste solvent shall be stored in closed containers only.

3. Conveyorized degreasers.

A. Ventilation exhaust from the conveyorized degreaser shall not exceed sixty-five (65) cubic feet per minute per square foot of conveyorized degreaser opening unless proof is submitted that it is necessary to meet OSHA requirements. Fans shall not be used near the conveyorized degreaser opening.

B. Solvent carry-out shall be minimized in the following ways:

(I) Parts shall be racked, if practical, to allow full drainage; and

(II) Vertical conveyor speed shall be maintained at less than eleven feet (11') per minute.

C. Whenever a conveyorized degreaser fails to perform within the rule operating requirements, the unit shall be shutdown immediately and shall remain shutdown until operation is restored to meet the rule operating requirements.

D. Solvent leaks shall be repaired immediately or the conveyorized degreaser shall be shutdown until the leaks are repaired.

E. Water shall not be visually detectable in solvent exiting the water separator.

F. Covers shall be placed over entrances and exits immediately after conveyor and exhaust are shutdown and removed just before they are started up.

G. Waste solvent shall be stored in closed containers only.

H. Any waste material removed from a conveyorized degreaser shall be disposed of by one (1) of the following methods or an equivalent method approved by the director and EPA:

(I) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste; or

(II) Stored in closed containers for transfer to—

(a) A contract reclamation service; or

(b) A disposal facility approved by the director and EPA.

4. Spray gun cleaners.

A. Cleaning of spray guns shall be accomplished by use of one (1) or more of the following methods:

(I) Enclosed spray gun cleaning. Enclosed system spray gun cleaning shall consist of forcing solvent through the spray gun and/or spray gun parts. Spray guns and/or spray gun parts shall only be cleaned in remote closed top spray gun cleaning machines under the following conditions:

(a) The spray gun cleaning machine is operated within the manufacturer's specifications and with the lid kept tightly closed at all times except when being accessed or maintained; and

(b) Removable containers (which shall not exceed thirty (30) gallons in size) for clean, used and waste solvent, are kept tightly closed except when being accessed or maintained;

(II) Nonatomized spray gun cleaning. Nonatomized spray gun cleaning shall consist of placing solvent in the pressure pot and forcing it through the spray gun with the atomizing cap in place. Spray guns shall only be cleaned through nonatomized spray gun cleaning under the following conditions:

(a) No atomizing air shall be used; and

(b) The cleaning solvent from the spray gun shall be directed into a pail, bucket, drum or other waste container that is closed when not in use;

(III) Disassembled spray gun cleaning. Disassembled spray gun cleaning shall be accomplished by disassembling the spray gun to be cleaned and cleaning the components by one (1) of the following methods:

(a) By hand in a spray gun cleaner, which shall remain closed except when in use; or

(b) By soaking in a spray gun cleaner, which shall remain closed during the soaking period and when not inserting or removing components;

(IV) Atomized spray gun cleaning. Atomized spray gun cleaning shall consist of forcing the cleaning solvent through the gun and directing the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions; or

(V) Cleaning of the nozzle tips of an automated spray equipment system is exempt from the requirements of paragraph (3)(B)4. of this rule, unless the system is a robotic system that is programmed to spray into a closed container.

B. Any waste material removed from a spray gun cleaning system shall be disposed of by one (1) of the following methods or an equivalent method approved by the director and EPA:

(I) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste; or

(II) Stored in closed containers for transfer to—

(a) A contract reclamation service; or

(b) A disposal facility approved by the director and EPA.

C. Waste solvent shall be stored in closed containers only.

5. Air-tight and airless cleaning systems.

A. Operate the air-tight and airless cleaning systems with a door or other pressure sealing apparatus in place during all cleaning and drying cycles.

B. All associated pressure relief devices shall not allow liquid solvent to drain out of the equipment.

C. Solvent leaks shall be repaired immediately or the air-tight or airless cleaning system shall be shutdown until the leaks are repaired.

D. The air-tight and airless cleaning systems shall be operated within the manufacturer's specifications.

E. Parts shall be positioned, if practical, to allow full drainage and pools of solvent shall be removed from cleaned parts before removing parts from the air-tight or airless cleaning system.

F. Wipe up solvent leaks and spills immediately and store the used rags in closed containers.

G. Any waste material removed from an air-tight and airless cleaning system shall be disposed of by one (1) of the following methods or an equivalent method approved by the director and EPA:

(I) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste; or

(II) Stored in closed containers for transfer to—

(a) A contract reclamation service; or

(b) A disposal facility approved by the director and EPA.

H. Waste solvent shall be stored in closed containers only.

(C) Operator and Supervisor Training.

1. Only persons trained in at least the operational and equipment requirements specified in this rule for their particular solvent metal cleaning process shall be permitted to operate the equipment.

2. The person who supervises any person who operates solvent cleaning equipment regulated by this rule shall receive equal or greater operational training than the operator.

3. A procedural review shall be given to all solvent metal cleaning equipment operators at least once each twelve (12) months.

4. Training records shall be maintained per subsections (4)(D) and (4)(E) of this rule.

(4) Reporting and Record Keeping.

(A) The owner or operator of a solvent metal cleaning or degreasing operation shall keep records of all types and amounts of solvent containing waste material from cleaning or degreasing operations transferred to either a contract reclamation service or to a disposal facility and all amounts distilled on the premises. The records also shall include maintenance and repair logs for both the degreaser and any associated control equipment. These records shall be kept current and made available for review on a monthly basis. The director may require additional record keeping if necessary to adequately demonstrate compliance with this rule.

(B) All persons that use any solvent subject to the requirements of subparagraphs (3)(A)1.A. or (3)(A)1.B. of this rule shall maintain records which include for each purchase of cold cleaning solvent:

1. The name and address of the solvent supplier;
2. The date of purchase;
3. The type of solvent; and
4. The vapor pressure of the solvent in mmHg at twenty degrees Celsius (20 °C) (sixty-eight degrees Fahrenheit (68 °F)).

(C) All persons that sell or offer for sale any solvent subject to the requirements of subparagraph (3)(A)1.A. or (3)(A)1.B. of this rule shall maintain records which include for each sale of cold cleaning solvent:

1. The name and address of the solvent purchaser;
2. The date of sale;
3. The type of solvent;
4. The unit volume of solvent;
5. The total volume of solvent; and
6. The vapor pressure of the solvent measured in mmHg at twenty degrees Celsius (20 °C) (sixty-eight degrees Fahrenheit (68 °F)).

(D) A record shall be kept of solvent metal cleaning training required by subsection (3)(C) of this rule.

(E) All records required under subsections (4)(A), (4)(B), (4)(C) and (4)(D) of this rule shall be retained for five (5) years and shall be made available to the director upon request.

(5) Test Methods. *(Not applicable)*

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Nov. 14, 1978, effective June 11, 1979. Amended: Filed July 1, 1987, effective Dec. 12, 1987. Amended: Filed Jan. 29, 2001, effective Oct. 30, 2001. Amended: Filed June 26, 2007, effective Feb. 29, 2008.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993, 1995.*

10 CSR 10-2.215 Control of Emissions From Solvent Cleanup Operations

(Rescinded January 30, 2019)

AUTHORITY: section 643.050, RSMo Supp. 1999. Original rule filed Aug. 30, 2000, effective May 30, 2001. Rescinded: Filed April 10, 2018, effective Jan. 30, 2019.

10 CSR 10-2.220 Liquefied Cutback Asphalt Paving Restricted

PURPOSE: This regulation restricts volatile organic compounds emissions from cutback asphalt paving operations.

(1) Application.

(A) This regulation shall apply only in Clay, Jackson and Platte Counties.

(B) This regulation limits the use or application of liquefied cutback asphalt in paving and maintenance operations on highways, roads, parking lots and driveways.

(2) General. After December 31, 1982, no person may cause or permit the use or application of liquefied cutback asphalts on highways, roads, parking lots and driveways during the months of April, May, June, July, August, September and October except as permitted in section (3). This section refers to liquefied cutback asphalt which is directly applied or used in a plant-mix or road-mix.

(3) Exceptions. The use or application of liquefied cutback asphalts is permitted if the liquefied cutback asphalt is—

(A) Used in a plant-mix or road-mix which is used solely for filling potholes or for emergency repairs;

(B) Used to produce a plant-mix manufactured for resale or for use outside Clay, Jackson and Platte Counties; or

(C) To be used solely as an asphalt prime coat or an asphalt seal coat on absorbent surfaces.

(4) Recordkeeping.

(A) Records shall be kept on all application uses and all production quantities sufficient to determine daily volatile organic compound emissions for the months of April, May, June, July, August, September and October.

(B) Liquefied cutback asphalt plants shall keep records of the quantities of liquefied cutback asphalt sold and who the purchasers are. The owner, operator or user shall record all information derived for a period of not less than two (2) years and all those records shall be made available to the director upon his/her request.

AUTHORITY: section 643.050, RSMo 1986. Original rule filed Nov. 14, 1978, effective July 12, 1979. Amended: Filed Jan. 3, 1991, effective Aug. 30, 1991.*

**Original authority 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993.*

10 CSR 10-2.230 Control of Emissions From Industrial Surface Coating Operations

PURPOSE: This regulation restricts volatile organic compound emissions from industrial surface coating operations.

Editor's Note: The secretary of state has determined that the publication of this rule in its entirety would be unduly cumbersome or expensive. The entire text of the material referenced has been filed with the secretary of state. This material may be found at the Office of the Secretary of State or at the headquarters of the agency and is available to any interested person at a cost established by state law.

(1) Applicability.

(A) This regulation applies only in Clay, Jackson, and Platte Counties.

(B) This regulation applies to any installation with an uncontrolled potential to emit greater than 6.8 kilograms per day (kg/day) or 2.7 tons per year of volatile organic compounds (VOC) from industrial surface coating operations covered under this rule. The uncontrolled potential emit is the potential emissions (as defined) plus the VOC removed by emission control devices.

(C) This regulation is not applicable to the following:

1. Exterior refinishing of airplanes;
2. Automobile refinishing;
3. Customizing top coating of automobiles and trucks, if production is less than thirty-five (35) vehicles per day;
4. Exterior of marine vessels;
5. Surface coating that is part of janitorial, building, and installation maintenance operations;
6. Research and development, performance testing, and quality control of coatings and surface coated products;
7. Aerosol coating products subject to 40 CFR 59 subpart C or E;
8. Field application of architectural coatings to buildings, building components, and stationary structures;
9. Powder coatings;
10. Surface coating and cleaning of aerospace vehicles or components at an aerospace manufacture or rework facility that—

A. Is subject to the requirements and/or aerospace specific exemptions of 10 CSR 10-2.205; or

B. Is not subject to 10 CSR 10-2.205 because the installation's potential to emit VOCs from aerospace surface coating and cleaning is twenty-five (25) tons per year or less;

11. Application and storage of coatings subject to 40 CFR 59 subpart D;
12. Printing operations subject to the

requirements of 10 CSR 10-2.290 or 10 CSR 10-2.340;

13. Surface coating and cleaning of articles used for internal company operations including, but not limited to, work stands; scaffolding; jigs; tooling; dollies; tow bars; aircraft ground support equipment; portable equipment used for maintenance, testing, fabrication, or repair; toolboxes; storage bins; shelving; and other manufacturing or warehouse support items;

14. Adhesives and sealants that contain less than 0.17 pounds of VOC per gallon of coating (less water and exempt compounds) as applied;

15. Cyanoacrylate adhesives;

16. Adhesives, sealants, adhesive primers, and sealant primers that are supplied by the manufacturer or supplier in containers with a net volume of sixteen (16) fluid ounces or less, or a net weight of one (1) pound or less, except plastic cement welding adhesives and contact adhesives;

17. Contact adhesives that are supplied by the manufacturer or supplier in containers with a net volume of one (1) gallon or less;

18. Adhesives, sealants, adhesive primers, sealant primers, surface preparation, and cleanup solvents used in the following operations:

A. Tire repair operations, provided the adhesive is labeled for tire repair only;

B. Assembly, repair, and manufacture of aerospace or undersea-based weapon systems components;

C. Plastic solvent welding operations used in the manufacture of medical devices or in the manufacture of medical equipment; and

D. Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992; and

19. Military specification coatings that meet the following criteria:

A. The coating is applied only to military equipment used for national defense;

B. The coating performance is critical to the successful operation of the military equipment; and

C. The coating is mandated in a specification or contract and a substitution of coatings is not allowed.

(2) Definitions.

(A) Adhesive—Any chemical substance that is applied for the purpose of bonding two (2) surfaces together other than by mechanical means.

(B) Adhesive primer—A product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(C) Air-dried coating—The coatings dried by the use of air or forced warm air at temperatures up to ninety degrees Celsius (90 °C) (one hundred ninety-four degrees Fahrenheit (194 °F)).

(D) Architectural coating—A coating recommended for field application to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs. This definition excludes adhesives and coatings recommended by the manufacturer or importer solely for shop applications or solely for application to nonstationary structures, such as airplanes, ships, boats, and railcars.

(E) Automobile—A four (4)-wheel passenger motor vehicle or derivative capable of seating no more than twelve (12) passengers.

(F) Clear coat—A coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color. This term also includes corrosion preventative coatings used for the interior of drums or pails.

(G) Coating applicator—An apparatus used to apply a surface coating.

(H) Coating line—One (1) or more apparatus or operations which include a coating applicator, flash-off area, and oven where a surface coating is applied, dried, or cured, or a combination of these.

(I) Contact adhesive—A contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only. A contact adhesive is an adhesive that—

1. Is designed for application to both surfaces to be bonded together;

2. Is allowed to dry before the two (2) surfaces are placed in contact with each other;

3. Forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

4. Does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

(J) Cyanoacrylate adhesive—An adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.

(K) Drum—Any cylindrical container of thirteen to one hundred ten (13–110)-gallon capacity.

(L) End seal compound—The gasket forming coating used to attach the end pieces of a can during manufacturing or after filling with contents.

(M) Extreme performance coating—A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

1. Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

2. Repeated exposure to temperatures in excess of two hundred fifty degrees Fahrenheit (250 °F); or

3. Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(N) Fabric coating—A coating applied to a textile substrate by dipping or by means of a knife or roll.

(O) Final repair—The final coatings applied to correct topcoat imperfections after the complete assembly of the automobile.

(P) Flash-off area—The space between the application area and the oven.

(Q) Industrial surface coating operation—The surface coating of manufactured items intended for distribution in commerce to persons other than the person or legal entity performing the surface coating.

(R) Interior body spray—The surface coating for the interior and ends of a two (2)-piece formed can or the surface coating of the side of the rectangular material to be used as the interior and ends of a three (3)-piece can.

(S) Light-duty truck—Any motor vehicle rated at eight thousand five hundred pounds (8,500 lbs.) gross vehicle weight or less or a derivation of this vehicle which is designed primarily for the purpose of transportation of property.

(T) Marine vessel—A craft capable of being used as a means of transportation on water, except amphibious vehicles.

(U) Pail—Any nominal cylindrical container of one to twelve (1–12)-gallon capacity.

(V) Primer—The first surface coating applied to the surface.

(W) Primer-surfacer—The surface coatings applied over the primer and beneath the topcoat.

(X) Sheet basecoat—The roll coated primary interior surface coating applied to surfaces for the basic protection of buffering filling material from the metal can surface.

(Y) Topcoat—The surface coating applied for the purpose of establishing the color or protective surface, or both, including ground coat and paint sealer materials, base coat, and clear coat.

(Z) Transfer Efficiency (TE)—Ratio of the amount of coating solids transferred onto a product to the total of coating solids used. In any surface coating operation, TE is the ratio

of solids in a coating that adhere on a target surface to the total solids used in the process for coating the target surface.

(AA) Vinyl coating—The application of a decorative or protective topcoat, or printing or vinyl-coated fabric or vinyl sheet.

(BB) Definitions of certain general terms specified in this regulation may be found in 10 CSR 10-6.020.

(3) General Provisions. No person shall emit to the atmosphere any VOC from any industrial surface coating operation in excess of the amount allowed in subsections (3)(A) and (3)(B) of this rule. The following emission limits and compliance dates apply to all application areas, flash-off areas, and ovens used in an affected industrial surface coating operation.

(A) Table A: VOC Emission Limits Based on Solids Applied.

Surface Coating Operations	Emission Limit # VOC/gal Solids Applied	Dates of Compliance (See Note 1)
Auto/light-duty truck		
*Ford Motor Company		
Primer Surfacer	15.1	12/24/87
Topcoat (passenger)	15.1	12/31/88
Topcoat (truck) (See Note 2)	15.1	12/31/88

(B) Table B: VOC Emission Limits Based on Weight of VOC per Gallon of Coating (minus water and non-VOC organic compounds).

Surface Coating Operation	Emission Limit # VOC/gal Coating (minus water) and non-VOC Organic Compounds	Dates of Compliance (See Note 1)
Large Appliance		
*Topcoat	2.8	12/31/81
Final Repair	6.5	12/31/81
Magnet wire	1.7	12/31/81
Metal furniture	3.0	12/31/81
Auto/light-duty truck		
Ford Motor Company		
Electrocoat prime	1.2	12/31/82
Topcoat (truck)	3.6	12/31/85
Topcoat (passenger)	3.6	12/31/86
Final Repair	4.8	12/31/85
Miscellaneous Metal Parts— Extreme Performance Coating and Air-Dried Coatings	3.5	12/31/82
All Other Coatings	3.0	12/31/82
Paper	2.9	12/31/81
Vinyl Coating	3.8	12/31/81
Fabric Coating	2.9	12/31/81
Coil	2.6	12/31/81
Can		
2 piece exterior,	4.0	12/31/82
sheet basecoat	2.8	12/31/85
2 and 3 piece interior body spray	4.2	12/31/82
2 piece end exterior	4.2	12/31/82
3 piece side seam	5.5	12/31/82
End Seal Compound	4.2	12/31/82
	3.7	12/31/85
Railroad Cars, Farm Implements, Machinery and Heavy-Duty Trucks	3.5	12/31/82
Other Metal Parts		
Clear Coat Extreme Performance Coat and Air-Dried Coating	4.3	12/31/82
	3.5	12/31/82
Other Coatings	3.0	12/31/82

Note 1—The emission limit associated with the latest compliance date for each surface coating process supersedes interim emission limits associated with earlier compliance dates.

Note 2—A formal commitment submitted to and received by the director prior to 12/31/88 to construct or modify the truck topcoat surface coating operation no later than 12/31/90 to meet the provisions of 10 CSR 10-6.070 or 40 CFR 60 Subpart MM, whichever is more stringent, may be substituted for this emission limitation. The emission limit specified by the rules referenced in this note is 12.3 lbs. VOC per gallon of solids applied.

(4) Reporting and Record Keeping.

(A) The owner or operator of a coating line shall keep records detailing specific VOC sources, as necessary to determine compliance. These may include:

1. The type and the quantity of coatings used daily;

2. The coating manufacturer's formulation data for each coating on forms provided or approved by the director;

3. The type and quantity of solvents for coating, thinning, purging, and equipment cleaning used daily;

4. All test results to determine capture and control efficiencies, transfer efficiencies, and coating makeup;

5. The type and quantity of waste solvents reclaimed or discarded daily;

6. The quantity of pieces or materials coated daily; and

7. Any additional information pertinent to determine compliance.

(B) Records, such as daily production rates, may be substituted for actual daily coating use measurement provided the owner submits a demonstration approvable by the director that these records are adequate for the purposes of this regulation. This will apply for all surface coating industries until the U.S. Environmental Protection Agency (EPA) issues national daily emissions record keeping protocols for specific industrial classifications.

(C) Owners or operators shall retain records for a minimum of two (2) years and make the records available to the director upon request.

(5) Test Methods. Use the methods in subsections (5)(A)–(C) as applicable and appropriate to determine compliance with section (3) requirements.

(A) To calculate the daily volume-weighted emission performance for automobile and light-duty truck primer-surfacer and topcoat operations for subsection (3)(A), use the procedures in the EPA document, *Protocol for Determining the Daily Volatile Organic Compound Emission Rate for Automobile and Light-Duty Truck Topcoat Operations* as incorporated by reference in 10 CSR 10-6.030(20).

(B) For subsection (3)(B)—

1. Compliance with emission limits may be demonstrated with EPA Method 24 as specified in 10 CSR 10-6.030(22) using the one (1)-hour bake. Emission performance is based on the daily volume-weighted average of all coatings used in each industrial surface coating operation as delivered to the coating applicator(s) on a coating line.The daily volume-weighted average (DAVGvw) is calculated by the following formula:

$$DAVG_{VW=} \frac{\sum_{i=1}^{n} (A_i \times B_i)}{C}$$

Where: A = daily gal. each coating used (minus water and exempt solvents) in a surface coating operation.

B = lbs. VOC/gal coating (minus water and exempt solvents).

C = total daily gal. coating used (minus water and exempt solvents) in a surface coating operation.

n = number of all coating used in a surface coating operation; or

2. Compliance with the emission limits in subsection (3)(B) may be demonstrated on pounds of VOC per gallon of coating solids basis. The demonstration is made by first

converting the emission limit in subsection (3)(B) to pounds of VOC per gallon of coating solids as shown in the following three (3) steps:

1) $\frac{\text{lbs. VOC per gallon of coating minus water \& exempt solvents}}{\text{7.36 lbs. per gallon}} \times \frac{\text{(Emission Limit from (3)(B))}}{\text{(average density of solvents used to originally establish the emission limit)}} =$ volume fraction of VOC

2) 1 - Volume fraction of VOC = Volume fraction of solids

3) $\frac{\text{lbs. VOC per gallon of coating minus water \& exempt solvents}}{\text{Volume fraction of solids}} \times \frac{\text{(Emission Limit from (3)(B))}}{1} =$ lbs. VOC / gallon of coating solids

This value is the new compliance figure. The VOC per gallon of coating solids for each coating used is then determined with EPA Method 24 as specified in 10 CSR 10-6.030(22) using the one (1)-hour bake. The composite daily volume-weighted average of pounds of VOC per gallon of coating solids as tested for the actual coatings used is compared to the new compliance figure. Source operations on a coating line using coatings with a composite actual daily volume-weighted average value less than or equal to the new compliance figure are in compliance with this regulation.

(C) As an alternative to the methods specified in subsections (5)(A) and (B), compliance with the emission limits specified in subsections (3)(A) and (B) may be demonstrated by the implementation of an emission reduction equivalency compliance plan, which utilizes a daily weighted average of emissions from a single or combination of source operations provided that—

1. All source operations involved in the plan are subject to the emission limits of this regulation;

2. All source operations are part of the same installation;

3. The total actual VOC emissions for each twenty-four (24)-hour period do not exceed the sum of the allowable emissions determined from section (3) for each source operation for the same period;

4. Equivalent emission reductions are accomplished in the time intervals allowed in subsection (5)(B);

5. After December 24, 1987, testing of raw materials, emissions, equipment, or a combination of these, shall be performed prior to initiation of an alternate compliance plan to verify any equivalent emission reductions claimed. Director approval prior to review is necessary for all test methods and procedures to be acceptable for use in the equivalency determination. Failure to gain test method and procedure approval of the director will invalidate the equivalency claim; and

6. The overall plan is approved by the director.

AUTHORITY: section 643.050, RSMo 2016. Original rule filed Dec. 15, 1978, effective July 12, 1979. Amended: Filed Oct. 15, 1979, effective March 13, 1980. Amended: Filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed July 1, 1987, effective Dec. 24, 1987. Amended: Filed Aug. 4, 1988, effective Nov. 24, 1988. Amended: Filed June 27, 2018, effective March 30, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993, 1995, 2011.*

10 CSR 10-2.240 Restriction of Emissions of Volatile Organic Compounds From Petroleum Refinery Sources

(Rescinded November 23, 1987)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Dec. 15, 1978, effective June 11, 1979. Rescinded: Filed July 1, 1987, effective Nov. 23, 1987.

10 CSR 10-2.250 Control of Volatile Leaks From Petroleum Refinery Equipment

(Rescinded November 23, 1987)

AUTHORITY: section 203.050, RSMo 1978. Original rule filed Dec. 15, 1978, effective June 11, 1979. Rescinded: Filed July 1, 1987, effective Nov. 23, 1987.

10 CSR 10-2.260 Control of Emissions During Petroleum Liquid Storage, Loading, and Transfer

PURPOSE: This rule restricts volatile organic compound emissions from the handling of petroleum liquids in three (3) specific areas: petroleum storage tanks with a capacity greater than forty thousand (40,000) gallons, the loading of gasoline into delivery vessels, and the transfer of gasoline from delivery vessels into stationary storage containers. Exemptions are provided for facilities that make transfers into stationary storage containers of certain sizes and types. This rule is necessary to reduce hydrocarbon emissions in the Kansas City metropolitan area that contribute to the formation of ozone.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability. This rule applies throughout Clay, Jackson, and Platte Counties.

(2) Definitions.

(A) CARB—California Air Resources Board.

(B) Cargo tank—A delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.

(C) Condensate (hydrocarbons)—A hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

(D) Crude oil—A naturally occurring mixture consisting of hydrocarbons and sulfur, nitrogen, or oxygen derivatives of hydrocarbons (or a combination of these derivatives), which is a liquid at standard conditions.

(E) Custody transfer—The transfer of produced crude oil or condensate, or both, after processing or treating, or both, in the producing operations, from storage tanks or automatic transfer facilities to pipelines, or any other forms of transportation.

(F) Delivery vessel—A tank truck, trailer, or railroad tank car.

(G) Department—Missouri Department of Natural Resources.

(H) External floating roof—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 petroleum liquid being contained and is equipped with a closure seal(s) to close the space between the roof edge and tank wall.

(I) Gasoline—A petroleum liquid having a Reid vapor pressure four pounds (4 lbs) per square inch or greater.

(J) Gasoline dispensing facility (GDF)—Any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle and is not—

1. A gasoline distribution facility; or

2. A manufacturer of new motor vehicles performing initial fueling operations dispensing gasoline into newly assembled motor vehicles equipped with onboard refueling vapor recovery (ORVR) at an automobile assembly plant while the vehicle is still being assembled on the assembly line.

(K) Gasoline distribution facility—Any

facility that receives gasoline by pipeline, ship or barge, or cargo tank and subsequently loads the gasoline into gasoline delivery vessels for transport to gasoline dispensing facilities.

(L) Lower explosive limit (LEL)—The lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed in percent of the gas or vapor in air by volume.

(M) Monthly throughput—The total volume of gasoline that is loaded into all gasoline storage tanks during a month, as calculated on a rolling thirty (30)-day average.

(N) Onboard refueling vapor recovery (ORVR)—A system on motor vehicles designed to recover hydrocarbon vapors that escape during refueling.

(O) Petroleum liquid—Petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery with the exception of Numbers 2–6 fuel oils meeting ASTM D396-17 requirements as specified in 10 CSR 10-6.040(12), gas turbine fuel oils Number 2-GT–4-GT meeting ASTM D2880-15 requirements as specified in 10 CSR 10-6.040(20), and diesel fuel oils Number 2-D and 4-D meeting ASTM D975-17 requirements as specified in 10 CSR 10-6.040(14).

(P) Staff director—Director of the Air Pollution Control Program of the Department of Natural Resources, or a designated representative.

(Q) Stage I vapor recovery system—A system used to capture the gasoline vapors that would otherwise be emitted when gasoline is transferred from a loading installation to a delivery vessel or from a delivery vessel to a storage tank.

(R) Submerged fill pipe—Any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches (6") above the bottom of the tank. When applied to a tank that is loaded from the side, any fill pipe, the discharge opening of which is entirely submerged when the liquid level is eighteen inches (18") or twice the diameter of the fill pipe, whichever is greater, above the bottom of the tank.

(S) True vapor pressure—The equilibrium partial pressure exerted by a petroleum liquid as determined in American Petroleum Institute, Manual of Petroleum Measurement Standards, Chapter 19.2, Evaporative Loss From Floating-Roof Tanks, 2012, as published by the American Petroleum Institute. Copies can be obtained from the API Publishing Services, 1220 L Street, Washington, DC 20005. This rule does not incorporate any subsequent amendments or additions.

(T) Ullage—Volume of a container not occupied by liquid.

(U) Vapor recovery system—A vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing the hydrocarbon vapors and gases so as to limit their emission to the atmosphere.

(V) Waxy, heavy pour crude oil—A crude oil with a pour point of fifty degrees Fahrenheit (50 °F) or higher compliant with ASTM D97-12 requirements as specified in 10 CSR 10-6.040(10).

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

(3) General Provisions.

(A) Petroleum Storage Tanks.

1. No owner or operator of petroleum storage tanks shall cause or permit the storage in any stationary storage tank of more than forty thousand (40,000) gallons capacity of any petroleum liquid having a true vapor pressure of one and one-half (1.5) pounds per square inch absolute (psia) or greater at ninety degrees Fahrenheit (90 °F), unless the storage tank is a pressure tank capable of maintaining working pressures sufficient at all times to prevent volatile organic compound (VOC) vapor or gas loss to the atmosphere or is equipped with one (1) of the following vapor loss control devices:

A. A floating roof, consisting of a pontoon type, double-deck type or internal floating cover, or external floating cover, that rests on the surface of the liquid contents and is equipped with a closure seal(s) to close the space between the roof edge and tank wall. Storage tanks with external floating roofs shall meet the additional following requirements:

(I) The storage tank shall be fitted with either—

(a) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or

(b) A closure or other device approved by the staff director that controls VOC emissions with an effectiveness equal to or greater than a seal required under subpart (3)(A)1.A.(I)(a) of this rule;

(II) All seal closure devices shall meet the following requirements:

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

(b) The seal(s) is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and

(c) For vapor-mounted primary seals, the accumulated area of gaps exceeding 0.32 centimeters, one-eighth inch (1/8") width, between the secondary seal and the tank wall shall not exceed 21.2 cm^2 per meter of tank diameter (1.0 in^2 per foot of tank diameter);

(III) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with—

(a) Covers, seals, or lids in the closed position except when the openings are in actual use; and

(b) Projections into the tank which remain below the liquid surface at all times;

(IV) Automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports;

(V) Rim vents shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and

(VI) Emergency roof drains shall have slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening;

B. A vapor recovery system with all storage tank gauging and sampling devices gas-tight, except when gauging or sampling is taking place. The vapor disposal portion of the vapor recovery system shall consist of an adsorber system, condensation system, incinerator or equivalent vapor disposal system that processes the vapor and gases from the equipment being controlled; or

C. Other equipment or means of equal efficiency for purposes of air pollution control as approved by the staff director.

2. Control equipment described in subparagraph (3)(A)1.A. of this rule shall not be allowed if the petroleum liquid other than gasoline has a true vapor pressure of 11.1 psia or greater at ninety degrees Fahrenheit (90 °F). All storage tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

3. Owners and operators of petroleum storage tanks subject to this subsection shall maintain written records of maintenance (both routine and unscheduled) performed on the tanks, all repairs made, the results of all tests performed, and the type and quantity of petroleum liquid stored in them.

4. This subsection does not apply to petroleum storage tanks which—

A. Are used to store processed and/or treated petroleum or condensate when it is stored, processed, and/or treated at a drilling and production installation prior to custody transfer;

B. Contain a petroleum liquid with a true vapor pressure less than 27.6 kilopascals (kPa) (4.0 psia) at ninety degrees Fahrenheit (90 °F);

C. Are of welded construction, and equipped with a metallic-type shoe primary

seal and have a shoe-mounted secondary seal or closure devices of demonstrated equivalence approved by the staff director; or

D. Are used to store waxy, heavy pour crude oil.

(B) Gasoline Loading.

1. No owner or operator of a gasoline distribution facility or delivery vessel shall cause or permit the loading of gasoline into any delivery vessel from a distribution facility unless the distribution facility is equipped with a vapor recovery system or equivalent. The delivery vessel must be in compliance with subsection (3)(D) of this rule.

2. Loading shall be accomplished in a manner that the displaced vapors and air will be vented only to the vapor recovery system. Measures shall be taken 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. The vapor disposal portion of the vapor recovery system shall consist of one (1) of the following:

A. An adsorber system, condensation system, incinerator, or equivalent vapor disposal system that processes the vapors and gases from the equipment being controlled and limits the discharge of VOC into the atmosphere to ten (10) milligrams of VOC vapor per liter of gasoline loaded;

B. A vapor handling system that directs the vapor to a fuel gas system; or

C. Other equipment of an efficiency equal to or greater than subparagraph (3)(B)2.A. or B. of this rule if approved by the staff director.

3. Owners and operators of distribution facilities subject to this subsection shall maintain complete records documenting the number of delivery vessels loaded and their owners.

4. This subsection does not apply to distribution facilities whose average monthly throughput of gasoline is less than or equal to one hundred twenty thousand (120,000) gallons when averaged over the most recent calendar year, provided that the installation loads gasoline by submerged loading.

A. Upon request of the director, these installations shall submit to the staff director, a report stating gasoline throughput for each month of the previous calendar year.

B. Delivery vessels purchased after April 30, 2004 shall be Stage I equipped.

C. Delivery vessels operated by an exempt installation shall not deliver to Stage I controlled tanks unless the delivery vessel is equipped with and employs Stage I controls.

(C) Gasoline Transfer at GDFs.

1. No owner or operator of a gasoline storage tank or delivery vessel shall cause or permit the transfer of gasoline from a delivery vessel into a gasoline storage tank with a capacity greater than five hundred fifty (550) gallons unless—

A. The storage tank is equipped with a submerged fill pipe extending unrestricted to within six inches (6") of the bottom of the tank, and not touching the bottom of the tank, or the storage tank is equipped with a system that allows a bottom fill condition;

B. All storage tank caps and fittings are vapor-tight when gasoline transfer is not taking place; and

C. Each storage tank is vented via a conduit that is—

(I) At least two inches (2") inside diameter;

(II) At least twelve feet (12') in height above grade; and

(III) Equipped with a pressure/vacuum valve that is CARB certified or equivalent as approved by the staff director. The pressure specifications for the pressure/vacuum valves shall be a positive pressure setting of two and one-half to six inches (2.5–6") of water and a negative pressure setting of six to ten inches (6.0–10.0") of water.

2. Stationary storage tanks with a capacity greater than two thousand (2,000) gallons shall also be equipped with a Stage I vapor recovery system in addition to the requirements of paragraph (3)(C)1. of this rule and the delivery vessels to these tanks shall be in compliance with subsection (3)(D) of this rule.

A. The vapor recovery system shall collect no less than ninety percent (90%) by volume of the vapors displaced from the stationary storage tank during gasoline transfer and shall return the vapors via a vapor-tight return line to the delivery vessel. After the effective date of this rule, all coaxial systems shall be equipped with poppeted fittings.

B. At the time of installation and every six (6) years thereafter, each Stage I vapor recovery system shall be tested according to subsection (5)(E) of this rule. The department must be notified at least seven (7) days prior to the test date to allow an observer to be present. It is not required for the department to be present to observe the test. The test results must be submitted to the staff director within fourteen (14) days of test completion. Each system has to be capable of meeting the static pressure performance requirement of the following equation:

$$P_f = 2e^{-760.490/v}$$

Where:

P_f = Minimum allowable final pressure, inches of water.

v = Total ullage affected by the test, gallons.

e = Dimensionless constant equal to approximately 2.718.

2 = The initial pressure, inches water.

C. Pressure/vacuum valves shall be tested according to subsection (5)(D) of this rule at the time of installation and every three (3) years thereafter. The department must be notified at least seven (7) days prior to the test date to allow an observer the opportunity to be present. It is not required for the department to be present to observe the test. The test results must be submitted to the staff director within fourteen (14) days of test completion. The pressure specifications for pressure vacuum valves must be a positive pressure setting of two and one-half to six inches (2.5–6") of water and a negative pressure setting of six to ten inches (6–10") of water. The leak rate of each pressure/vacuum valve shall not exceed four tenths (0.40) cubic foot per hour at a pressure of two inches (2.0") of water and four tenths (0.40) cubic foot per hour at a vacuum of four inches (4.0") of water.

D. A delivery vessel shall be refilled only at installations complying with the provisions of subsection (3)(B) of this rule.

E. This subsection shall not be construed to prohibit safety valves or other devices required by governmental regulations.

3. No owner or operator of a gasoline delivery vessel shall cause or permit the transfer of gasoline from a delivery vessel into a storage tank with a capacity greater than two thousand (2,000) gallons unless—

A. The owner or operator employs one (1) vapor line per product line during the transfer. The staff director may approve other delivery systems upon submittal to the department of test data demonstrating compliance with subparagraph (3)(C)2.A. of this rule;

B. Each vapor hose is no less than three inches (3") inside diameter;

C. Each product hose is less than or equal to four inches (4") inside diameter; and

D. Any component of the vapor recovery system that is not preventing vapor emissions as designed is repaired.

4. The owner or operator of a vapor recovery system subject to subsection (3)(C) of this rule shall maintain records of inspection reports, enforcement documents, gasoline deliveries, routine and unscheduled maintenance, repairs, and all results of tests conducted. Unless otherwise specified in this rule, records have to be kept for two (2) years and made available to the staff director within five (5) business days of a request.

5. The provisions of paragraph (3)(C)2. of this rule do not apply to transfers made to storage tanks equipped with floating roofs or their equivalent.

6. The provisions of paragraphs (3)(C) 1.–4. of this rule do not apply to stationary storage tanks having a capacity less than or

equal to two thousand (2,000) gallons used exclusively for the fueling of implements of agriculture or were installed prior to June 12, 1986.

(D) Gasoline Delivery Vessels.

1. No owner or operator of a gasoline delivery vessel shall operate or use a gasoline delivery vessel which is loaded or unloaded at an installation subject to subsections (3)(B) or (C) of this rule unless—

A. Cargo tank tightness test is conducted annually;

B. The owner or operator obtains the completed test results signed by a representative of the testing facility upon successful completion of the leak test;

C. The delivery vessel is repaired by the owner or operator and retested within fifteen (15) days of testing if it does not pass the cargo tank tightness test; and

D. A copy of the vessel's current cargo tank tightness test results are kept with the delivery vessel at all times and made immediately available to the staff director upon request.

2. This subsection shall not be construed to prohibit safety valves or other devices required by governmental regulations.

(E) Owner/Operator Compliance. The owner or operator of a vapor recovery system subject to this rule shall—

1. Operate the vapor recovery system and the gasoline loading equipment in a manner that prevents—

A. Gauge pressure from exceeding four thousand five hundred (4,500) pascals (eighteen inches (18") of water) in the delivery vessel;

B. A reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at two and one-half (2.5) centimeters from all points on the perimeter of a potential leak source when measured by Method 21—Determination of Volatile Organic Compound Leaks as specified in 10 CSR 10-6.030(22) during loading or transfer operations; and

C. Visible liquid leaks during loading or transfer operation;

2. Repair and retest within fifteen (15) days, a vapor recovery system that exceeds the limits in subsection (3)(E) of this rule; and

3. The owner or operator of a vapor recovery system subject to subsection (3)(E) of this rule shall maintain records of inspection reports, enforcement documents, gasoline deliveries, routine and unscheduled maintenance, repairs, and all results of tests conducted. Unless otherwise specified in this rule, records shall be kept for two (2) years and made available to the staff director within five (5) business days of a request.

(4) Reporting and Record Keeping. The reporting and record keeping requirements are located in paragraphs (3)(A)3., (3)(B)3., (3)(C)4., and (3)(E)3. of this rule. In addition, all records shall be maintained for a minimum of two (2) years, and shall be made immediately available to inspectors upon request.

(5) Test Methods.

(A) Testing procedures to determine compliance with subparagraph (3)(D)1.A. shall be performed according to 40 CFR 63.425(e), Subpart R. 40 CFR 63.425(e), Subpart R, promulgated as of June 30, 2018 is 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.

(B) Testing procedures to determine compliance with subparagraph (3)(B)2.A. of this rule shall be conducted using Method 25—Determination of Total Gaseous Nonmethane Organic Emissions as Carbon as specified in 10 CSR 10-6.030(22) or by any method determined by the staff director.

(C) The staff director, at any time, may monitor a delivery vessel, vapor recovery system or gasoline loading equipment by a method determined by the staff director to confirm continuing compliance with this rule.

(D) Testing procedures to determine compliance with subparagraph (3)(C)2.C. of this rule shall be conducted using California Air Resources Board Vapor Recovery Test Procedure TP-201.1E—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003, or by any method determined by the staff director. Test Procedure TP-201.1E is hereby incorporated by reference in this rule, as published by the California Air Resources Board. Copies can be obtained from the California Air Resources Board, PO Box 2815, Sacramento, CA 95812. This rule does not incorporate any subsequent amendments or additions.

(E) Testing procedures to determine compliance with subparagraph (3)(C)2.B. of this rule shall be conducted using California Air Resources Board Vapor Recovery Test Procedure TP-201.3—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999, or by any method determined by the staff director. Test Procedure TP-201.3 is hereby incorporated by reference in this rule, as published by the California Air Resources Board. Copies can be obtained from the California Air Resources Board, PO Box 2815, Sacramento, CA 95812. This rule does not incorporate any subsequent amendments or additions.

AUTHORITY: section 643.050, RSMo 2016. Original rule filed Jan. 15, 1979, effective June 11, 1979. Amended: Filed Oct. 15, 1979, effective March 13, 1980. Amended: Filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Nov. 2, 1984, effective May 11, 1985. Amended: Filed Feb. 4, 1986, effective May 29, 1986. Amended: Filed Sept. 1, 1987, effective Dec. 24, 1987. Amended: Filed Nov. 27, 1989, effective May 24, 1990. Amended: Filed May 15, 1995, effective Dec. 30, 1995. Amended: Filed Dec. 1, 2000, effective July 30, 2001. Amended: Filed April 1, 2002, effective Nov. 30, 2002. Amended: Filed Aug. 15, 2003, effective April 30, 2004. Amended: Filed May 9, 2018, effective Feb. 28, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, 1992, 1993, 1995.*

10 CSR 10-2.270 Restriction of Emissions From Catalytic Cracking Units

(Rescinded November 23, 1987)

AUTHORITY: section 643.050, RSMo 1986. Original rule filed July 16, 1979, effective Feb. 11, 1980. Rescinded: Filed Aug. 4, 1987, effective Nov. 23, 1987.

10 CSR 10-2.280 Control of Emissions From Perchloroethylene Dry Cleaning Installations

(Rescinded January 30, 2003)

AUTHORITY: Chapter 203, RSMo 1986. Original rule filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed Nov. 10, 1981, effective May 13, 1982. Rescinded: Filed May 21, 2002, effective Jan. 30, 2003.

10 CSR 10-2.290 Control of Emissions From Rotogravure and Flexographic Printing Facilities

PURPOSE: This regulation restricts volatile organic compound emissions from rotogravure and flexographic printing facilities.

(1) Application.

(A) This regulation shall apply throughout Clay, Jackson and Platte Counties.

(B) This regulation applies to installations with uncontrolled potential emissions equal to or greater than two hundred fifty kilograms (250 kg) per day or one hundred (100) tons per year of volatile organic compounds (VOC) from the combination of rotogravure

and flexographic printing presses. The uncontrolled potential emissions are the potential emissions (as defined) plus the amount by weight of VOCs whose emission into the atmosphere is prevented by the use of air pollution control devices.

(2) Definitions.

(A) Definitions of certain terms specified in this regulation may be found in 10 CSR 10-6.020.

(B) The definition of a term specific to this regulation is as follows: ink formulation, as applied, includes the base ink and any additives, such as thinning solvents, to make up the ink material that is applied to a substrate.

(3) Emission Limits.

(A) No owner or operator shall use or permit the use of any of the following printing presses unless they are equipped with a control device. The control device shall remove, destroy or prevent the emission of VOCs into the ambient air by at least the percentage indicated by weight of the uncontrolled VOC emissions on a daily basis.

Printing

Press	**Percentage**
Flexographic	60
Publication Rotogravure	75
Other Rotogravure	65

(B) Low solvent technology may be used to achieve VOC emission reductions instead of the methods required in subsection (3)(A). If low solvent technology is used, the following limits must be met for each press:

1. For waterborne inks, the volatile portion of the ink as applied to the substrate must contain no more than twenty-five percent (25%) by volume of VOC; and

2. For water-based or high solids inks, the ink as applied to the substrate must be at least sixty percent (60%) by volume non-VOC material.

(C) No owner or operator shall use or permit the use of any flexographic or rotogravure printing press that uses cleanup solvents containing VOCs unless—

1. The cleanup solvents are kept in tightly covered tanks or containers during transport and storage;

2. The cleaning cloths used with the cleanup solvents are placed in tightly closed containers when not in use and while awaiting off-site transportation. The cleaning cloths should be properly cleaned and disposed of. The cloths, when properly cleaned or disposed of, are processed in a way that as much of the solvent as practicable is removed for some further use or destroyed. Cleaning and disposal methods shall be approved by the director; and

3. An owner or operator may use an alternate method for reducing cleanup solvent VOC emissions, including the use of low VOC cleanup solvents, if the owner or operator shows the emission reduction is equal to or greater than paragraphs (3)(C)1. and 2. This alternate method must be approved by the director.

(4) Record Keeping.

(A) For owners or operators using an add-on control device(s) to meet the requirements of subsection (3)(A), the following parameters shall be monitored and recorded to determine compliance with subsection (3)(A):

1. Exhaust gas temperature of all incinerators or temperature rise across a catalytic incinerator bed on a continuous basis;

2. VOC breakthrough on a carbon adsorption unit on a continuous basis;

3. Results of emissions testing as required in section (5) of this regulation when performed;

4. Maintenance, repairs and malfunction of any air pollution control equipment when performed; and

5. Any other monitoring parameter required by the director to determine compliance with subsection (3)(A).

(B) For owners or operators meeting the requirements of subsection (3)(B) for each ink formulation used, the following shall be recorded for each press to determine continuous compliance with subsection (3)(D):

1. Volume-weighted ink VOC content in percent by volume for each ink formulation as applied on a monthly basis;

2. Results of ink testing as required in section (5) of this rule when performed; and

3. Any other information required by the director to determine compliance with subsection (3)(B).

(C) For owners and operators using low solvent technology without the use of control equipment to meet the requirements of subsection (3)(B), and for who subsection (4)(B) does not apply, the following shall be recorded to determine daily compliance with subsection (3)(B):

1. Volume-weighted ink VOC content in percent by volume for each ink formulation as applied on a monthly basis;

2. Ink usage in gallons for each ink formulation as applied on a daily basis for each press;

3. Volume-weighted density of VOCs in ink in pounds per gallon for each ink formulation as applied on a daily basis;

4. Volume-weighted average of the VOC content of each ink formulation as applied in percent by volume for each press on a daily basis;

5. Ink water content in percent by volume for each ink formulation as applied on a daily basis for each press;

6. Ink exempt solvent content in percent by volume for each ink formulation as applied on a daily basis for each press;

7. Results of ink testing as required in section (5) of this regulation when performed; and

8. Any other information required by the director to determine compliance with subsection (3)(B).

(D) Records of all information required in subsections (4)(A)–(C) shall be kept for at least two (2) years. These records shall be available immediately upon request for review by Department of Natural Resources personnel and other air pollution control agencies with proper authority.

(5) Determination of Compliance.

(A) Testing and compliance demonstrations for the emission limits of subsection (3)(A) shall follow the procedures contained in 10 CSR 10-6.030(14)(A) and 10 CSR 10-6.030(20). The averaging time for these tests shall be three (3) one (1)-hour tests. These procedures will determine control device capture efficiency and destruction efficiency. Control device testing will be required as the director determines necessary to verify the capture and destruction efficiencies. At a minimum, control device testing must be completed and submitted once to the appropriate air pollution control agency within one hundred eighty (180) days (August 4, 1992) after this provision of the regulation is effective (February 6, 1992), unless the director determines that a valid test is already on file. Inlet and outlet gas temperature rise across a catalytic incinerator shall be used to determine daily compliance. These temperatures shall be monitored with an accuracy of the greater of plus or minus three-fourths percent ($\pm$ 0.75%) of the temperature being measured expressed in degrees Celsius or two and one-half degrees Celsius (2.5 °C).

(B) Testing and compliance demonstrations for the emission limits of subsection (3)(B) shall follow the procedures contained in 10 CSR 10-6.030(14)(C). This procedure will determine the VOC content of inks. Ink testing will be required as the director determines necessary to verify the manufacturer's formula specifications. At a minimum, ink testing will be required once after this provision of the regulation is effective (February 6, 1992). Ink manufacturer's formula specifications shall be used to determine daily compliance.

(6) Compliance Dates.

(A) The owner or operator of a rotogravure or flexographic printing installation subject to this regulation must submit a final control

plan to the director by December 31, 1980 for his/her approval. This plan must include the following:

1. A detailed plan of process modifications; and

2. A time schedule for compliance containing increments of progress and a final compliance date.

(B) Compliance with this regulation shall be accomplished by any installation as expeditiously as practicable, but in no case shall final compliance extend beyond December 31, 1982.

AUTHORITY: section 643.050, RSMo 1986. Original rule filed March 13, 1980, effective Sept. 12, 1980. Amended: Filed July 1, 1987, effective Dec. 24, 1987. Amended: Filed July 15, 1991, effective Feb. 6, 1992.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 643.050, RSMo 1992, 1993.*

10 CSR 10-2.300 Control of Emissions From the Manufacturing of Paints, Varnishes, Lacquers, Enamels and Other Allied Surface Coating Products

PURPOSE: This rule specifies operating equipment requirements and operating procedures for the reduction of volatile organic compounds from the manufacture of paints, varnishes, lacquers, enamels, and other allied surface coating products in Clay, Jackson, and Platte Counties.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(A) This rule applies throughout Clay, Jackson, and Platte Counties.

(B) This rule applies to those facilities which have the uncontrolled potential to emit more than two hundred fifty kilograms per day (250 kg/day) or one hundred (100) tons per year of volatile organic compounds (VOCs) from the manufacture 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) Facility—All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

(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.

(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.

(3) General Provisions.

(A) Operating Equipment and Operating Procedure Requirements.

1. Tanks storing VOC with a vapor pressure greater than or equal to ten kilo pascals (10 kPa) (1.5 psi) at twenty degrees Celsius (20 ^{o}C), shall be equipped with pressure/vacuum conservation vents set at 0.2 kPa (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 VOC 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%) 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 manufacturer's specifications. The manufacturer's specifications shall be kept on file and made available to the director upon his/her 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, the temperature of the exit stream shall not exceed the temperature at which the vapor pressure is 3.5 kPa (0.5 psi) for any organic compound in the exit stream.

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. Equivalent controls may not be used until proof of equivalency has been submitted to the

department and approved by the director.

(B) Compliance Determination.

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

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

A. Exit stream temperature on all condensers;

B. Routine and unscheduled maintenance and repair activities on all air pollution control equipment; and

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

(4) Reporting and Record Keeping.

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

(B) The owner or operator shall maintain all recorded information required under section (4) of this rule. All records shall be kept for at least two (2) years and made available to the director upon request.

(5) Test Methods. 40 CFR 60, Appendix A-7, Method 25 as specified in 10 CSR 10-6.030(22).

AUTHORITY: section 643.050, RSMo 2016. Original rule filed April 2, 1986, effective Sept. 26, 1986. Amended: Filed April 2, 1987, effective Aug. 27, 1987. Amended: Filed Aug. 4, 1987, effective Dec. 12, 1987. Amended: Filed May 9, 2018, effective Feb. 28, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993, 1995, 2011.*

10 CSR 10-2.310 Control of Emissions From the Application of Automotive Underbody Deadeners

(Rescinded September 30, 2018)

AUTHORITY: section 643.050, RSMo 1986. Original rule filed July 1, 1987, effective Nov. 23, 1987. Rescinded: Filed Jan. 4, 2018, effective Sept. 30, 2018.

10 CSR 10-2.320 Control of Emissions From Production of Pesticides and Herbicides

PURPOSE: This regulation restricts emissions of volatile organic compounds from the production of pesticides and herbicides.

(1) Applicability.

(A) This regulation applies throughout Clay, Jackson, and Platte Counties.

(B) This regulation applies to any pesticide or herbicide manufacturing installation with an uncontrolled potential to emit equal to or greater than two hundred fifty kilograms per day (250 kg/day) or one hundred (100) tons per year of volatile organic compounds (VOC). This regulation also applies to any installation which does not have an allowable VOC emission limit established under 10 CSR 10-6.060 or legally enforceable state implementation plan revision and which has uncontrolled potential emissions greater than or equal to two hundred fifty kilograms per day (250 kg/day) or one hundred (100) tons per year of VOC. The uncontrolled potential to emit is the potential emissions (as defined) plus the emissions removed by control devices.

(C) This regulation does not apply to source operations used exclusively for chemical or physical analysis of determinations of product quality and commercial acceptance (such as pilot plant operations and laboratories) unless the operation is an integral part of the production process.

(2) Definitions of certain terms specified in this regulation may be found in 10 CSR 10-6.020.

(3) General Provisions. All source operations in installations affected by this regulation that are venting emissions to VOC emission control devices as of November 23, 1987 shall be required to continue venting emissions to these control devices and these emissions shall be controlled to the extent required in this section. Any pesticide or herbicide manufacturing installation VOC emissions control devices subject to this regulation must achieve an instantaneous VOC destruction or removal efficiency greater than or equal to ninety-nine percent (99%).

(4) Reporting and Recordkeeping.

(A) Owners or operators utilizing thermal oxidizers as control technology must maintain adequate records of the combustion chamber temperature and residence time to determine the VOC control compliance. Also, the owners or operators must maintain records of routine or unscheduled maintenance and repairs of the thermal oxidizers. The director may require any other records of operating parameters as may be necessary to determine compliance.

(B) Owners or operators using other control technology shall maintain records of all operating parameters and routine or unscheduled maintenance and repairs of air pollution control equipment as may be required by the director to determine compliance.

(C) Records of all information required in subsections (4)(A) and (B) shall be kept for a period of not less than two (2) years and all these records shall be made available to the director upon his/her request.

(5) Test Methods.

(A) VOC compliance is to be determined by test method 25 as specified in 10 CSR 10-6.030(22).

(B) For thermal oxidizers, compliance is to be determined by the combustion chamber temperature and residence time after adequate test results, as determined by the director, are provided by the owners or operators. These test results are subject to periodic confirmation at the discretion of the director. Combustion chamber gas temperature is to be monitored with an accuracy of the greater of $\pm$ 0.75% of the temperature being measured expressed in degrees Celsius or 2.5 degrees Celsius.

AUTHORITY: section 643.050, RSMo 2016. Original rule filed July 1, 1987, effective Nov. 23, 1987. Amended: Filed April 13, 2018, effective Jan. 30, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993, 1995, 2011.*

10 CSR 10-2.330 Control of Gasoline Reid Vapor Pressure

(Rescinded September 30, 2020)

*AUTHORITY: section 643.050, RSMo Supp. 2012. Original rule filed Jan. 3, 1991, effective Aug. 30, 1991. Rescinded: Filed March 15, 1995, effective Nov. 30, 1995. Readopted: Filed March 17, 1997, effective Oct. 30, 1997. Amended: Filed Sept. 26, 2000, effective May 30, 2001. Amended: Filed Oct. 25, 2012, effective July 30, 2013. ** Rescinded: Filed Jan. 14, 2020, effective Sept. 30, 2020.*

***Pursuant to Executive Orders 20-04 and 20-10, 10 CSR 10-2.330 was suspended from May 6, 2020 through September 30, 2020.*

10 CSR 10-2.340 Control of Emissions From Lithographic and Letterpress Printing Operations

PURPOSE: This regulation restricts volatile organic compound emissions from lithographic and letterpress printing operations.

(1) Applicability.

(A) This regulation applies throughout Clay, Jackson, and Platte Counties.

(B) This regulation shall apply to installations that have calculated actual volatile organic compound (VOC) emissions for a known number of crewed hours, increased by the amount by weight of VOCs whose emission into the atmosphere is prevented by the use of air pollution control devices and extrapolated to eight thousand seven hundred sixty (8,760) hours per year equal to or greater than one hundred (100) tons per year from offset lithographic and letterpress printing presses after December 9, 1991. The following factors shall be taken into consideration unless an alternative method is approved by the director:

1. Assume fifty percent (50%) of the solvent used for cleanup is retained in the rag(s) when the used solvent-laden rag(s) are cleaned or disposed of. The installation must demonstrate to the director that the solvents are not evaporated into the air when the waste rags are properly cleaned and disposed of;

2. Assume forty percent (40%) of the heatset ink oils stay in the paper web;

3. Assume no VOCs are emitted from the inks used in sheet-fed presses and nonheatset web presses; and

4. Assume that fifty percent (50%) of the alcohol from the fountain solution is emitted from the dryer.

(C) This regulation does not apply to—

1. Printing on fabric, metal, or plastic;

2. Sheet-fed lithographic and letterpress presses with cylinder widths of twenty-six inches (26") or less; or

3. Web lithographic and letterpress presses with cylinder widths of eighteen inches (18") or less.

(2) Definitions.

(A) Alcohol—Refers to isopropanol, isopropyl alcohol, normal propyl alcohol, or ethanol.

(B) Coating—A protective, decorative, or functional material applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks, and temporary protective coatings.

(C) Fountain solution—The solution which is applied to the image plate to maintain the hydrophilic properties of the nonimage areas. It is primarily water containing an etchant, gum arabic, and a dampening aid (commonly containing alcohol and alcohol substitutes).

(D) Heatset—A class of web-offset lithographic and letterpress printing in which the setting of the printing inks requires a heated dryer to evaporate the ink oils. The setting or curing of inks using only radiation (e.g., infrared, ultraviolet light, or electron beam) is not heatset and is classified as nonheatset.

(E) Letterpress printing—A printing process in which the image area is raised relative to the nonimage area, and the ink is transferred to the substrate directly from the image surface.

(F) Lithographic printing—A planographic printing process where the image and nonimage areas are chemically differentiated; the image area is oil receptive and the nonimage area is water receptive. This method differs from other printing methods, where the image is typically printed from a raised or recessed surface. Offset lithographic printing is the only common type of lithographic printing used for commercial printing.

(G) Offset lithographic printing—A printing process that transfers the ink film from the lithographic plate to an intermediary surface (rubber-covered blanket cylinder), which, in turn, transfers the ink film to the substrate.

(H) Sheet-fed—A printing press where individual sheets of substrate are fed into the press sequentially.

(I) Web—A printing process where a continuous roll of substrate is fed into the press.

(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.

(A) No owner or operator shall use or permit the use of any offset lithographic and letterpress printing press unless—

1. The fountain solution contains ten percent (10%) or less by weight of alcohol;

2. The fountain solution is refrigerated to a temperature of fifty-five degrees Fahrenheit (55°F) or less for alcohol-based solutions;

3. The fountain solution temperature at the mixing tank for alcohol-based solutions is monitored during each shift; and

4. The fountain solution mixing tanks are covered for alcohol-based solutions.

(B) No owner or operator shall use or permit the use of any offset lithographic and letterpress printing press that uses cleanup solvents containing VOCs unless—

1. The cleanup solvents are kept in tightly covered tanks or containers during transport and storage;

2. The cleaning cloths used with the cleanup solvents are placed in tightly closed containers when not in use and while awaiting off-site transportation. The cleaning cloths should be properly cleaned and disposed of. The cloths, when properly cleaned or disposed of, are processed in a way that as much of the solvent, as practicable, is recovered for further use or destroyed. Cleaning and disposal methods shall be approved by the director; and

3. An owner or operator may use an alternate method for reducing cleanup solvent VOC emissions, including the use of low VOC cleanup solvents, if the owner or operator shows the emission reduction is equal to or greater than those in paragraphs (3)(B)1. and 2. This alternate method is approved by the director.

(C) No owner or operator shall use or permit the use of any heatset web-offset lithographic and letterpress printing press that uses a dryer that has ever had an actual emission rate of ten (10) tons per year or more VOCs after December 9, 1991, unless one hundred percent (100%) of the dryer exhaust is ducted to a control device that achieves eighty-five percent (85%) by weight or greater control efficiency.

(D) Use of emission control equipment requires that continuous monitors be installed, calibrated, operated, and maintained. The monitors continuously shall measure—

1. The exhaust gas temperature of all VOC destruction devices and the gas temperature immediately upstream and downstream of any catalytic bed with an accuracy of plus or minus 0.75% measured in degrees Celsius, or 2.5 degrees Celsius;

2. The cumulative amount of VOC recovered during a calendar month for all VOC recovery equipment attached to a dryer with an accuracy of plus or minus two percent (±2%); and

3. Any other parameters considered necessary by the director to verify proper operation of emission control equipment.

(4) Reporting and Record Keeping.

(A) All persons subject to this regulation shall maintain records that are—

1. Sufficient to determine continuous compliance with this regulation;

2. Retained for at least two (2) years; and

3. Made available immediately upon request for review by Department of Natural Resources personnel and other air pollution control agencies with proper authority.

(B) All persons subject to subsection (3)(C) shall maintain records for each control device sufficient to demonstrate that the control efficiency is being maintained.

(C) For each regulated printing press, records shall be maintained to show—

1. Quantity of alcohol added to the fountain solution of each regulated press in pounds each month;

2. Percent of alcohol in fountain solution by weight as monitored on a once per shift basis;

3. Results of any testing conducted on an

emission unit at a regulated installation;

4. Maintenance records of any air pollution control equipment; and

5. The temperature of alcohol-based fountain solution as recorded on a once per shift basis.

(D) For each lithographic installation subject to this regulation, records shall be maintained to show—

1. Properties of heatset inks as applied (determined by the manufacturer's formulation data), density of inks in pounds per gallon, and total VOC content in weight percent;

2. Quantity of heatset inks as applied to substrate in pounds on a monthly basis;

3. Quantity of cleanup solvents used on a monthly basis; and

4. Quantity of coatings used on a monthly basis and percent VOC in coating by weight on a formulation basis.

(E) The director may require other records as reasonable and necessary to carry out the provisions of the Missouri Air Conservation Law.

(F) All persons subject to the provisions of this regulation shall provide to the director for approval a demonstration of final compliance with subsection (3)(A)—

1. Upon startup of presses which are not in existence and operating on December 9, 1991;

2. Within eighteen (18) months (June 9, 1993) after the effective date of this regulation (December 9, 1991) for all presses with a cylinder width of less than sixty inches (60") and all web presses with a cylinder width of sixty inches (60") or greater that are in existence and operating on December 9, 1991; and

3. Within thirty-six (36) months (December 9, 1994) after the effective date of this regulation (December 9, 1991) for all sheet-fed presses with a cylinder width of sixty inches (60") or greater that are in existence and operating on December 9, 1991.

(G) All persons subject to the provisions of this regulation shall provide to the director for approval a demonstration of final compliance with subsections (3)(B) and (C) of this rule—

1. Upon startup of presses which are not in existence and operating on December 9, 1991; and

2. Within eighteen (18) months (June 9, 1993) after the effective date of this regulation for all presses that are in existence and operating December 9, 1991.

(H) All persons subject to the provisions of this regulation and not in compliance with all provisions of this regulation within twelve (12) months (December 9, 1992) from the effective date of this regulation (December 9, 1991) must submit a compliance plan to the director for approval. This plan must be received within six (6) months (June 9, 1992) after the effective date of this regulation (December 9, 1991). This plan must include the following:

1. A detailed plan of process modifications; and

2. A time schedule for compliance containing increments of progress, including:

A. Date of submittal of the source's final control plan to the appropriate air pollution control agency;

B. Date by which contracts for emission control systems or process modifications will be awarded; or date by which orders will be issued for the purchase of component parts to accomplish emission control or process modification;

C. Date of initiation of on-site construction or installation of emission control equipment or process change;

D. Date by which on-site construction or installation of emission control equipment or process modification is to be completed; and

E. Date by which final compliance is to be achieved.

(5) Test Methods.

(A) Testing and compliance demonstrations for subsection (3)(C) of this rule shall follow the procedures contained in 40 CFR Part 60, Appendix A, Methods 25 or 25A as specified in 10 CSR 10-6.030(22).

(B) Testing and compliance demonstrations for paragraph (3)(A)1. of this rule shall be based on the results from a calibrated hydrometer or refractometer.

AUTHORITY: section 643.050, RSMo 2016. Original rule filed June 4, 1991, effective Dec. 9, 1991. Amended: Filed Jan. 13, 2003, effective Aug. 30, 2003. Amended: Filed April 13, 2018, effective Jan. 30, 2019.*

**Original authority: 643.050, RSMo 1965, amended 1972, transferred from 203.050 in 1986, 1992, 1993, 1995, 2011.*

10 CSR 10-2.360 Control of Emissions From Bakery Ovens

(Rescinded September 30, 2018)

AUTHORITY: section 643.050, RSMo 1994. Original rule filed May 15, 1995, effective Dec. 30, 1995. Rescinded: Filed Jan. 4, 2018, effective Sept. 30, 2018.

10 CSR 10-2.385 Control of Heavy-Duty Diesel Vehicle Idling Emissions

PURPOSE: The purpose of this rule is to implement restrictions on the idling of heavy-duty diesel vehicles in the Kansas City Ozone Maintenance Area. The evidence supporting the need for this rule, per section 536.016, RSMo, is the federally approved 2007 Kansas City Maintenance Plan for the Control of Ozone.

(1) Applicability.

(A) This regulation applies throughout Clay, Platte, and Jackson Counties.

(B) This regulation applies to owners or operators of commercial, public, and institutional heavy-duty diesel vehicles that are designed to operate on public streets and highways, whether or not the vehicles are operated on public roadways.

(C) This regulation applies to owners and operators of load/unload locations where commercial, public, and institutional heavy-duty diesel vehicles load or unload passengers.

(D) Passenger vehicles as defined in subsection (2)(H) of this rule are exempt from this rule.

(2) Definitions.

(A) Auxiliary Power Unit (APU)—An integrated system that—

1. Provides heat, air conditioning, engine warming, or electricity to components on a heavy duty vehicle; and

2. Is certified by the Administrator under part 89 of title 40, *Code of Federal Regulations* (or any successor regulation), as meeting applicable emissions standards.

(B) Commercial Vehicle—Any motor vehicle, other than a passenger vehicle, and any trailer, semitrailer, or pole trailer drawn by such motor vehicle, that is designed, used, and maintained for the transportation of persons or property for hire, compensation, profit, or in the furtherance of a commercial enterprise.

(C) Gross Vehicle Weight Rating (GVWR)—The value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

(D) Heavy Duty Diesel Vehicle—A vehicle that—

1. Has a gross vehicle weight rating greater than ten thousand pounds (10,000 lbs.);

2. Is powered by a diesel engine; and

3. Is designed primarily for transporting persons or property on a public street or highway.

(E) Idling—The operation of an engine where the engine is not engaged in gear.

(F) Institutional Vehicles—Any motor vehicle, other than a passenger vehicle, and any trailer, semitrailer, or pole trailer drawn by such a motor vehicle, that is designed, used, and maintained for the transportation of persons or property for an establishment, foundation, society, or the like, devoted to the

promotion of a particular cause or program especially one of a public, educational, or charitable character.

(G) Load/Unload Locations—Distribution centers, warehouses, retail stores, railroad facilities, ports, and any other sites where heavy duty diesel vehicles may idle their engines while waiting to load or unload.

(H) Passenger Vehicle—Every motor vehicle, except motorcycles, motor-driven cycles, and ambulances, designed for carrying ten (10) passengers or less and used for the transportation of persons.

(I) Public Vehicles—Any motor vehicle, other than a passenger vehicle, and any trailer, semitrailer, or pole trailer drawn by such a motor vehicle, which is designed, used, and maintained for the transportation of persons or property at the public expense and under public control.

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

(3) General Provisions.

(A) Passenger Load/Unload Locations. No passenger load/unload location owner or operator shall cause or allow vehicles covered by this rule to idle for a period greater than five (5) minutes in any sixty (60)-minute period.

(B) Requirement for Heavy-Duty Diesel Vehicles. No owner/operator of a heavy-duty diesel vehicle covered by this rule shall idle the vehicle for more than five (5) minutes in any sixty (60)-minute period except as noted in subsection (3)(C) of this rule.

(C) Exempt Idling Activities. The following activities are exempt from 10 CSR 10-2.385:

1. A heavy-duty diesel vehicle idling while forced to remain motionless because of road traffic, an official traffic control device or signal, or at the direction of a law enforcement official;

2. A heavy-duty diesel vehicle idling when operating defrosters, heaters, air conditioners, safety lights, or other equipment solely to prevent a safety or health emergency;

3. A police, fire, ambulance, public safety, utility service vehicle, military, other emergency or law enforcement vehicle, or any heavy-duty diesel vehicle being used in an emergency capacity, idling while in an emergency or training mode, and not for the convenience of the heavy-duty diesel vehicle operator;

4. The primary propulsion engine idling for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity or if idling of the primary propulsion engine is being conducted in accordance with the manufacturer's recommendations;

5. A heavy-duty diesel vehicle idling as part of a state or federal inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection;

6. A primary propulsion engine idling when necessary to power work related mechanical or electrical operations other than propulsion (e.g., mixing, operating hydraulic lifts, processing cargo, or straight truck refrigeration). This exemption does not apply when idling for cabin comfort or to operate non-essential onboard equipment;

7. An armored vehicle idling when a person remains inside the vehicle to guard the contents, or while the vehicle is being loaded or unloaded;

8. A bus idling for no greater than fifteen (15) minutes in any sixty (60)-minute period to maintain passenger comfort while non-driver passengers are onboard;

9. An occupied heavy-duty diesel vehicle with a sleeper berth compartment idling for purposes of air conditioning or heating during government mandated rest periods;

10. A heavy-duty diesel vehicle idling due to mechanical difficulties over which the driver has no control;

11. Heavy-duty diesel vehicles used exclusively for agricultural operations and only incidentally operated or moved upon public roads;

12. Operating an auxiliary power unit as an alternative to idling the main engine; and

13. A heavy-duty diesel vehicle idling for no greater than thirty (30) minutes in any sixty (60)-minute period while waiting to load or unload at a freight load/unload location.

(4) Reporting and Record Keeping. *(Not Applicable)*

(5) Test Methods. *(Not Applicable)*

AUTHORITY: section 643.050, RSMo 2000. Original rule filed July 11, 2008, effective Feb. 28, 2009. Amended: Filed Oct. 28, 2011, effective July 30, 2012.*

Original authority: 643.050, RSMo 1965, amended 1972, 1992, 1993, 1995, 2011.

10 CSR 10-2.390 Kansas City Area Transportation Conformity Requirements
(Rescinded January 30, 2019)

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Oct. 4, 1994, effective May 28, 1995. Amended: Filed May 1, 1996, effective Dec. 30, 1996. Amended: Filed June 15, 1998, effective Jan. 30, 1999. Amended: Filed Feb. 14, 2003, effective Sept. 30, 2003. Amended: Filed April 1, 2005, effective Dec. 30, 2005. Amended: Filed Oct. 24, 2006, effective July 30, 2007. Rescinded: Filed April 10, 2018, effective Jan. 30, 2019.